

# Environmental Statement: Volume 1

## Plot H, Sister

May 2026

# Contents


| | | |
|---|---|---|
| Appendices | | 3 |
| Figures | | 5 |
| 1. | Introduction | 7 |
| 2. | EIA Methodology | 14 |
| 3. | Alternatives and Design Evolution | 23 |
| 4. | Site Surroundings and Description of Proposals | 29 |
| 5. | Construction Programme and Methodology | 38 |
| 6. | Townscape and Visual Impact | 46 |
| 7. | Built Heritage | 61 |
| 8. | Noise and Vibration | 82 |
| 9. | Air Quality | 120 |
| 10. | Transport | 136 |
| 11. | Daylight, Sunlight and Overshadowing | 149 |
| 12. | Solar Glare | 186 |
| 13. | Wind Microclimate | 197 |
| 14. | Climate Change | 210 |
| 15. | Socio-Economic | 234 |
| 16. | Human Health | 260 |
| 17. | Summary of Residual Effects | 301 |
| 18. | Type 1 Cumulative Effects | 317 |

# Appendices

## Introduction

No appendices

## EIA Methodology

Appendix 2.1 – EIA Scoping Report

Appendix 2.2 – EIA Scoping Response (dated 30 December 2025)

Appendix 2.3 – Committed Developments

## Alternatives and Design Solution

No appendices

## Site, Surroundings and Description of Proposals

No appendices

## Construction Methodology and Programme

Appendix 5.1 – Construction Environmental Management Plan

## Townscape and Visual Impact

Appendix 6.1 – Methodology and Criteria Tables

Appendix 6.2 – Visual Baseline and Assessment

Appendix 6.3 – Townscape Baseline and Assessment

## Built Heritage

Appendix 7.1 – Heritage Statement

## Noise and Vibration

Appendix 8.1 – Environmental Noise Impact Assessment

Appendix 8.2 – Ground-borne Vibration Impact Assessment

Appendix 8.3 – Demolition Noise and Vibration Impact Assessment

Appendix 8.4 – Construction Noise, Vibration and Road Traffic Noise Assessment

Appendix 8.5 – Commercial Units and Residents' Gym Noise and Vibration Impact Assessment

## Air Quality

Appendix 9.1 – Legislation, Policy and Guidance

Appendix 9.2 – Construction Dust Risk Assessment

Appendix 9.3 – Air Quality Assessment Appendices (Figures and Glossary)

## Traffic and Transport

Appendix 10.1 – Construction Traffic Information

Appendix 10.2 – Construction Stage Impact

Appendix 10.3 – Operational Stage Impact

Appendix 10.4 – Cumulative Assessment

Appendix 10.5 – IDM Masterplan Assessment with Cumulative Trips

Appendix 10.6 – Cumulative Developments

Appendix 10.7 – Transport Assessment

## Daylight, Sunlight and Overshadowing

Appendix 11.1 – Drawings of the Assessment Scenarios

Appendix 11.2 – Daylight and Sunlight Results for the Assessment Scenarios

Appendix 11.3 – Overshadowing Results for the Assessment Scenarios

## Solar Glare

Appendix 12.1 – Solar Glare Assessment Methodology

Appendix 12.2 – Solar Glare Assessment

## Wind

Appendix 13.1 – Detailed Wind Microclimate Methodology

Appendix 13.2 – Wind Microclimate CFD Results

## Climate Change

Appendix 14.1 – Greenhouse Gas Calculation Inputs

Appendix 14.2 – Climate Change Resilience Risk Assessment

Appendix 14.3 – Scope 3 Emissions Considerations

Appendix 14.4 – Legislation, Policy & Guidance

Appendix 14.5 – Whole Life Carbon Assessment

## Socio-Economic

No appendices

## Human Health

Appendix 16a – Guidance and Regulation

Appendix 16b – Assessing the Outcomes for Health and Wellbeing

Appendix 16c – Health determinants and their relevance to the Proposed Development

## Summary of Residual Effects

No appendices

## Type 1 Cumulative Effects

No appendices

# Figures

## Introduction

Figure 1.1: Site Location Plan

## EIA Methodology

No Figures

## Alternatives and Design Solution

No Figures

## Site, Surroundings and Description of Proposals

Figure 4.1 – Site Plan with existing buildings and structures annotated

Figure 4.2 – UK Government Flood Map

Figure 4.3 – Historic England Listed Asset Map

## Construction Methodology and Programme

Figure 5.1: Logistics Strategy

## Townscape and Visual Impact

No Figures

## Built Heritage

Figure 7.1 - Heritage Asset Plan

Figure 7.2 – Whitworth Conservation Area Map

Figure 7.3 – Viewpoint locations with potential effects on heritage

## Noise and Vibration

Figure 8.1 – Noise and Vibration Study Areas

## Air Quality

No Figures

## Traffic and Transport

No Figures

## Daylight, Sunlight and Overshadowing

Figure 11.1 – Figure 20 of the BRE Guidelines, Decision Chart: diffuse daylight

## Solar Glare

No Figures

## Wind

No Figures

## Climate Change

No Figures

## Socio-Economic

No Figures

## Human Health

No Figures

## Summary of Residual Effects

No figures

## Type 1 Cumulative Effects

No figures

# 1. Introduction

1.1. This Environmental Statement ('ES') accompanies an application for Full Planning Permission for a purpose-built student accommodation ('PBSA') led development within Development Zone H of the Sister Strategic Regeneration Area in Manchester City Centre ('the Proposed Development'). The proposals form a key component of realising Sister's ambitions to transform the former University of Manchester Institute of Science and Technology (UMIST) campus into a 4 million sq. ft. globally competitive innovation district, including 2 million sq. ft. of commercial and retail space, and over 1,500 homes.

1.2. Development Zone H is defined within 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.

1.3. The Applicants are RGRE Ltd, ID Manchester Ltd and 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. A Full Planning Application for the following description of development('the Planning Application'):

> *"Erection of three interconnected blocks (T1, T2 and T3) of 8, 10 and 38 storeys including ground, plus basement and plant, comprising purpose-built student accommodation with ancillary internal amenity space (Sui Generis - PBSA) and flexible commercial uses (Use Class E; landscaping works, highways, access, servicing, infrastructure and other associated works."*

## The Site

1.5. 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 currently comprises a discussed car park and vacant retail units, which has reached the end of its economic life.

1.6. 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.0.6 Ha.

1.7. Please refer to Section 4 of this Environment Statement for further details on the Site Context.

1.8. This ES sets out the findings of an Environmental Impact Assessment ('EIA') carried out in respect of the Proposed Development of the Site. For completeness the Site has planning permission for the demolition of the existing car park and retail units on Site ref. 143741/FO/2025, approved 04/12/2025.

## Requirements for EIA

1.9. 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.

1.10. The purpose of the EIA is to establish the nature of the Proposed Development 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.

1.11. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') require that any Proposed Development falling within the description of a 'Schedule 2 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 nature, size or location (Regulations 2(b))

1.12. The Proposed Development is considered likely to fall under the category of 'urban development projects' (Schedule 2, 10, (b)) where:

- The development includes more than 1 hectare of urban development which is not dwellinghouse development; or
- The development includes more than 150 dwellings; or
- The overall area of the development exceeds 5 hectares.

1.13. Given that the Proposed Development results in development of a greater scale than the existing use, an EIA is therefore considered appropriate to test the likely significant effects of the Proposed Development.

1.14. A formal EIA scoping request was submitted to MCC on 28 November 2025 requesting formal confirmation of the proposed scope of the Environmental Impact Assessment required in respect of the Proposed Development. A formal scoping opinion was received on 30 December 2025. The technical Sections are based on a scope of assessment that has been agreed with the relevant statutory consultees through the scoping exercise. A copy of the EIA Screening and Scoping Report and the Scoping Opinion is included in Appendix 2.1 and 2.2 of this ES.

1.15. In accordance with the EIA Regulations, this ES sets out the following information:

- A description of the Proposed Development comprising information on the Site, design, size and other relevant features of the development;
- A description of the likely significant effects of the Proposed Development on the environment;
- A description of any features of the Proposed Development 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 Development 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

1.16. Deloitte has significant experience and expertise in managing the EIA process and hold the ISEP 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 |
| Hodder and Partners | Architecture and design |
| Layer Studios | Townscape and Visual Impact; Landscape design |

| | |
|---|---|
| Stephen Levrant Heritage Architecture | Heritage |
| Buro Happold | Air Quality; Climate Change; Human Health; Circular Economy |
| Blackbird Acoustics and Heyda | Noise and Vibration |
| RG Group | Construction |
| Civic | Traffic and Transport; Operational Waste; Archaeology |
| GIA | Daylight/Sunlight/Overshadowing; Solar Glare; Wind |
| Pager Power | Broadband Connectivity, Aviation, TV Reception |
| Roscoe | Ground Conditions; Flood Risk and Drainage |
| Tyler Grange | Ecology, Arboriculture |
| Greater Manchester Police | Crime and Security |
| HG-CE | Energy and Carbon, Ventilation |
| Synergy | BREEAM |

Table 1.2: EIA Technical Team

| Topic | EIA Consultant | Qualifications |
|---|---|---|
| EIA Coordinator | Deloitte | ISEP, MRTPI, MPlan, BA (Hons)<br>ISEP Quality Mark Registered |
| Architecture and Design | Hodder+Partners | N/A |
| Townscape and Visual Impact | Layer Studios | BA (Hons), PgDip Landscape Architecture. Chartered Member of the Landscape Institute |
| Heritage | SLHA | BA (Hons), MA, MSc, IHBC |
| Noise and Vibration | Heyda and Blackbird | BSc (Hons), MIOA |
| Daylight/Sunlight/Overshadowing | GIA | LLB (Hons) |
| Solar Glare | GIA | MSc. ARB |
| Wind | GIA | Meng, PHD |
| Traffic and Transport | Civic | BSc |
| Air Quality | Buro Happold | MMet AMIAQM, BSc MIAQM |
| Climate Change | Buro Happold | BSc, MSc, IAQM, PISEP |
| Human Health | Buro Happold | BSc, MSc Local Economic Development |
| Socio-Economic | Buro Happold | BSc, MSc Local Economic Development |

## Organisation of the Environmental Statement

1.17. This ES comprises 18 Sections and is supported by figures (located at the back for each Section 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.

1.18. Figures have been referenced using the Section number as a prefix followed by the number of the figure within a given Section. 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

| Section No. | Section 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 Section, 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. |
| 5. | Construction Management – Programme and Methodology | Details of anticipated programme for development and construction methodology. |
| 6. | Townscape and Visual Impact | To assess the likely significant effects of the Proposed Development in relation to townscape and visual impact. |
| 7. | Built Heritage | To assess the likely significant effects of the Proposed Development in relation to on and off-site heritage assets, both in terms of physical and visual impact. |
| 8. | Noise and Vibration | To assess the likely significant effects of the Proposed Development in relation to noise and vibration. |
| 9. | Air Quality | To assess the potential air quality impacts associated with the Proposed Development due to changes in traffic flows, construction etc. |
| 10. | Traffic and Transport | To consider the level of traffic to be generated and its potential impact on existing highways, accessibility to public transport and access / servicing requirements. |
| 11. | Daylight, Sunlight and Overshadowing | To assess the impacts of the Proposed Development in relation to daylight and sunlight for nearby residential properties and overshadowing in relation to relevant public spaces. |
| 12. | Solar Glare | To assess the impacts on identified receptors (e.g. rail, road and light rail users) in relation to reflections of sunlight off the building in key locations. |
| 13. | Wind | To assess the likely significant effects of the Proposed Development in relation to environmental wind. |
| 14. | Climate Change | To assess the nature and magnitude of Greenhouse Gas Emissions, which are likely to arise from the Proposed Development during |

| Section No. | Section Title | Description |
|---|---|---|
| | | construction and operation, and the impact of this contribution towards climate change, in addition to mitigation measures required to minimise this contribution. |
| 15. | Socio Economic | To assess the likely socio-economic impacts of the Proposed Development upon the Site and surrounding area. |
| 16. | Human Health | To assess the likely significant effects of the Proposed Development on human health. |
| 17. | Summary of Residual Effects | Summary of residual effects of the Proposed Development (including cumulative impacts alongside other committed developments). |
| 18. | Type 1 Cumulative Effects | An assessment of the combined effects arising from the Proposed Development upon a set of defined sensitive receptors. |
| VOLUME 2 | Technical Appendices | Technical data and reports to support the Section 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

1.19. 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

| Planning Application Documentation | Author |
|---|---|
| Accommodation Schedule | Hodder+Partners |
| Application Form | Deloitte |
| Covering letter | Deloitte |
| Site Location Plan | Hodder+Partners |
| Existing Site Plans and Elevations | Hodder+Partners |
| Proposed Plans, Elevation and Sections | Hodder+Partners |
| Landscape Plans | Layer |
| Design and Access Statement | Hodder+Partners |
| Landscape Strategy (included in DAS) | Layer |
| Planning and Tall Building Statement | Deloitte |
| Green and Blue Infrastructure Statement (appended to Planning and Tall Building Statement) | Deloitte |
| Statement of Consultation | Deloitte |
| Student Need Assessment | Cushman & Wakefield |

| Planning Application Documentation | Author |
|---|---|
| Flood Risk Assessment and Drainage Strategy Report | Roscoe |
| Supplementary Drainage Pro-Forma | Roscoe |
| Shooters Brook Diversion Review | Roscoe |
| Aviation Safeguarding Technical Note | Pager Power |
| Archaeological Assessment | Civic |
| Framework Travel Plan | Civic |
| Operational Waste Strategy (including completed Waste Pro-Forma) | Civic |
| Environmental Standards Statement | HGCE |
| Energy and Carbon Statement (including completed Energy and Carbon Pro-forma | HGCE |
| Operational Energy Report (TM | Buro Happold |
| Whole Life Carbon Assessment | Buro Happold |
| BREEAM Pre-Assessment (PBSA and Commercial) | Synergy |
| Ventilation and Extraction Statement | HGCE |
| Thermal Comfort Report | HGCE |
| Crime Impact Statement | GMP |
| Terrestrial Television Baseline Survey Report | Pager Power |
| Desk-Based Satellite Television Interference Assessment | Pager Power |
| Broadband Connectivity Survey | Pager Power |
| Circular Economy Statement | Buro Happold |
| Outline Operational Management Strategy (inc student move in/out and deliveries) | RGRE Ltd |
| Local Labour Agreement | RGRE Ltd |
| Ecological Impact Assessment | Tyler Grange |
| Habitat Features Plan | Tyler Grange |
| Arboriculture Impact Assessment, including Tree Retention and Removal Plan and Tree Protection Plan | Tyler Grange |
| Statutory Biodiversity Metric (Baseline and net gain assessments) | Tyler Grange |
| Gateway One Fire Statement for Planning | Ashton Fire |
| Preliminary Geoenvironmental Appraisal | Calabrian |
| ID Manchester Preliminary Ground investigation Interpretive Report and Final Factual Report | Arup |
| ID Manchester Detailed Unexploded Ordnance (UXO) Risk Assessment | 1st Line Defence |
| Piling Strategy Contamination Risk Assessment | Roscoe |

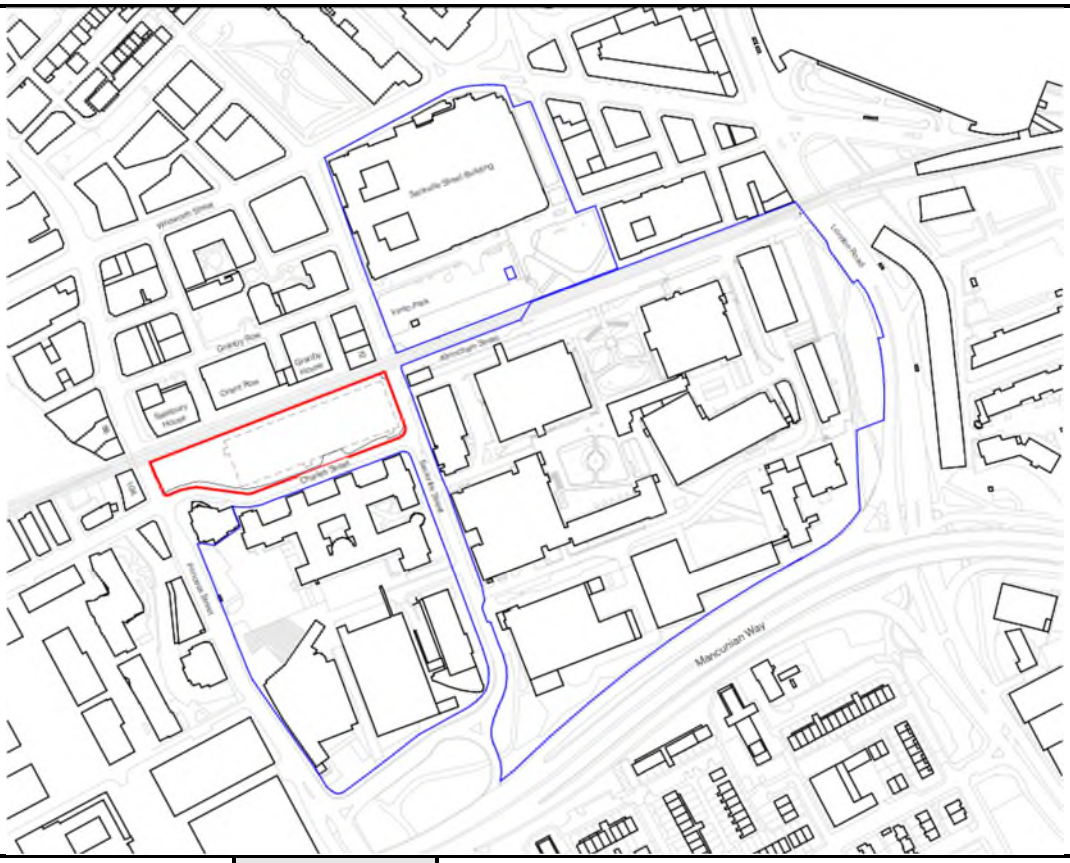
1.20. The ES is available for public viewing on MCC's Public Access website at the following address: http://pa.manchester.gov.uk/online-applications/ once the application has been submitted and validated.

1.21. 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.

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

Plot H, Sister – Planning and EIA Team
Deloitte LLP
100 Embankment
Cathedral Approach
Manchester
M3 7FB




| | | | | |
|---|---|---|---|---|
| | **Figure:** | 1.1 | | |
| | **Title:** | Site Location Plan (Source: Hodder and Partners) | | |
| | **Project:** | Plot H, Sister, Manchester | | |
| | **Date:** | 01/12/2025 | **Scale:** | NTS |

# 2. EIA Methodology

## Introduction

2.1. This Section sets out the methodology used to prepare each Section 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 Development on the environment as defined in Section 1 and described in detail in Section 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 Sustainability and Environmental Professionals (ISEP) (formerly known as 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 Section'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. In October 2025, MCC carried out a Regulation 18 draft Local Plan consultation in preparation of a new Local Plan. Given the early stage of plan preparation, the draft policies carry limited weight and are not considered in this assessment.

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

## Screening and Scoping

2.8. A formal EIA Screening and Scoping request was submitted to MCC on 28 November 2025 (Appendix 2.1) requesting a formal opinion and confirmation as to the proposed scope of the EIA required in respect of the Proposed Development. A formal scoping opinion was received on 30 December 2025 (Appendix 2.2), which confirmed agreement to the scope and contents of the EIA. The results of the scoping exercise have determined the subject areas of the EIA and any comments received as part of this Scoping response from the LPA have been factored into this ES.

2.9. Based on the contents of Appendix 2.1 and 2.2, the following Sections have been scoped into the EIA:

- Townscape and Visual Impact
- Built Heritage
- Noise and Vibration
- Air Quality
- Traffic and Transport
- Daylight, Sunlight and Overshadowing
- Solar Glare
- Wind
- Climate Change
- Socio Economic
- Human Health

2.10. The Scoping Opinion was broadly in agreement with the Scoping Report, and where further information was requested, this has been addressed within this ES.

## EIA Scenarios

### Scenarios

2.11. The scenarios to the be tested within the EIA take into account the range of committed or reasonably foreseeable developments anticipated to come forward within the study area. As a rule, and to ensure consistency across disciplines, developments that are already under construction are considered to form part of the Baseline and those subject to planning permissions or otherwise identified within the committed developments as reasonably foreseeable are considered as part of the cumulative analysis. The schedule of committed developments formed part of the Scoping Report which was agreed/Scoping Opinion received on 30th December 2025. For the purpose of the EIA scenarios, the Sister Masterplan has been referred to as 'IDM Masterplan' .

2.12. Planning permission has been granted in a separate application in relation to the demolition of the existing structures (MSCP and retail units) on the Plot H site (under planning permission 143741/FO/2025, approved

04/12/2025). This application was supported by an Environmental Statement, which was approved by the Planning Authority under that consent.

2.13. The demolition approved under this planning permission has not yet taken place. Therefore, the time of writing this ES, and when baseline studies were undertaken, the vacant car park and commercial buildings were still on-site and the demolition has not commenced at the time of this submission.

2.14. To be robust, consultants were asked to advise if the most 'robust case' is once the buildings on site are demolished or as the Site is today, and to test the respective scenarios accordingly.

2.15. For the purpose of the EIA Scenarios, 'Proposed Development' is defined as follows:

- Construction – demolition of existing structures on site (multi-storey car park and retail units), and construction/ erection of new build.
- Operational – occupation/ operational running of new build/ scheme.

2.16. The existing baseline considers the Site as it is today, with the existing buildings on site. The alternative baseline assumes the demolition has commenced prior to this redevelopment application.

2.17. The scenarios therefore are as follows:

Table 2.1: Scenarios

| | |
|---|---|
| Scenario 1 | Existing Baseline (existing EIA Site, as of December 2025) |
| Scenario 2 | Existing Baseline + Proposed Development |
| Scenario 3 | Existing Baseline + Proposed Development + Cumulative |
| Scenario 4 | Existing Baseline + Proposed Development + IDM Masterplan (future surrounds/ future phases) + Cumulative |
| *Alternative baseline scenarios* | |
| Scenario 1a | Alternative Baseline (existing EIA Site, but with multi-storey car park and retail units demolished) |
| Scenario 2a | Alternative Baseline + Proposed Development |
| Scenario 3a | Alternative Baseline + Proposed Development + Cumulative |
| Scenario 4a | Alternative Baseline + Proposed Development + IDM Masterplan (future surrounds/ future phases) + Cumulative |

2.18. Please note as the demolition of the existing structures (car park and retails units) is either covered by the Alternative Baseline or Proposed Development (with existing baseline), and therefore this is not referenced in the cumulative / committed developments list.

Table 2.2: EIA Scenarios to be assessed

| Topic | Scenarios Assessed |
|---|---|
| Townscape and Visual Impact | 1, 2, 3, 4 |
| Built Heritage | 1, 2, 3, 4 |
| Noise and Vibration | 1, 2, 3, 4 |
| Air Quality | 1, 3, 4 |
| Traffic and Transport | 1, 2, 3, 4 |
| Daylight, Sunlight and Overshadowing | 1, 2, 3, 1a, 2a, 3a |

| | |
|---|---|
| Solar Glare | 2 |
| Wind | 1, 2, 3, 4 |
| Climate Change | 1, 2 |
| Socio-Economic | 1, 2, 3, 4 |
| Human Health | 1, 2, 3, 4 |

## Consultation

2.19. The Proposed Development has been prepared in consultation with MCC and a range of technical statutory stakeholders (refer to Table 2.3), which were also consulted upon as part of the EIA Scoping exercise.

Table 2.3: Scope of Stakeholder Consultation

| Planning Application Stakeholder Consultation |
|---|
| MCC Planning Authority |
| MCC Highways |
| Greater Manchester Police |
| MCC Environmental Health Officers |
| Greater Manchester Ecology Unit (GMEU) |
| Historic England |
| National Air Traffic Control |
| Manchester Airport Group |
| Greater Manchester Archaeological Advisory Service (GMAAS) |
| Transport for Greater Manchester |
| Network Rail |

2.20. In addition to the stakeholder consultation noted above, the Proposed Development has benefited from public consultation. Further details are provided in the Statement of Consultation that accompanies the application. Considerations of any legitimate alternative proposals are set out in Section 4 of this ES.

## Non-Significant Effects

2.21. 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 Report in Appendix 2.1:

- Agricultural Circumstances.
- Aviation.
- Archaeology.

- Broadband Connectivity.
- Ecology.
- TV Reception.
- Water resources, flood risk and drainage.
- Ground Conditions.

## Approach to Technical Studies

2.22. 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 Development by defining the environmental sensitivities, constraints and opportunities associated with the Site.

2.23. 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.

2.24. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within each of the respective assessment Sections.

2.25. The majority of assessments involved consultations with statutory and non-statutory bodies, desk-based research, site inspections and surveys, impact prediction and mitigation.

2.26. The assessment and conclusions of the ES are based on the description of the Proposed Development provided in Section 4.

## Structure of Technical Sections

2.27. Each technical Section of the ES has been set out broadly in line with Table 2.4. Where Sections differ from the structure set out below, the reasons for that have been clearly articulated within the Section introduction.

Table 2.4: Structure of the ES Technical Sections

| Technical Section Subheading | Summary of information |
|---|---|
| Introduction | Each of the technical Sections 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 Development 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 |

| Technical Section Subheading | Summary of information |
|---|---|
| | 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 | This section identifies the likely significant effects on the environment resulting from the Proposed Development. A description of the likely effects of the Proposed Development and an assessment of their predicted significance is provided.<br><br>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 Sections presented. |
| Mitigation Measures | 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.<br><br>This section of each technical Section describes the measures which would be implemented to mitigate potential adverse effects. Where possible, enhancement measures have also been proposed. |
| Residual Effects | The residual effects, i.e. the remaining effects of the Proposed Development assuming implementation of the proposed mitigation measures, have been estimated and presented.<br><br>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. |
| Summary | Each technical Section concludes with a brief summary outlining the potential residual effects of the Proposed Development. |

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

## Magnitude

2.29. The methodology for determining the scale, or magnitude, of effect is set out in Table 2.5.

Table 2.5 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. |

| Magnitude of Impact | Criteria for Assessing Effect |
|---|---|
| Negligible | Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation. |

## Sensitivity

2.30. The sensitivity of a receptor is based upon the relative importance of the receptor using the scale in Table 2.6.

Table 2.6: 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

2.31. The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be positive or negative. Table 2.7 below shows how magnitude and sensitivity interact to derive effect significance.

Table 2.7: 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 |

2.32. 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 Section under the heading of 'Assessment Methodology and Significance Criteria'.

2.33. 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 2.7).

## Baseline Conditions

2.34. Each technical Section includes a segment which describes and evaluates the baseline environmental conditions (i.e. the current situation and anticipated changes over time assuming the Site remains unchanged).

2.35. As noted earlier within this Statement, it is important to note that at the time baseline studies have been undertaken, the Site contains the vacant car park and commercial buildings. However, it is anticipated that the Site will be cleared, following the demolition of existing structures on the Site (obtained under planning consent ref. 143741/FO/2025).

2.36. To be robust, consultants have been asked to advise if the most 'robust case' is once the buildings on Site are demolished or as the Site is today, and for that scenario to be tested accordingly. The series of scenarios are as noted earlier in the Section at Table 2.1.

2.37. 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 Section (Section 5 to 16 includes a clear description of what is assumed as the baseline against which the assessment is being made. The method used to obtain baseline information, where relevant and possible, has been clearly identified within each technical Section and agreed in advance with statutory consultees.

## Mitigation

2.38. 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.

2.39. 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.

2.40. 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 Section 5: Construction Methodology and Programme and are cross referred to in the relevant Sections. It is anticipated that a condition be attached to any subsequent consent that requires submission and approval of a CMP.

2.41. Mitigation to be implemented during the operational phase would be secured through planning conditions and obligations, which are explicitly referenced in each Section.

## Residual Effects

2.42. The likely significant effects on the environment, assuming the successful implementation of mitigation measures proposed, have been estimated within each Section. These are termed 'residual effects' and are considered in Section 17 of this Statement.

## Cumulative Effects

2.43. 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 November 2025 is contained within the Scoping Report at Appendix 2.1, to which agreement has been provided from the Local Planning Authority as part of the Scoping Opinion process.

2.44. The ES considers the potential for likely significant effects on the environment resulting from consented or reasonably foreseeable activities or developments in the area, which could lead to potentially significant cumulative effects in conjunction with the Proposed Development ('Committed Developments'). Each technical Section (Section 6-16) has assessed the potential for likely significant effects on the environment, as a result of the above committed developments, together with the Proposed Development, which are known as Type 2 cumulative effects.

2.45. In addition, Section 18 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

2.46. The principal assumptions that have been made and any limitations that have been identified in preparing the ES are set out in each technical Section. 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 Section 4, Site Surroundings and Description of the Proposals;
- Construction and demolition methods and phasing will follow the timetable and methods set out in Section 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

2.47. 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.

2.48. 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 Regulations states that an ES should include: "a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects". In considering the evolution of the Proposed Development, 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 Section considers the following four options in the context of these requirements and the existing Development Brief: The 'do nothing' alternative where the Proposed Development is not progressed.

- Alternative Locations for the Proposed Development.
- Alternative Uses.
- Alternative Designs (including size and scale) for the Proposed Development.

3.3. The Proposed Development has been detailed out in Section 6 of the Planning Statement and the submitted Design and Access Statement, which also sets out the iterative design process undertaken over the past 12-18 months to develop the submitted proposal. 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 for the Site.

## The "do nothing" Alternative

3.4. As set out previously, a separate application for the demolition of existing structures on site was recently approved on 4 December 2025. The demolition is progressing separately to this redevelopment application and is anticipated to take place in early 2026, during the determination of this application.

3.5. Therefore, while the structures remain on site at the time of writing, as the demolition is proceeding independently of this redevelopment proposal and is reasonably foreseeable during the assessment period, the "do nothing" scenario refers to the option of leaving the Site as a cleared site with no further construction or redevelopment undertaken as the Proposed Development does not proceed.

3.6. Accordingly, the Site would consist of a cleared plot, following the removal of existing buildings, no new built form, no additional activity, operational use, or public access beyond essential site maintenance, with environmental conditions shaped only by natural processes and existing surrounding influences.

3.7. 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.

3.8. 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.

3.9. In the "do-nothing" alternative, the Site would lay empty and vacant with no prospect of new uses or redevelopment coming forward. This option would fail to deliver any benefits (economic, social and environmental) associated with the Proposed Development nor would it contribute to realising the vision and ambitions set out in the SRF. As the Site forms part of an area identified as a strategic priority for regeneration and redevelopment, the "do-nothing" alternative has been discounted.

## Alternative Locations

3.10. The site is a designated brownfield location situated within both the city centre and the wider regional centre. It has been identified as a strategic focus for development and economic activity within the Local Plan and the Places for Everyone (PfE) framework.

3.11. The Strategic Regeneration Framework (SRF) area has been designated as a regeneration priority. A Joint Venture (JV) was established to facilitate the delivery of the SRF area, subsequently forming a partnership with RG for the development of Plot H. Plot H is specifically identified within the SRF for bespoke housing typologies, including Purpose-Built Student Accommodation (PBSA). Given this established context and the specific designations, Plot H represents the primary focus for this development; further details and justification regarding site selection are provided in the subsequent subsections.

### Sister SRF

3.12. The introduction to the SRF states that:

*"The relocation of the teaching and research functions from the former UMIST campus presents a rare opportunity to deliver comprehensive place-based regeneration and renewal of a 9-hectare city centre site in a single ownership to support the next phase of Manchester's growth and success. These factors have created a unique opportunity in time and place to deliver IDM: a world-class innovation district in the heart of the city, where clusters of companies can grow around the Masdar Building (home to the Graphene Engineering Innovation Centre, "GEIC") and the Manchester Institute of Biotechnology ("MIB"). Adding to these existing facilities, Sister is anticipated to generate further hubs of innovation exploring the practical and commercial application of the University's research specialisms. These could be companies and organisations from the public or private sector with a focus on areas such as health innovation and digital technology."*

3.13. The SRF also establishes opportunities to enhance linkages beyond the Framework Area's boundaries in all directions: fully integrating the SRF Area into the city centre core to the north; repairing the entry sequence to the Oxford Road Corridor from Piccadilly Station and seamlessly knitting into Mayfield to the east; reducing physical and perceptual barriers to the residential neighbourhoods of Brunswick and Ardwick to the south; and creating legible and permeable routes through to the university campuses to the south west.

3.14. Within the SRF Area, the Site is identified as a key entry-point into the Sister SRF Area at Princess Square, arriving from the Oxford Road Corridor, and therefore being an opportunity to deliver tall, landmark buildings. Key placemaking interventions envisaged in the SRF are captured within the Site, including the western portion of the new east-west pedestrian route along Altrincham Street, repairing pedestrian routes across Princess Street and Charles Street, and the creation of a welcoming and animated gateway to Sister at Princess Square. The SRF also envisages the Site to provide a critical mass of bespoke housing models to support the Sister ecosystem and bring life to the SRF Area.

## Proximity to university campuses

3.15. In addition, the Site is considered an appropriate location for PBSA given its proximity to major university campuses in Manchester. MCC has consistently affirmed the necessity for new PBSA to meet the demands of a growing and changing student population. Multiple Executive Reports (including the 2019 Executive Report on Consideration of Policy H12: Purpose Built Student Accommodation Within the Changing Market Context' and 2020 Executive Report 'Purpose Student Accommodation in Manchester'), reinforced by the Economic Scrutiny Committee in 2023, have established the Council's strategic objective to locate new PBSA within the Oxford Road Corridor and in close proximity to the City's universities. This approach is crucial to accommodate the increasing number of international students who prefer city centre living, alleviate pressure on the traditional rental market, and foster balanced neighbourhoods by providing appropriately situated student housing. The Site is within a circa 6 minute walk of Manchester Metropolitan University and circa 10 minute walk of the University of Manchester. It is also within the Oxford Road Corridor, MCC's preferred location for PBSA development.

3.16. Demand for PBSA within Manchester City Centre is growing, with 2.5 students to every one bed in the 2021/22 academic year. 2023 projections estimated that demand for new PBSA could be between 5,440 and 11,320 bedspaces up to 2030 (1-2% growth per annum) (MCC Report to the Economy Scrutiny Committee of PBSA in Manchester, May 2023).

3.17. The Proposed Location for PBSA is also considered appropriate within policy, as Core Strategy (2012) Policy H12 'Purpose Built Student Accommodation' notes that sites should be in close proximity to the University campuses, where proposals can demonstrate a positive regeneration impact and to ensure high-density developments are in locations that are compatible with existing developments and initiatives. The Proposed Development location actively demonstrates all of these criteria.

3.18. Therefore, this Section does not consider alternative sites either outside of the SRF Area or elsewhere in the masterplan for the Proposed Development of PBSA. Therefore, the "alternative location" scenario has been discounted.

# Alternative Uses

3.1. PBSA is identified as a potential use that could be accommodated within the SRF Area:

*"Living at IDM through the provision of homes and hotels that will bring 24/7 life and activity to the Framework Area. Innovative housing models can improve social mobility by providing pathways for local people to access and benefit from the opportunities generated by the innovation district. In addition to mainstream homes, there may be opportunity to* ***deliver bespoke housing and hotel models*** *tailored to the IDM ecosystem as part of a sustainable mix of accommodation that can help to attract and retain talent within Manchester. This could comprise forms of* ***PBSA, work/live units, serviced apartments, and/or other forms of bespoke accommodation*** *designed to meet the needs of people living, studying or working in the city"* (page 48)

3.2. As noted above, the SRF specifically envisaged PBSA as a potential use on the Site.

3.3. As one of the first Sister plots to come forward, high-quality and high-density PBSA, with active ground floor commercial uses is therefore considered to support the overall vision and objectives for Sister and ensure the area remains vibrant and attractive, acting as a catalyst for continued regeneration and investment into the area. While other bespoke accommodation types could contribute, PBSA's proven model for rapid delivery and immediate activation of an area makes it well-suited for this initial phase. The proposed use is therefore considered to wholly align with the objectives of the Sister SRF.

3.4. The existing brownfield use provides no amenity to the local area, with low levels of activity and visibility and poor pedestrian connections making the Site feel unsafe. The redevelopment of the Site, including public realm improvements will diversify land use within Sister, adding interest and activity during the day and evening, and make it a more welcoming environment for pedestrians. Development would also enhance the

prospects of Sister securing future occupiers by reactivating the area and ensuring vitality, accelerating the delivery and overall success of Sister.

3.5. The SRF's goal to attract and retain talent is strongly supported by PBSA which feeds into the IDM ecosystem by supporting the student population, which is a fundamental component of the innovation district's talent pipeline.

3.6. As noted above, there is a clear and identified need for PBSA bedspaces within the city centre. As identified in detail within Chapter 5 of the Planning Statement, Manchester City Centre, particularly the Oxford Road Corridor (ORC), is a vital hub for higher education, home to the University of Manchester (UoM), Manchester Metropolitan University (Man Met), and the Royal Northern College of Music (RNCM). These institutions are experiencing significant growth in student numbers, especially international and postgraduate students, who increasingly seek high-quality, purpose-built student accommodation (PBSA) in close proximity to their campuses.

3.7. MCC has consistently acknowledged this demand, with Executive Reports and Appeal Decisions reinforcing the strategic need for new PBSA within the ORC to support university expansion, alleviate pressure on the traditional rental market, and contribute to the city's economic growth. By providing dedicated student accommodation, the Proposed Development directly addresses the issue of students occupying mainstream residential accommodation. While work/live units or serviced apartments cater to other demographics, they do not directly alleviate this specific pressure on the general housing market.

3.8. In addition to aligning with the overall ambitions of the Sister SRF, the proposed PBSA development would also deliver the following key socio-economic and environmental benefits:

- Secure a viable, long-term use for an otherwise underutilised and long-term vacant site. As one of the first sites to come forward within the Sister SRF, the proposals can help to kick-start Sister, a long-standing aim of MCC since the North Campus SRF was first endorsed in 2017.

- Providing high-quality PBSA helps to attract talent to the city, including a proportion of affordable units.

- Increase local expenditure. The presence of PBSA can help to support the vitality of businesses located within the area, thereby establishing a positive feedback loop between the community and local economy.

- Encourage a more diverse retail, food and drink, culture, leisure, sports and entertainment offer across the Oxford Road Corridor and Picadilly Ward, supporting stronger daytime and evening economies.

- Enhance vitality, vibrancy and diversity of Sister, and increase pedestrian movement and footfall around the area. The inclusion of PBSA also stitches together Manchester's new innovation regeneration area with the educational and commercial uses in the Oxford Road Corridor.

- Provide a broader housing offer which takes account of the housing needs of the workforce of the Oxford Road Corridor, Piccadilly Ward and Manchester, and the attractiveness of Manchester as a place to live and work, in keeping with the Manchester Residential Growth Strategy. Meeting an identified need for PBSA bedspaces will also free up standard residential accommodation within the City Centre. Students living in mainstream residential accommodation has often had a detrimental effect on availability for economically active residents in the city centre and has resulted in loss of council tax revenue.

3.9. For the reasons above, alternative uses such as hotels or other bespoke forms of accommodation were discounted as the Proposed Development is considered the most appropriate in the context of this location and responds to both identified regeneration priorities as well as PBSA need in this part of the City Centre.

## Alternative Designs

3.10. This section outlines the evolution of the Proposed Development's design, demonstrating how various alternatives and refinements were considered and integrated to achieve a scheme that is both responsive to its context and aligned with planning objectives. The design process was iterative, moving from initial concepts to a detailed proposal through a series of key design moves and stakeholder engagements.

3.11. The initial starting point for the development's massing was derived from the illustrative proposal within the SRF for Plot H. This initial concept suggested three towers of consistent height. However, a critical assessment of this approach revealed that it did not adequately consider the potential impact of the Proposed Development on the surrounding context.

3.12. To address this, the design team undertook a comprehensive review, leading to the development of an alternative massing strategy. This alternative aimed to deliver upon the place-based principles defined within the SRF, whilst delivering a contextual design response that is more sensitive to neighbouring properties' amenity, particularly with respect to the residential properties on Granby Row. The key alternative design moves are explained in detail within the supporting Design and Access Statement and are summarised below:

- Building Siting: The buildings is sited as far south and east as possible to maximise the separate distances between the Proposed Development and residential properties to the north.
- Height Redistribution: Instead of uniform towers, the massing was strategically lowered to the south, particularly adjacent to the Granby Row residencies, moving from 3 towers to one with a lower block. This redistributed massing was then shifted to the east, minimising the direct interface with residential properties, while creating a landmark at the Princess Street entrance to the Sister neighbourhood. This approach respects existing residential buildings while optimising the development's presence.
- Realigned Massing: The spacing between the three primary building elements was adjusted to facilitate natural light penetration and to preserve key views through the massing, enhancing the permeability of the scheme.
- Facade Relief: The introduction of setbacks within the facade was an alternative to a monolithic building form. This breaks up the mass, helps the main tower meet the ground more gracefully, and creates recessed entrances, improving pedestrian experience.
- Covered Walkways: The inclusion of a colonnade provides covered pedestrian routes around the site, an alternative to exposed pathways, and deepens the perceived width of the streetscape.
- Public Realm: A significant alternative was the integration of green, diverse, and accessible public spaces surrounding the developed massing, creating an exciting new area of public realm rather than a purely built-form solution.

3.13. In addition, an alternative to a simple tower-to-ground connection was the implementation of a plinth and colonnade strategy. This architectural tool was adopted to humanise the building at street level, changing the rhythm of the facade from the tower to the base and aligning the plinth's height with nearby urban fabric.

3.14. The selection of materials also involved considering alternatives based on the local context. While the northern side of the railway viaduct is predominantly characterised by Manchester red brick, the southern side, particularly the former UMIST campus, features a starkly different palette of white concrete. The proposed design explores a muted, whiter palette, aligning with the character of the Sister area. Further to this, in recognition of the site's intent to be a 'landmark building' (as per the Sister SRF), the design considered the use of materials akin to the Portland Stone aesthetic found in iconic Manchester buildings such as the Central Library and Sunlight House.

3.15. The entire design evolution was heavily influenced by continuous stakeholder engagement, including multiple pre-application meetings with Manchester City Council. Feedback from these sessions led to iterative refinements and the adoption of various alternatives, addressing concerns related to street activation, plinth-to-street relationships, servicing, landscaping, and facade detailing. This collaborative approach ensured the final proposal was robust, responsive, and well-integrated into its urban setting.

## Summary

3.16. Where possible, alternative options have been considered throughout the design process. The above has set out why the Site is considered suitable for the Proposed Development.

3.17. This process has been informed by the SRF, site constraints and opportunities, and the desire to create a landmark buildings that has a positive relationship with the surrounding developments, helping to realise the vision for the masterplan as a thriving destination where academia and commercial business come together.

3.18. The Proposed Development 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

## SRF Area

4.1. The SRF Area is located within the southern portion of Manchester City Centre. The area is bound by Aytoun Street to the north, Princess Street to the west, the Mancunian Way to the south and London Road to the east. South of the Viaduct arches the SRF Area currently consists of the former UMIST Campus of the University of Manchester. The University decanted the majority of its teaching and research functions out of campus in 2022. The area therefore contains numerous vacant buildings including former faculty buildings as well as student accommodation, largely characterised by its modernist architecture. The Site sits within the boundary of the SRF Area, positioned within the northwestern corner, sat at a principal entry point from Manchester Oxford Road Railway Station, with direct access to the ORC.

4.2. Please see Figure 4.1 for the SRF boundary. Please note the Plot H Site does not align exactly with Zone H, as set out in Figure 4.1, therefore please see Figure 1.1 for a Site Location Plan setting out the Plot H boundary.

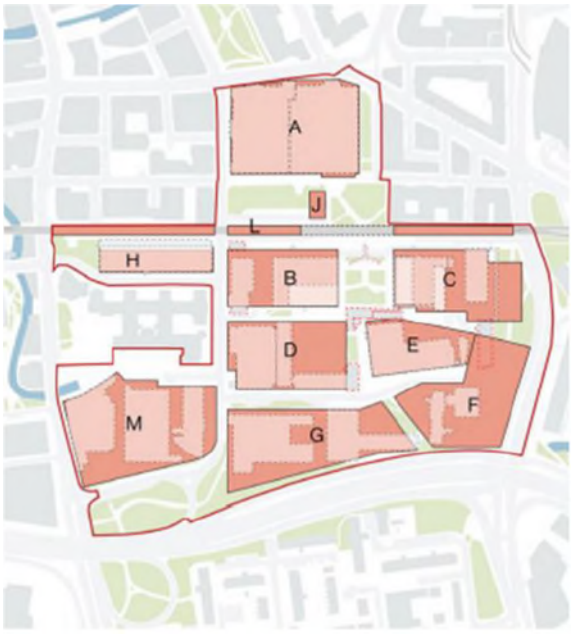



Figure 4.1 – SRF Boundary (source: IDM SRF)

## Site Location

4.3. 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. The Site is identified on the Figure 1.1 (Section 1, Page 5).

## Surrounding Land Uses

4.4. 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.

4.5. To the east lies the Paper Science Building and Renold Building and, beyond Renold, Plot C for which planning and listed building consent applications have recently secured resolution to grant at planning committee for a commercial development and new civic square (as detailed in Section 3). Renold Building has recently undergone works to re-activate the building for commercial uses and collaboration spaces related to Sister. Further north-east lies Piccadilly Station, Manchester's primary rail hub.

4.6. Land to the south comprises IQ Weston Hall which is a PBSA building adjoining the Pendulum Hotel and Manchester Conference Centre. A planning application for the redevelopment of this site was submitted to MCC in December 2025 (144791/FO/2025). The proposals are for four buildings of 17, part-8, part-23, 32 and 50 storeys, comprising 2,511 PBSA rooms. An Ibis hotel is located to the southwest of the site.

4.7. 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 and Topography

4.8. The Site extends to circa 0.6ha.

4.9. The Site contains a gradual slope falling east-to-west from Sackville Street to Princess Street. The level difference from the eastern end of the Site to the Western end is approximately 3.4m.

4.10. A full topographical survey has been obtained for the Site including spot levels of roads, kerbs and footpaths, boundaries, adjacent buildings, the railway arches, drainage and services. The lowest level of the car park is set below the adjacent external levels of the majority of the floorplan and as a result, means less excavation is required to facilitate the development.

4.11. The Site principally was used as a multi-storey car park which closed in October 2024 as it was at the end of its economic life and no longer in a condition fit for purpose.

4.12. The building also accommodates three ancillary commercial uses (two retail (Use Class E) and one drinking establishment (Sui Generis), all of which are now vacant.

4.13. There is evidence of anti-social behaviour at the Site with the existing car park subject to vandalism and graffiti.

4.14. The existing structures (multi-storey car park and ancillary commercial uses) are the subject of a planning application for their demolition (143741/FO/2025) which was approved on 4 December 2025.

## Trees

4.15. There are 11 trees on Site. Of these seven are in B category, which is characterised by moderate quality and value, and four in C category, which are considered to be of low quality and value.

4.16. The Planning Application is accompanied by a Tree Survey, prepared by Tyler Grange.

## Access

4.17. The Site is currently accessed from the south of the existing multi-storey car park via Charles Street, which runs east to west between Princess Street and Sackville Street. Access to the Site is also from the east of the existing retail units. Previous access to the north of the Site and south of the viaduct along Altrincham Street has been restricted since the closure of the existing multi-storey car park.

## Connectivity

4.18. 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 ORC, 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

4.19. 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 seven to nine minutes.

## Metrolink

4.20. Piccadilly Station Tram Stop and St Peter's Square Tram Stop are both a 10 -minute walk away from the Site, which offer 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

4.21. 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.

4.22. 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.

4.23. Manchester bus station is an 8-minute walk away from the Site, offering national and regional services at affordable prices.

## Walking

4.24. The Site benefits from excellent pedestrian connectivity, with readily accessible transport infrastructure and a range of amenities within comfortable walking distance.

4.25. The Site's adjacency to academic institutions around Oxford Road is ideal for students residing at the Proposed Development. This includes a c.6 minute walk west to Manchester Metropolitan University, a c.11 minute walk south to University of Manchester and c.14 minute walk south to Royal Northern College of Music. 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

4.26. 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

4.27. There are no Sites of Special Scientific Interest ('SSSI') 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') (MCC Core Strategy Policy EN15) are located within 1 km of the Site (Ashton Canal (West) and Rochdale Canal: Stott's Lane to Ducie Street Basin).

4.28. 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.

4.29. The Site is largely hard standing with small areas of overgrown vegetation which are of negligible ecological importance. As noted within the Ecological Impact Assessment report (Appendix 5), the Site is of negligible ecological importance for bats and no suitable bat roosting features were recorded. No evidence of other protected species has been found on the Site either.

### Flood Risk and Drainage

4.30. 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.

4.31. In addition, the Flood Risk Assessment (and Drainage Strategy) prepared by Roscoe sets out the flood risk for the Site associated with all types of flooding, which is summarised as follows:

- Fluvial (River Medlock) – Medium Risk.
- Pluvial (Surface Water) – Very low risk
- Overland Flow – Low risk
- Groundwater – Low risk
- Sewers (Public drainage network) – Very low risk
- Reservoirs – Extremely low risk

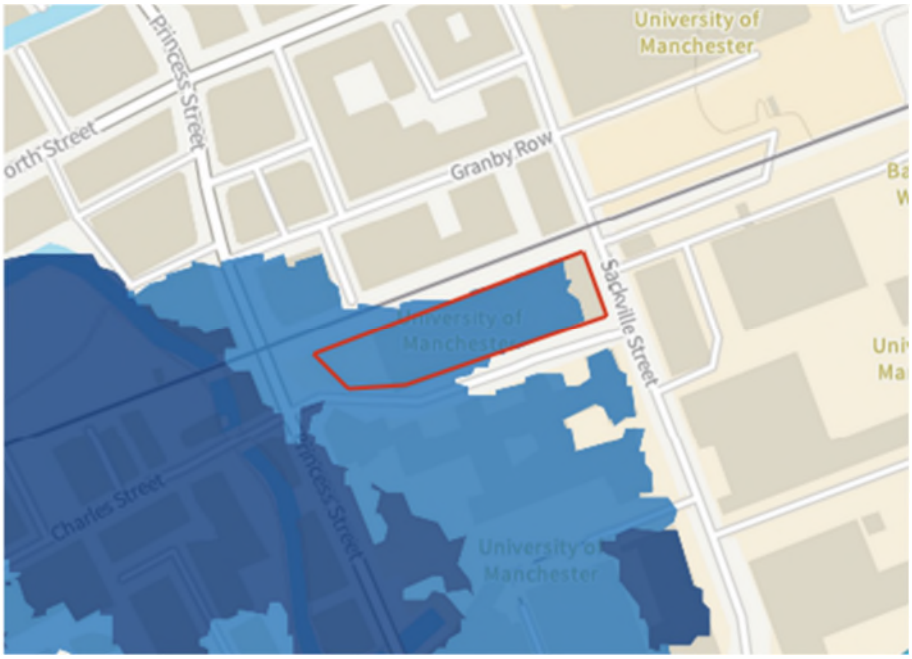



Figure 4.2 – UK Government Flood Map (Source: Flood Map for Planning Service, gov.uk)

4.32. 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

4.33. The Site does not contain any Listed Buildings or non-designated heritage assets and is not located within a Conservation Area. The Site is however, immediately adjacent designated heritage assets., The Site's northern boundary abuts the Whitworth Street Conservation Area (see Figure 4.3). George Street Conservation Area is located 430m to the north-west of the Site and St Peters Square Conservation Area is located 484m to the north-west of the Site.

4.34. 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.

4.35. The Renold Building, located east of the Site, has been recently designated as a Grade II listed building by Historic England.

4.36. MCC does not have a list of non-designated heritage assets, however, as part of the wider redevelopment of the Sister SRF Area, numerous assets have been identified, including the Butterfly Stairs, Manchester Meeting Place and the Pariser Building, all located east of the Site.

4.37. There are 101 Listed Buildings located within 500m of the Site. Figure 4.3 identifies these with a blue pin. Those indicated (listed and non-designated heritage assets) with a yellow number have been identified by SLHA as relevant to this planning application and are noted in Table 4.1.

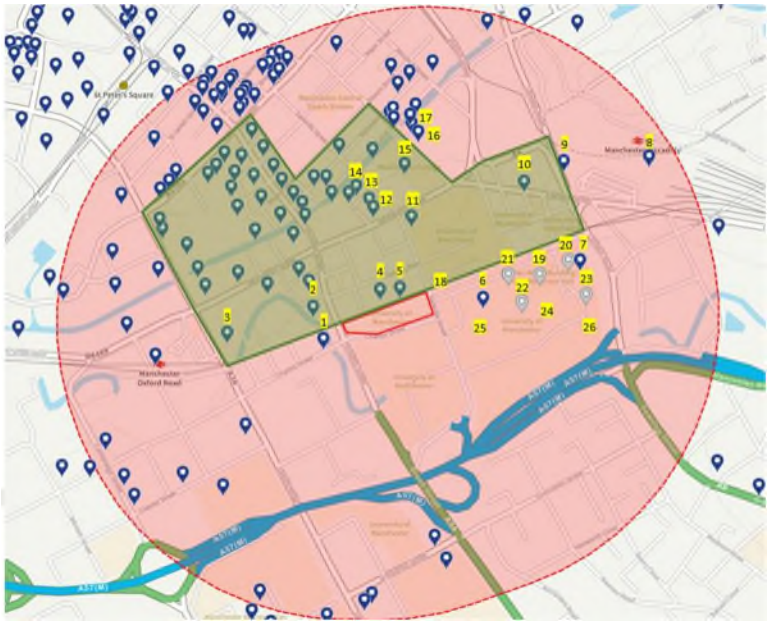


Figure 4.3 — Heritage Asset Map – the Site is identified in with a red outline, the Whitworth Street Conservation Area is shaded in green. Listed buildings are indicated with a blue pin, with the key heritage assets identified with a number in yellow. (Source: SLHA)

Table 4.1: Surrounding listed buildings and non-designated heritage assets

| Map No. | Location | Grade | List Entry Number |
|---|---|---|---|
| 1 | Lass O Gowrie Public House | II | 1293175 |
| 2 | Manchester House | II | 1270897 |
| 3 | Former Refuge Assurance Company | II | 1271429 |
| 4 | Orient House | II | 1200838 |
| 5 | Granby House | II | 1218253 |
| 6 | Renold Building, UMIST Campus | II | 1491623 |
| 7 | Sculptural Wall | II | 1400857 |
| 8 | Train Shed and Undercroft at Manchester Piccadilly Station | II | 1283014 |
| 9 | Former Goods Offices to Piccadilly | II | 1197919 |
| 10 | Police and Fire Station | II* | 1197918 |
| 11 | Institute Of Science and Technology | II | 1247609 |
| 12 | Regency House with Barclays Bank | II | 1254835 |
| 13 | 46, Sackville Street | II | 1247608 |
| 14 | 42 and 44, Sackville Street | II | 1270791 |

| Map No. | Location | Grade | List Entry Number |
|---|---|---|---|
| 15 | The Shena Simon Sixth Form | II | 1270607 |
| 16 | Minshull House | II | 1283092 |
| 17 | Minteirna House | II | 1197759 |
| 18 | Manchester South Junction and Altrincham Railway Viaduct | II | 1200837 |
| 19 | Barnes Wallis and Wright Robinson Building | Non-designated heritage asset, Certificate of Immunity | |
| 20 | Moffat Building | Non-designated heritage asset, Certificate of Immunity | |
| 21 | Butterfly Stairs and Walkway Bridge (formerly known as The Sir Hubert Worthington Stair) | Non-designated heritage asset, Certificate of Immunity | |
| 22 | Staff House (Manchester Meeting Place) | Non-designated heritage asset, Certificate of Immunity | |
| 23 | Morton Laboratory (Chemical Engineering Pilot Plant) | Non-designated heritage asset, Certificate of Immunity | |
| 24 | The Mill | Non-designated heritage asset | |
| 25 | Pariser Building | Non-designated heritage asset | |
| 26 | MSS Tower | Non-designated heritage asset | |

## Planning History

4.38. 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 - 03/03/1982 |
| 073558/FO/2004/C3 | Change Of Use from vacant unit to B1 (office) for a temporary period of 2 years | Approved – 06/06/2005 |
| 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. | Approved – 14/01/2021 |

| Reference | Description of Development | Status |
|---|---|---|
| 143741/FO/2025 | Demolition of existing multi-storey car park and associated commercial units (retail and sui generis bar uses) to prepare site for future development. | Approved – 04/12/2025 |

## The Proposed Development

4.39. The Proposed Development comprises the following elements:

- Erection of three interconnected blocks of 8, 10 and 38 storeys above ground, plus basement, with two connected basements (T1 and T2 & T3); T1 and T2 - connected at levels 1 to 8; T2 and T3 - connected at ground to level 2, with T3, including a two-storey podium.
- The buildings comprise 1,041 PBSA (Sui Generis) units, with supporting amenity space and associated cycle parking.
- At ground floor level, three flexible commercial units, totalling 659 sqm GEA, are proposed. The proposed uses are flexible Use Class E (commercial, business and service, excluding hot food).
- Creation of a significant provision of new public realm - including a new pedestrian boulevard along Altrincham Street a new public square at the gateway to Sister- and landscaping, access and other associated works, including works to the public highway along Charles Street.

4.40. The Proposed Development's design and materiality have been carefully considered to ensure a sensitive response to the surrounding context, complementing the existing character of Manchester City Centre. The project will deliver a wide range of benefits, aligning with the economic, social, and environmental dimensions of sustainable development as defined by the NPPF and local planning policy.

4.41. The proposed quantum of development is set out below:

Table 4.3: Proposed Quantum of Proposed Development

| Parameter | |
|---|---|
| Site Area (ha) | c. 0.6ha |
| Proposed new build height in storeys | Tower 1: 8 storeys (including ground) plus plant and basement.<br>Tower 2: 10 storeys including ground) plus plant and basement.<br>Tower 3: 38 storeys (including two storey plinth/ podium and ground) plus plant and basement. |
| Proposed new build height in AOD | Tower 1: 62.25m<br>Tower 2: 67.95 m<br>Tower 3: 148.75m<br>Tower 3 podium: 46.20m<br>Top of Colonnade: 40.00m |
| Proposed new build floorspace (total) | GEA: 38,536 sqm<br>GIA: 34,619 sqm |
| Total floorspace in each building | GEA:<br>o Tower 1: 4,876 sqm<br>o Tower 2: 4,795 sqm<br>o Tower 3: 28,865 sqm<br><br>GIA: |

| Parameter | |
|---|---|
| | o Tower 1: 4,336 sqm<br>o Tower 2: 4,178 sqm<br>o Tower 3: 26,105 sqm |
| Proposed no. PBSA bedspaces | Total units: 1,041<br>o Cluster: 720<br>o Studios: 321 |
| No. accessible PBSA bedspaces | No: 18 Studios (2% of total) |
| Total PBSA floorspace<br><br>*Calculated PBSA floorspaces excludes only footprint of commercial units* | GEA: 37,898 sqm<br>GIA: 34,007 sqm |
| PBSA residential amenity floorspace<br><br>*Calculated area of amenity includes: Entrances, Management Areas, WC's, Laundry* | NIA: 1,486 sqm |
| Location of PBSA amenity floorspace<br><br>*Calculated area of amenity includes: Entrances, Management Areas, WC's, Laundry* | Ground Floor – 637 sqm<br>Level 1 – 849 sqm |
| Flexible commercial floorspace (Use Class E)<br><br>*Net Internal Area measured to back of curtain wall mullions.* | GEA: c.659 sqm<br>Commercial Unit A: 137.5 sqm<br>Commercial Unit B: 241.5 sqm<br>Commercial Unit C: 280 sqm<br><br>NIA: c.592 sqm<br>Commercial Unit A: 123 sqm<br>Commercial Unit B: 218 sqm<br>Commercial Unit C: 251 sqm |
| Number of cycle spaces and location | 64 dedicated spaces in the basement. (6 accessible)<br><br>13 Sheffield stands located within the landscaping proposal providing 26 visitor spaces. |
| Number of DDA parking spaces and location | 2 DDA parking spaces located on Charles Street |
| Number of servicing bays and location | 2 Servicing bays located on Charles Street |
| Public Realm | • Creation of c. 1,000sqm public green space (Princess Square).<br>• Enhancement of green gateway at junction of Princess Street and Charles Street.<br>• Enhanced Altrincham Street as a primary pedestrian route.<br>• Retention of seven mature trees, removal of four trees, planting of 27 new trees; 500sqm new biodiverse green space; 800sqm improved existing green space.<br>• Improved pedestrian experience along Charles Street and Sackville Street. |

# 5. Construction Methodology and Programme

## Introduction

5.1. This Chapter of the ES has been prepared by RG Group and describes the proposed construction programme and the likely key activities that will be undertaken. Detailed consideration of potential impacts during the construction process and any necessary mitigation measures are provided in each relevant chapter of the ES. It should be read in conjunction with Figure 5.1 (Site Logistics Plan).

5.2. The main aim throughout the construction 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 construction 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 Construction Management, Construction Phase Health and Safety, Environmental Management as well as Site Waste Management, Logistics and Traffic Management.

## Programme

5.4. Subject to planning permission, the total construction programme will span a period of approximately 3 years incorporating the main works (c.149 weeks). Within this period there will be piling, ground works and foundations, frame construction, façade cladding, internal fit-out, landscaping and works to the existing Arches. Whilst there are several points that will determine the final programme and sequencing at the Proposed Development, the target plan is to split the development 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. Please note Planning permission has been granted in a separate application in relation to the demolition of the existing structures (MSCP and retail units) on the Plot H site (under planning permission 143741/FO/2025, approved 04/12/2025). The works are estimated to progress between February – July 2026.

## New Build Construction

5.6. Following demolition and ground works, the construction of the new blocks will commence.

5.7. Consists of the delivery of a 38-storey PBSA tower and landscaped areas.

5.8. The overall estimated timescale to deliver is between July 2027 and May 2030.

5.9. The outline construction methods and timescales are as follows:

- Substructure: Summer 2027 – Winter 2028, comprising:
    - Installation of CFA piles
    - Basement Contiguous Piling

  - Creation of ground floor slab and associated retaining structures
  - Crane Bases
  - Drainage & Services
- Superstructure: Autumn 2027 – Spring 2029
  - Insitu concrete core that will either be built using a jump form method that will be constructed on a level-by-level basis ahead of the main concrete frame or, the alternative method is slipform with the core constructed to full height prior to the main frame commencing.
  - Insitu concrete frame, constructed on a level-by-level basis using table framework to install reinforcement and pour the concrete for each floor level. One or two tower cranes will be utilised to lift all materials in place and move table form to various levels during construction. A concrete pumper will be used to pump concrete from ground level to the required pour level.
- Façade and Roofing: Autumn 2028 – Spring 2029
  - The façade is pre-cast concrete system. The façade will be prefabricated off site in a quality-controlled environment and delivered to site as a complete panel; a series of panels will make up the façade per level. On completion of the frame, each pre-cast panel will be lifted into place via the tower cranes. The façade will be installed level by level working bottom to top.
  - The roofing is a hot melt applied system to be installed following completion of the insitu concrete roof slab once cured and moisture content at the appropriate level.
- Internal Fit Out: Spring 2028 – Winter 2029
  - All core spaces will be complete including lift lobbies, lifts and toilets, fit out will also include lower ground floor servicing and lobby areas.
- Commissioning: Winter 2029 – Spring 2030
  - Commissioning of all electrical, mechanical and plumbing systems including associated witness testing, QA compliance and compliance with third parties including fire officer, building control and facilities management. During this period, the O&Ms will be finalised, QA checked and issued.
- S278 External Works: Winter 2029 – Spring 2030
  - Landscaping and external works will commence during the fit-out stages following completion of the structure and façade. Externals will be phased to allow continual access for material delivery and working around welfare arrangements.
- Building to be Operational: September 2030

## Hours

5.10. 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 0830hrs to 1400hrs on Saturday. Outside of these hours, any works that take place will have been agreed in advance with the Council. Access to Site will be permitted 30 minutes prior to the working day commencing with noise kept to a minimum for the first hour of each shift. Any further out of hours working will be generally limited to internal fit out operations.

5.11. The close 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.

## Construction Methodology

5.12. The following is a brief overview of the methodology to be adopted for the demolition, construction and fit out of the Proposed Development. This section also considers general logistics as well as traffic management for the movement of material for the disposal of waste.

## Demolition Methodology

5.13. 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.

## Site Logistics

### Site Layout

5.14. As far as is reasonably practicable and appropriate, the site layout and appearance will be designed using the following principles:

a) The site will be fully secure by the use of a solid hoarding of timber/metal or plastic.

b) Site lighting will be located and directed so as not to intrude into adjacent properties or create a road hazard.

c) Security cameras will be sited and directed so that they do not intrude into adjacent properties.

### Site Hoarding

5.15. The site hoardings will accord with the following principles:

a) The hoarding linking directly with a street will extend to the kerb, closing off the pavement.

b) The hoarding will be 2.4m minimum height, plywood faced, timber frame hoarding, suitably painted.

c) The hoarding may be increased in height to form an enhanced acoustic screen, where required or imposed by planning.

d) Notices will be displayed on all site boundaries where appropriate to warn of hazards on site such as deep excavations, constructions, access etc.

e) Appropriate sight lines/visibility splays will be maintained to ensure that the safety of both vehicles and pedestrians is preserved.

f) Temporary fences may be used in certain circumstances to allow short-term works to be undertaken.

g) Prior to the completion of the work, reinstatement plans will be agreed with Manchester City Council and in reference to 3.0e above.

h) The hoarding can be located without interfering with or damaging trees outside the site boundary.

i) All licenses will be applied for in good time with Manchester City Council.

5.16. Refer to Figure 5.1 for further details.

### Wheel Washing

5.17. It is of the highest importance that debris is not transferred on to the carriageway. All delivery vehicles will enter and exit the site using the vehicle gates, near the exit gate there will be a wheel wash station where jet washing will be provided on either a metal surface or compacted stone.

5.18. Every vehicle leaving site will be inspected by a site officer and all debris removed using the jet washer. Regular inspections will be undertaken by the site manager and mechanical sweeper deployed to remove all debris tracked from the site. The route the sweeper is to take will be the approved construction and delivery route detailed within this report.

5.19. To compliment and log this, daily checks are recorded, and the presence of a full-time gateman ensures any infringements are dealt with before a vehicle leaves the site or is responded to should any materials be tracked onto the highway despite mitigation put in place.

## Project Accommodation

5.20. The site accommodation, including welfare, drying rooms and offices for the initial works (groundworks, superstructure) are planned as per figure 1. Thereafter we would look to relocate the site welfare facilities into the ground floor / cycle store areas of the new development. The location of the site welfare will need to be off site following the relevant approval from the local authority.

## Vertical Transportation

5.21. It is currently envisaged that the project will require a tower crane and 3 no twin goods and passenger hoist, details to follow. The locations and details of which are shown in figure 1 below.

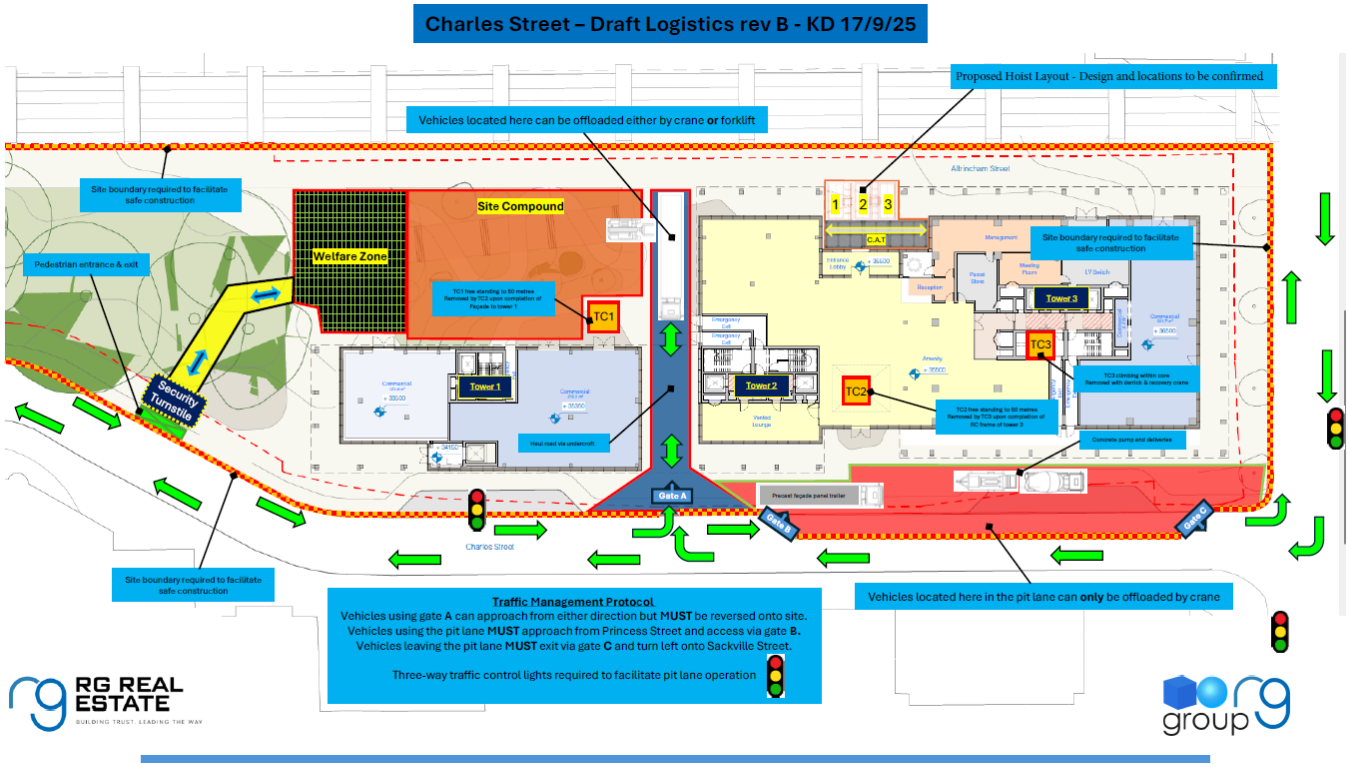



Figure 5.1: Logistics Strategy

## Demolition and Construction

5.22. The works generally comprise the following:

- Site establishment including site hoardings and site welfare
- Service diversions and isolations
- Soft strip and asbestos removal will be complete prior to this phase
- Temporary retaining structures
- Scaffold installation
- Demolition
- Removal of foundations

- Ground remediation and ground formation
- Creating of piling mat substrate and formation of tower crane bases
- Substructure
- CFA & bored piling to the site perimeter with associated temporary propping
- Creation of retaining structures
- Ground Beams, capping beams and basement slab and drainage
- Superstructure
- Installation of tower crane(s)
- Construction of in-situ concrete core, by slipform construction
- In-situ concrete superstructure to roof level
- Pre-cast concrete Façade
- Roof covering
- Installation of roof plant
- Fit out to scope
- Installation of internal mechanical and electrical systems including main lifts
- Installation of BMU
- Removal of tower crane(s)
- Completion of internal finishes to communal space
- Removal of permanent hoardings and temporary gates
- Landscaping
- Completion of public realm & S278
- Decant from site and opening of the development

## Traffic Management Plan

5.23. The aim of this part of the plan is to provide an overview of the expected logistical activities and their control during the construction of the project. Traffic management is a high-risk element and requires close control. At all times the contractor will have trained and experienced banks person on hand to assist with any reversing and offloading within site boundaries. Specific care will be taken of pedestrians and cyclists.

5.24. Pedestrians and vehicles will be carefully segregated with physical barriers used at all times. All deliveries will be planned and will follow a set protocol. The safe collection and delivery of goods, materials, plant and waste will require cooperation and exchange of information between all parties in the supply chain. This cooperation will be achieved via planned deliveries which will be staggered to avoid peak rush hour traffic periods. In addition, secure storage for tools etc. will be provided on site to reduce the reliance on delivery vans.

5.25. We will operate a detailed traffic management plan separate from this CMP which highlights the following:

a) Timely deliveries to suit construction activities and local traffic hotspots / times which will avoid peak times.

b) Size and weight of deliveries.

c) Designated delivery routes to minimise the impact on the community.

d) Designated delivery time to promote a strong discipline, create a ‘no surprises’ regime and to

minimise disruption.

e) Dedicated and qualified slinger/signaler and banksman to ensure the safe and monitored handling of each delivery.

f) Only using qualified operators when operating plant.

g) Dedicated public liaison / logistics coordinator who approves each delivery.

5.26. Please note certain movements such as temporary accommodation, piling rigs, tower crane installation and de-rig will require out-of-hour permission. These will be coordinated with the Police, The Contractors Environmental Health Officer (EHO) and NCC Highways & Transport in advance of the works being carried out. Please refer to Appendix 5.1 (CEMP) for further details regarding the traffic management plan.

## Site Security and Safety

5.27. 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.

5.28. 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.

5.29. Vandalism and theft of plant, equipment, materials and fuel is possible throughout the duration of the development. 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 metal turnstiles access system controlled by an individual facial recognition system.

5.30. 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

5.31. 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, dusk, emission and light).
- Public relations.]

5.32. All topics have been identified and expanded in further detail within Appendix 5.1 (CEMP).

## Environmental Legislation

5.33. 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

5.34. Procedures will be established to ensure the prevention of water and ground pollution relating to the following risk activities:

- De-watering of the site (if required).

- Soil contamination remediation.
- Earthworks (including piling, spoil movement and removal, and movement of contaminated soils).
- Concrete works (including washing out of concrete delivery vehicles and pumps).
- Storage and movement of fuels, oils, chemicals and other such fluids.
- Cleaning (including plant, machinery and wheel washing).

## Nuisance (Noise, Vibration & Dust)

### Noise & Vibration

5.35. The objectives of the noise and vibration management plan are (as far as reasonably practicable), to seek to control and limit noise and vibration level. This is so that affected properties and other sensitive parties are protected from excessive noise and vibration levels associated with the construction activities.

5.36. Prior to the works commencing on site, noise and vibration surveys will be undertaken for a minimum of one continuous week. Noise and vibration monitoring will begin prior to demolition and will continue until the internal fit-out commences.

5.37. The results of the continuous monitoring will form part of the monthly report to the client team and will help identify any 'spikes', highlighting the cause along with the offsetting measure required. In order to minimise the noise, the Contractor will likely provide the following:

- Any compressors brought on to the Site to be silenced, or sound reduced models fitted with acoustic enclosures.
- All pneumatic tools to be fitted with silencers or mufflers were available.
- Care to be taken when unloading vehicles to minimise noise. Delivery vehicles to be routed to minimise disturbance to local residents. Delivery vehicles to be prohibited from waiting within or in the vicinity of the Site with their engines running.
- All plant items to be properly maintained and operated according to manufacturers' recommendations in such a manner as to avoid causing excessive noise.
- Where possible, all plant to be sited so that the noise impact at nearby noise sensitive properties is minimised.
- Local hoarding, screens or barriers to be erected as necessary to shield particularly noisy activities.
- Project is utilising prefabricated façade panels that will equate to minimising deliveries to Site, crane operated installation and reduced site labour.

5.38. In order to minimise the vibration, the Contractor will likely provide the following:

- Adoption of low vibration working methods. Consideration should be given to use of the most suitable plant.
- Where processes could potentially give rise to significant levels of vibration, on-site vibration levels should be monitored regularly by a suitably qualified person.
- Where piling is to take place, any obstructions should first be removed.
- Off-site manufacture of façade panels and crane lift install

### Dust

5.39. The contractor will seek to control and limit emissions and pollutants from vehicles and plant used on the site, including dust from construction activities. The contractor will identify potential sources of emissions to the

atmosphere and apply appropriate control techniques and implement measures to reduce the impact of dust, in a timely manner.

## Public Relations

5.40. 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 piling and tower crane erection due to the close proximity of adjacent residential schemes. The Contractor will display a contact number on hoardings which will be operational 24/7. The Contractor will be obliged to follow the Considerate Constructor's Scheme.

## Waste Management Strategy

5.41. A Site Waste Management Plan (SWMP) will be developed by the principal contractor and agreed with Manchester City Council.

## Site Waste Management Plan

5.42. The works will be undertaken in such a way that, as far as is reasonably practicable, the amount of spoil and waste (including ground water, production water and run- off) to be disposed of will be minimised, and any waste arising from the site will be properly categorised and dealt with in accordance with the appropriate legislation and guidance.

5.43. The measures to be considered for the project include:

a) A formal and detailed Site Waste Management Plan (SWMP) will be developed by the contractor.

b) The disposal of all waste or other materials removed from the site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974, Environment Act 1995, Special Waste Regulations 1996, Duty of Care Regulations 1991 and Waste Management Regulations 2006.

c) In general, and in accordance with the principles of the UK Government 'Waste Strategy 2010', a principal aim during construction will be to reduce the amount of waste generated and exported from the site.

d) This approach complies with the waste hierarchy whereby the intention is to first minimise, then treat at source or compact and finally dispose of waste off-site as necessary. All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

e) Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging 'take-back' scheme.

f) Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of damage and therefore the disposal of waste.

g) Attention to material quantity requirements to avoid over-ordering and therefore generation of waste materials.

h) Segregation of waste at source where practical.

i) Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re- sale for direct re-use or re- processing).

5.44. Please refer to Appendix 5.1 (CEMP) for further details.

# 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 Development 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 1 | | |
|---|---|---|
| | 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 November 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 autumn when trees have dropped some of their leaves. 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 4 is assessed qualitatively based on information and material available in the ID Manchester Strategic Regeneration Framework (SRF). The Illustrative Masterplan on page 23 of the SRF informs commentary on possible scale, mass and height of proposed buildings.

6.9. The baseline position assumes that the existing multi storey car park has not been demolished, thus enabling direct comparison between before and after visualisations.

## Relevant Legislation, Policy and Guidance

6.10. 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

### 6.10.1. The European Landscape Convention

6.11. 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.

6.12. 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

### 6.12.1. National Planning Policy Framework (2024)

6.13. 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".

6.14. 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".

6.15. 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"

### 6.16.1. 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

### 6.17.1. 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

### 6.25.1. 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

## 6.26.1. 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.

## 6.33.1. 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:

6.36. A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities

6.37. A highly skilled city: world class and home-grown talent sustaining the city's economic success

6.38. A progressive and equitable city: making a positive contribution by unlocking the potential of our communities

6.39. A liveable and low carbon city: a destination of choice to live, visit, work

6.40. A connected city: world class infrastructure and connectivity to drive growth

## Assessment Methodology and Significance Criteria

### Scenarios Tested

6.41. The following scenarios are tested in this report.

| | |
|---|---|
| **Scenario 1** | Existing Baseline |
| **Scenario 2** | Existing Baseline + Proposed Development |
| **Scenario 3** | Existing Baseline + Proposed Development + Cumulative |
| **Scenario 4** | Existing Baseline + Proposed Development + Cumulative + IDM Masterplan |

### The Study Area

6.42. 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.

### Source of Effect

6.43. The Proposed Development is taller with a footprint that differs from the existing. 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.

6.44. Comprehensive changes to the public realm may also impact the street network and the way people move around The Site and its vicinity. This includes the opening up of Altrincham Street and enhancements to Charles Street.

### Significance Criteria

6.45. As recognised by GLVIA3, the effects of The Proposed Development 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.

6.46. 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 2:

| | | 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 |

6.47. 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 a proposed development 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.

6.48. 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 Development;
- 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

6.49. 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 Development. The establishment of baseline townscape and visual conditions including any changes likely to occur independently of The Proposed Development, 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 Development. The assessment considers impacts during construction and on completion, once operational. Residual effects consider the effects post completion with mitigation in place.

6.50. The TVIA has been completed as part of an iterative design process with a team of multi-disciplinary professionals. This has included the consideration of mitigation measures to avoid and reduce where possible, any adverse townscape or visual effects resulting from The Proposed Development.

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

## Baseline Conditions

6.52. This section describes receptors that could be impacted by the proposed development and should be read in conjunction with Appendix 6.2 and 6.3, where judgements on value and susceptibility are also noted.

### 6.52.1. Urban Grain (refer to Appendix 6.3, figure 1.3)

6.53. Plot H is located within an area of the city where urban grain is mixed and influenced by the presence of key road and rail transportation routes. To the north, beyond the railway line, grain is tight, reflecting the more traditional streets and historic core of the city centre. To the south, beyond Mancunian Way, grain is more varied and looser as land use accommodates both more modern residential streets as well as commercial and educational use associated with the university. In the pocket of land contained by the railway, London Road, Mancunian Way and Princess Street, grain is defined by educational and leisure uses connected to the university. The campus setting also means that public space is prevalent and further loosens the grain.

6.54. Inside the Plot H boundary, the multi-storey car footprint dominates meaning that grain is limited.

### 6.54.1. Land Use (refer to Appendix 6.3, figure 1.4)

6.55. Locally, the predominant land uses are education and residential with The Site itself being categorised as “other” and greenspace, reflecting the car park and mature trees. To the immediate north, beyond the railway line, residential use on Granby Row takes the form of apartments in listed buildings, whereas to the immediate south, it comprises hotel accommodation. Moving towards the city centre, commercial use becomes more commonplace and the retail core easily identified.

6.56. To the north east is Piccadilly station which serves as a key strategic transport hub for the city.

### 6.56.1. Building Heights (refer to Appendix 6.3, figure 1.5)

6.57. There is much variety within this part of the city and within the immediate surrounds of the Plot H boundary. High rise development over the last decade has altered Manchester’s skyline meaning that the historic, low rise built form of up to circa seven storeys, is now experienced with the backdrop of towers such as iQ Echo Street to the east of Plot H and Number 3 Circle Square (90-100m) which sits circa 300m west of The Site.

6.58. Building heights within the Plot H boundary is defined by the multi storey car park which is categorised as 11-20m tall.

### 6.58.1. Public Realm and Streetscape (refer to Appendix 6.3, figure 1.2 & 1.3)

6.59. In terms of connectivity, the railway line passes immediately along the northern edge of the Plot H boundary on an east-west axis, with Manchester Piccadilly Station located about 500m to the north east of The Site. This railway line serves as primary public transport routes for people travelling into and out of the City Centre. Manchester Piccadilly Metrolink stop is also located within the train station, forming an additional point of arrival into the city and in close proximity to The Site.

6.60. The street network is influenced by key arterial routes that radiate from the city centre and broadly follow a north-south alignment. Plot H is directly connected to Princess Street in the west and Sackville Street in the east. Perpendicular to these routes are Altrincham Street and Charles Street. The former is fenced off inside the Plot H boundary but beyond this, connects The Site to the SRF Masterplan area and London Road, thus establishing a legible link to public amenities such as Piccadilly Station and Mayfield Park. Altrincham Street is recognised as a TFGM cycleway which has connections (albeit fragmented) across the city centre. In the opposite direction, Charles Street connects The Site to Oxford Street in the west.

### 6.60.1. Site Character (refer to Appendix 6.3, figure 1.1)

6.61. Owing to its use as a multi storey car park, The Site has limited character. Built form is architecturally non-descript and public realm is either inaccessible (Altrincham Street) or spatially restricted (Charles Street). Mature trees to the western end of The Site support green amenity and biodiversity. Public realm below these trees is however poor quality and unwelcoming.

6.62. Whilst The Site itself is not character rich, the influence of nearby heritage assets can be felt and offers untapped potential.

### 6.62.1. Visual Amenity (refer to Appendix 6.2)

6.63. Given its city centre location, close to the transport hubs of Manchester Piccadilly Metrolink and rail station, many people pass by and through The Site and experience a transient view of Plot H. The Proposed Development 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 (SRF View B)
4. Altrincham Street
5. Sackville Street
6. Charles Street at Lass O' Gowrie pub
7. Princess Street
8. Sackville Gardens (SRF view 5)
9. Chorlton Street (SRF view 2)
10. London Road (SRF view 3)
11. Fairfield Street (SRF view 4)
12. Altrincham Street
13. Mancunian Way
14. Skerry Close
15. Mancroft Walk
16. Oxford Road
17. Upper Brook Street
18. Oxford Road Station

## Identification and Evaluation of Likely Significant Effects

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

### Construction Phase

6.1. Construction of The Proposed Development 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
- Erection of site hoardings to The Site perimeter
- Construction of three, albeit linked buildings
- Changes to ground level public realm including creation of new footway along Charles Street
- Installation of signage associated with new in-carriageway cycle route
- The coming and going of construction traffic
- Tree surgery to retained mature trees
- Lighting to enable works to continue after dark

6.2. Potential visual effects are outlined in Appendix 6.2 and townscape effects detailed in Appendix 6.3. The assessment is also summarised in Table 3 at the end of this section.

### Operational Phase

6.3. On completion of the construction phase and commencement of building operation, the following may have an impact on townscape and visual receptors:

- Presence of tall residential buildings, 30, 10 and 8 storeys high
- The opening up of Altrincham Street to pedestrians
- New ground level public realm

6.4. Potential visual effects are outlined in Appendix 6.2 and townscape effects detailed in Appendix 6.3. The assessment is summarised in Table 3 below. As required by the EIA Regulations (2017), “moderate or above” effects are deemed to be significant and so these are underlined. Colouring is used to help explain the severity of significance and is explained in Appendix 6.1, Table 1.9. Cells are outlined in pink to illustrate where significance has increased on the preceding scenario.

6.5. Generally, change will be beneficial to townscape receptors because the baseline is of low quality. The multi storey car park offers little architectural merit and presents poorly onto the street scene. The Proposed Development will reinstate a legible grain that may be navigated more easily by pedestrians and cyclists. The strength of change will increase as the IDM Masterplan is implemented, creating a more cohesive neighbourhood.

6.6. Where impacts on visual receptors have a moderate significance or greater, impacts are predominantly neutral or beneficial. This includes viewpoints 1 and 3 – 8. From more distant locations (viewpoints 10 -18) significance is lower because of intervening buildings restricting the amount of development visible and therefore limiting the magnitude of change.

| Table 3: Summary Table | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Receptor** | **Value** | **Susceptibility** | **Sensitivity** | **Magnitude (M)**<br>**Significance (S)**<br>**Nature of effect (N)** | | | |
| **Townscape** | | | | | | | |
| | **Scenario 1** | | | **Scenario 2** | | **Scenario 3** | **Scenario 4** |
| | **Baseline** | | | **Construction** | **Site operational** | **Cumulative** | **Cumulative + IDM SRF** |
| **Urban grain** | Low | Low | Low | M = Minor<br>S = Minor<br>N = Neutral | M = Moderate<br>S = Min/mod<br>N = Beneficial | M = Moderate<br>S = Min/mod<br>N = Beneficial | M = Moderate<br>S = Min/mod<br>N = Beneficial |
| **Land use** | Low | Low | Low | M = Minor<br>S = Minor<br>N = Neutral | M = Moderate<br>S = Min/mod<br>N = Beneficial | M = Moderate<br>S = Min/mod<br>N = Beneficial | M = Moderate<br>S = Min/mod<br>N = Beneficial |
| **Building height** | Low | Low | Low | M = High<br>S = Mod/major<br>N = Neutral | M= High<br>S = Mod/major<br>N = Neutral | M = High<br>S = Mod/major<br>N = Neutral | M = Substantial<br>S = Mod/major<br>N = Beneficial |
| **Public realm and streetscape** | Low | Low | Low | M = Minor<br>S = Minor<br>N =Neutral | M = High<br>S = Moderate<br>N = Beneficial | M = High<br>S = Moderate<br>N = Beneficial | M = Substantial<br>S = Mod/major<br>N = Beneficial |
| **Site character** | Medium | Low | Low/Med | M = High<br>S = Moderate<br>N = Neutral | M = High<br>S = Moderate<br>N = Beneficial | M = High<br>S = Moderate<br>N = Beneficial | M = High<br>S = Moderate<br>N = Beneficial |
| **Visual** | | | | | | | |
| Viewpoint 1) Granby Row at Orient House | High | Low | Medium | M = Minor<br>S = Minor/mod<br>N = Adverse | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Moderate<br>S = Moderate<br>N = Neutral | M = Moderate<br>S = Moderate<br>N = Beneficial |
| Viewpoint 2) Granby Row at Granby House | High | Low | Medium | M = Moderate<br>S = Moderate<br>N =Adverse | M = High<br>S = Mod/major<br>N = Neutral | M = High<br>S = Mod/major<br>N = Neutral | M = High<br>S = Mod/major<br>N = Neutral |
| Viewpoint 3) Vimto Park | High | Low | Medium | M = Moderate<br>S = Moderate<br>N = Adverse | M = Moderate<br>S = Moderate<br>N =Neutral | M = Moderate<br>S = Moderate<br>N = Neutral | M = Major<br>S = Mod/major<br>N = Beneficial |
| Viewpoint 4) Altrincham Street | Medium | Low | Low/Med | M = High<br>S = Moderate - Mod/major<br>N = Adverse | M = High<br>S = Moderate - Mod/major<br>N =Neutral | M = Substantial<br>S = Mod/major - major<br>N = Neutral | M = Substantial<br>S = Mod/major - major<br>N = Beneficial |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Viewpoint 5) Sackville St | Low | Low | Low | M = High<br>S = Moderate<br>N = Adverse | M = High<br>S = Moderate<br>N = Beneficial | M = High<br>S = Moderate<br>N = Beneficial | M = Substantial<br>S = Mod/major<br>N = Beneficial |
| Viewpoint 6) Charles St | Low | Low | Low | M = High<br>S = Moderate<br>N = Adverse | M = High<br>S = Moderate<br>N = Beneficial | M = Substantial<br>S = Mod/major<br>N = Beneficial | M = Substantial<br>S = Mod/major<br>N = Beneficial |
| Viewpoint 7) Princess St | High | Medium | Med/High | M = Minor<br>S = Minor/mod<br>N = Adverse | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral |
| Viewpoint 8) Sackville Gardens | High | Medium | Med/High | M = Moderate<br>S = Mod/major<br>N = Neutral | M = Moderate<br>S = Mod/major<br>N = Neutral | M = Moderate<br>S = Mod/major<br>N = Neutral | M = Moderate<br>S = Mod/major<br>N = Neutral |
| Viewpoint 9) Chorlton St | Medium | Medium | Medium | M = No change<br>S = n/a<br>N = n/a | M = No change<br>S = n/a<br>N = n/a | M = No change<br>S = n/a<br>N = n/a | M = No change<br>S = n/a<br>N = n/a |
| Viewpoint 10) London Rd | Medium | Low | Low/Med | M = Minor<br>S = Minor – Min/mod<br>N = Neutral | M = Negligible<br>S = Negligible<br>N = Neutral | M = Minor<br>S = Minor – Min/mod<br>N = Neutral | M = Minor<br>S = Minor – Min/mod<br>N = Neutral |
| Viewpoint 11) Fairfield St | Medium | Medium | Medium | M = Minor<br>S = Minor/mod<br>N = Adverse | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral |
| Viewpoint 12) Altrincham Street | High | Low | Medium | M = Minor<br>S = Minor/mod<br>N = Adverse | M = Minor<br>S = Minor/mod<br>N = Beneficial | M = High<br>S = Mod/major<br>N = Neutral | M = High<br>S = Mod/major<br>N = Neutral |
| Viewpoint 13) Mancunian Way | Low | Low | Low | M = Negligible<br>S = Neg/minor<br>N = Neutral | M = Negligible<br>S = Neg/minor<br>N = Neutral | M = High<br>S = Moderate<br>N = Neutral | M = High<br>S = Moderate<br>N = Neutral |
| Viewpoint 14) Skerry Close | Low | Low | Low | M = Minor<br>S = Neg/minor<br>N = Neutral | M = Minor<br>S = Neg/minor<br>N = Neutral | M = Moderate<br>S = Minor/mod<br>N = Neutral | M = Moderate<br>S = Minor/mod<br>N = Neutral |
| Viewpoint 15) Mancroft Walk | Low | High | Medium | M = Moderate<br>S = Moderate<br>N = Adverse | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Moderate<br>S = Moderate<br>N = Neutral | M = High<br>S = Mod/major<br>N = Neutral |
| Viewpoint 16) Oxford Road | Low | Low | Low | M = Moderate<br>S = Minor/mod<br>N = Adverse | M = Moderate<br>S = Minor/mod<br>N = Beneficial | M = Moderate<br>S = Minor/mod<br>N = Beneficial | M = Moderate<br>S = Minor/mod<br>N = Beneficial |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Viewpoint 17) Upper Brook Street | Low | Low | Low | M = Negligible<br>S = Neg/minor<br>N = Neutral | M = Negligible<br>S = Neg/minor<br>N = Neutral | M = Moderate<br>S = Minor/mod<br>N = Neutral | M = Moderate<br>S = Minor/mod<br>N = Neutral |
| Viewpoint 18) Oxford Road Station | Medium | Medium | Medium | M = Negligible<br>S = Minor<br>N = Neutral | M = Negligible<br>S = Minor<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral | M = Minor<br>S = Minor/mod<br>N = Neutral |

## Cumulative Effects

6.7. As part of scenario 3, a total of 41 committed developments have been subject to the cumulative assessment, which is included in Appendix 6.2 and 6.3. Location of these developments is included within Appendix 6.4.

- 4) Barclay House
- 5) The Republic, Baring Street
- 6) First Street, Plot 10b
- 9) The Fairfax
- 10) One Medlock Street
- 11) 32-34 Laystall Street
- 12) The Joinery
- 13) One Port Street
- 14) No.2 St Michael's, Jacksons Row
- 15) Larad's Still
- 17) Energy Centre
- 18) Sister, Plot C
- 20) Student Castle, Hulme Street
- 23) Metropolitan University Library
- 24) Land between Upper Brook Street, Kincardine Road and Grosvenor Street
- 25) The Poulton
- 26) Union Building, 12 Piccadilly
- 27) Hotspur House
- 28) Mayfield Baring Street car park
- 29) Cambridge Halls
- 30) Sparkle Street
- 31) M1 Piccadilly, 47 Store Street
- 32) First Street, Plot 10a
- 33) 50 Fountain Street
- 34) Apex Tower

- 35) 50-56 Great Bridgewater Street
- 36) Plot 11, Block C, First Street South
- 37) First Street, Plot 9b
- 38) Mayfield Plots J and K, Hoyle Street
- 39) Land bounded by Upper Brook Street, Cottenham Street and Kincardine Road
- 40) Uno (formerly One City Road)
- 41) Vision, 10-12 Whitworth Street West
- 42) Viadux, Phase 2
- 43) Ferrous, Chapletown Street
- 44) Curlew Student Hulme, Boundary Lane
- 45) Great Northern Warehouse
- 46) 2-4 Whitworth Street West
- 47) Hilton Motto Hotel, Laystall Street
- 49) 140 Great Ancoats Street
- 50) Manchester Digital Campus
- Weston Student Halls & Pendulum Hotel, 78 Sackville Street

### Construction and Operational Phases

6.65. Scenario 3 considers in combination effects when The Proposed Development is reviewed alongside other committed developments, local to the Site. Cumulatively, nature of effect on townscape and visual receptors remains the same as identified under scenario 2, however significance generally increases. This is because some committed development tall and so multiple new buildings will be viewed at once, thus increasing magnitude of change and the resulting significance.

6.66. Scenario 4 considers in combination effects when The Proposed Development is experienced in the context of committed developments plus, the ID Manchester masterplan completed. On the whole, completion of the masterplan will realise a strategic vision for this part of the city and see the implementation of considered and cohesive public realm and built form, thus having a beneficial effect on townscape receptors. Having implemented the masterplan, significance of effect on visual receptors generally increases on the scenario 3 position because there will be more tall buildings within many of the views. Nature of effect remains consistent, or changes to beneficial as tall buildings are provided with a relatable setting.

## Mitigation Measures

### Construction Phase

6.8. In advance of a construction 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 at ground level
- 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

6.1. As the project has evolved and been refined, the following considerations have been embedded into the design of the built form and external surroundings to The Proposed Development:

- An evolution of the building massing moving away from three towers of similar height and scale, as shown by the SRF's indicative masterplan. Massing is adjusted and redistributed to the east, thus minimising visual impact on residential receptors to the west.
- New public realm, including reinstatement of Altrincham Street and enhancement to Charles Street creates a series of connected outdoor spaces and supports inclusive access.
- Retention of mature trees to western end of The Site
- Façade materials have been selected to reflect local character whereby white concrete dominates the former UMIST campus. (in contrast to the red brick that characterises areas to the north of the railway viaduct)
- Lighting supports usability of public realm around the clock

## Residual Effects

6.67. As required by the EIA Regulations (2017), "moderate or above" are deemed to be significant and therefore relevant townscape and visual receptors (as underlined in Table 3) are reported below. Residual effects relate only to scenario 2 as there is insufficient information available to consider scenarios 3 and 4 at depth.

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Scenario 2: Construction | | | | |
| Moderate – mod/major adverse | Viewpoint 4) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate – mod/major adverse, temporary |
| Moderate adverse | Viewpoint 2) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate adverse, temporary |
| Moderate – mod/major neutral | Viewpoint 3) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate – mod/major neutral, temporary |
| Moderate – mod/major neutral | Viewpoint 5) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate – mod/major neutral, temporary |
| Moderate – mod/major neutral | Viewpoint 6) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate – mod/major neutral, temporary |

| | | | | |
|---|---|---|---|---|
| Moderate – mod/major neutral | Viewpoint 15) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate – mod/major neutral, temporary |
| Moderate/major neutral | Viewpoint 8) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate/major neutral, temporary |
| Moderate/major neutral | Building heights | None | n/a | Moderate/major neutral, temporary |
| Moderate neutral | Site Character | Solid site hoardings and maintenance of tidy construction site. | Hoarding and maintenance is responsibility of works contractor. | Moderate neutral, temporary |
| Scenario 2: Baseline + Proposed Development | | | | |
| Moderate – mod/major neutral | Viewpoint 4) Altrincham Street | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate – mod/major neutral, permanent |
| Moderate/major neutral | Viewpoint 8) Sackville Gardens | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate/major neutral, permanent |
| Moderate neutral | Viewpoint 3) Vimto Gardens | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate neutral, permanent |
| Moderate neutral | Building height | Move away from three equal sized towers as per the IDM Masterplan SRF | n/a | Moderate neutral, permanent |
| Moderate beneficial | Viewpoint 5) Sackville Street | Building materials acknowledge local vernacular. Greening at street level. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Viewpoint 6) Charles Street | Massing evolved away from three equal sized towers as per the IDM Masterplan SRF. Building materials acknowledge local vernacular. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Public Realm & streetscape | Reinstatement and enhancement of key connections. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Site Character | Architectural design and building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |

## Monitoring

6.68. Not required

## Reference List


6.69. Guidelines for Landscape and Visual Impact Assessment, third edition, Landscape Institute and the Institute for Environmental Management and assessment, 2013.

6.70. Technical Advice Note 06/19 Visual Representation of Development Proposals, The Landscape Institute.

6.71. Technical Advice Note 05/17 Townscape Character Assessment, The Landscape Institute.

# 7. Heritage

## Introduction

7.1. This Chapter of the ES assesses the likely Built Heritage impacts of the Proposed Development 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. The Chapter is accompanied by the following appendix: Appendix 7.1 – Heritage Statement.

7.2. This Chapter has been prepared by Stephen Levrant Heritage Architecture. The authors of this Chapter are Holly Gerrard (BA, MA), and Kirsten McKnight (BA (hons), MA, MSC, IHBC).

| | Lead Author | Reviewer |
|---|---|---|
| Name | Holly Gerrard | Kirsten McKnight |
| Company | Stephen Levrant Heritage Architecture | Stephen Levrant Heritage Architecture |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | BA, MA | BA (hons), MA, MSC, IHBC |
| Years technical experience (in technical area) | 2 | 15 |
| Number of EIA's delivered to date | 1 | 30+ |

## Assumptions and Limitations

7.3. Surveys of the identified heritage assets within the study area was taken from publicly accessible areas. As such, the study is limited to an assessment from ground level.

7.4. An assessment of below ground archaeology does not form part of this Chapter.

## Relevant Legislation, Policy and Guidance

### Legislation

7.5. The Heritage Statement (Appendix 7.1) has been prepared in accordance with or with reference to the following legislation, policy, and guidance.

7.6. Section 66 of the Planning (Listed Building and Conservation Areas) Act 1990 requires the Local Planning Authority to "*have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses*" when considering whether to grant planning permission. This section of the 1990 Act is of relevance as there are a number of listed buildings within the immediate and wider setting of the Site.

7.7. Section 72 of the Act is also of relevance given the presence of conservation areas in the setting of the Site, and because it embodies the "*general duty as respects conservation areas in exercise of planning functions*" and stipulates that "*special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area*." The Site is within the immediate setting of the Whitworth Street Conservation Area, situated to the north, and while S72 does not specifically protect the setting of these designated heritage assets, due regard is required to be paid to preserving or enhancing the special significance of the area.

## Policy

### National Planning Policy Framework (2025)

7.8. Chapter 12 (Design) of the NPPF establishes the Government's framework and approach towards design. The NPPF states at **Paragraph 131** that "*good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities".*

7.9. At **Paragraph 135**, the NPPF establishes a set of principles that Local Authorities should ensure are at the forefront when considering planning policies and development proposals. These principles stipulate that developments should: function well and contribute to the overall quality of the area; be visually attractive through the use of high quality architecture, successful layouts and effective landscaping; be sympathetic to local townscape character and history (including the built environment and landscape setting); reinforce and maintain sense of place through considered arrangement of streets, spaces, typologies and materiality; optimise the potential of sites and create a sustainable mix of developments; and create spaces that are safe, inclusive and accessible to all.

7.10. **Paragraph 139** states that developments that are that not well designed should be refused by Local Authorities (including and especially where proposals fail to reflect local design policies and government design guidance). Conversely, the NPPF states in the same paragraph that *"significant weight"* should be given to schemes that reflect local policy requirements and government guidance on design, and those that reflect *"innovative designs which promote high levels of sustainability".*

7.11. Read together, Paragraphs 134 and 139 demonstrate the Government's encouragement of Local Authorities to support schemes which embody high quality sustainable design.

7.12. Chapter 16 (Conserving and Enhancing the Historic Environment) of the NPPF sets out the Government's planning policies on the conservation of the historic environment.

7.13. The policies in the NPPF constitute the Government's view of what sustainable development in England means in practice. In these terms, development proposals which fail to give due weight to the conservation of heritage assets are deemed not to be sustainable development and consequently shall not be supported. One of the key dimensions of sustainability is protecting and enhancing our historic environment.

7.14. The NPPF stresses that "great weight" should be given to the conservation of designated heritage assets (paragraph 212), emphasising the need to avoid substantial harm, in terms of demolition, alteration or the compromise of its setting. The fundamental objective is to ensure that the balance of the impact on the heritage assets is demonstrably beneficial, minimising any negative impact on their significance.

7.15. The NPPF establishes a clear hierarchy of significance for heritage assets, derived from their designated status. The fundamental objective is to avoid compromising designated heritage assets, such that any potential 'harm' from a development must be balanced against the potential advantages of the public benefits that may outweigh any harm.

7.16. Degrees of harm to designated heritage assets are categorised within the NPPF as 'substantial' and 'less than substantial'. Paragraph 214 states that "where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss". Four subsequent tests apply to mitigate such harm.

7.17. Paragraph 215 relates to 'less than substantial harm', stating that "Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use".

7.18. The 'designated heritage asset' status of the identified listed buildings and conservation areas within and in the setting of any Site requires that any potential 'harm' must be weighed and balanced against the potential

advantages of the particular development proposal. It is thus necessary to establish whether the benefits of the proposals outweigh any perceived harm, in the context of the statutory duties set out above.

7.19. Paragraph 216 outlines that effects of a proposed development on non-designated heritage assets as follows: "The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset". This paragraph is of relevance, as the Site lies adjacent to several structures within the former UMIST campus that are considered to be non-designated heritage assets.

## Regional

Greater Manchester Combined Authority, Places for Everyone ('PfE') (2024)

7.20. PfE is the long-term plan of nine Greater Manchester districts for jobs, new homes, and sustainable growth. The plan sets out a strategic policy framework for the nine boroughs and helps these areas to meet their local housing and employment needs by identifying land and infrastructure to support growth.

7.21. Objective 4 of the PfE seeks to: "Enhance our cultural, heritage and educational assets; - Improve sustainable transport and active travel access to these locations; - Improve access for local people to jobs in these locations."

7.22. Policy JP-P 2 addressing 'Heritage', states: "Through this Plan we will proactively manage and work with partners to positively conserve, sustain and "enhance its historic environment and heritage assets and their settings. Opportunities will be pursued to aid the promotion, enjoyment, understanding and interpretation of heritage assets, as a means of maximising wider public benefits and reinforcing Greater Manchester's distinct identity and sense of place. Local Plans will set out the key elements which contribute to the district's identity, character and distinctiveness and which should be the priority for safeguarding and enhancing in the future, and demonstrate a clear understanding of the historic environment and the heritage values of sites, buildings or areas and their relationship with their surroundings. This knowledge should be used to inform the positive integration of our heritage by:

1. Setting out a clear vision that recognises and embeds the role of heritage in place-making;

2. Utilising the heritage significance of a site or area in the planning and design process, providing opportunities for interpretation and local engagement;

3. Integrating the conservation and enhancement of heritage assets and their settings, with creative contextual architectural responses that contribute to their significance and sense of place;

4. Delivering positive benefits that sustain and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing; and

5. Exploring opportunities to reduce greenhouse gas emissions that restoration of historic buildings offer."

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

7.24. Development proposals affecting a designated heritage asset (or an archaeological site of national importance) and a conservation area should conserve those elements which contribute to its significance including those identified in any conservation area appraisal as making a positive contribution to the area. Harm to such elements will only be permitted where this is clearly justified and outweighed by the public benefits of the proposal.

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

### Local

Manchester City Council, Core Strategy (2012)

7.26. The relevant, local heritage planning policy maintains the same focus as the NPPF. The City Council's heritage policies focus on the fundamental importance of "preserving or, where possible, enhancing the historic environment". The following policies from Manchester's Core Strategy are of relevance.

7.27. Policy CC9 (Design and Heritage) states that development in Manchester City Centre should preserve or enhance the heritage assets that have been identified, including listed buildings, conservation areas and scheduled monuments. The policy also establishes that new development must support the range of uses the Council expects in the City Centre and contribute to a coherent and integrated physical environment.

7.28. Policy EN3 (Heritage) states that Manchester City Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods. Development options must be designed to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance.

Unitary Development Plan for the City of Manchester, 1995

7.29. The Unitary Development Plan (the 'UDP') for Manchester was adopted by the Council in 1995. The Core Strategy, adopted in 2011 and referred to above, replaced significant elements of the UPD, though there are saved policies which are extant, and which are relevant to a consideration of the impact of development proposals on heritage assets.

7.30. Development Control Policies 18.1 and 19.1 are saved from the UPD and address conservation areas and listed buildings respectively. The policies stipulate the careful consideration is given to development proposals which affect the respective heritage assets, providing a series of provisions to consider such as relationships between new and old buildings, and promote their preservation and enhancement.

## Guidance

Planning Practice Guidance ('PPG') (2014 and as subsequently amended)

7.31. The PPG is an online document which is amended as required by the Government. It provides current advice to assist with the interpretation of the NPPF. The section "conserving and enhancing the historic environment" of the current iteration of the PPG has been reviewed and referenced in the course of producing this Heritage Statement. As evidenced in recent case law, the PPG is considered to carry considerable weight in Planning decisions, in line with that of the NPPF (see recent judgement in Mead Realisations Ltd v Secretary of State for Housing Communities and Local Government [2025] EWCA Civ 32).

Historic England Guidance

7.32. In 2015 Historic England ('HE') released three Good Practice Advice notes supporting the implementation of national policy and the related guidance provided within the PPG. Good Practice Advice Note 2 - Managing Significance in Decision-Taking in the Historic Environment (2015) ('GPA2') and Good Practice Advice Note 3 - The Setting of Heritage Assets (amended December 2017) ('GPA3') and Tall Buildings Advice Note 4 (March 2022) were both utilised as part of this assessment in order to gain a full understanding of the relevant issues.

7.33. In particular, this Chapter and the accompanying Heritage Statement (Appendix 7.1) take account of the advice contained within the revised version of GPA3 on understanding what constitutes the setting of a listed building, Conservation Area, or other heritage asset. Furthermore, this Chapter relies on the guidance provided on the

identification of assets and their settings which have the potential to be affected by development proposals, as well as the approach to the selection of indicative key views of a proposed development in a context which includes heritage assets and heritage sensitivities.

7.34. In terms of assessing the impacts of development proposals, this Chapter takes account of the advice in GPA3 which states that, "setting and views are matters of qualitative and expert judgement […] technical analyses [and] should be seen primarily as material supporting a clearly expressed and non-technical narrative argument that sets out 'what matters and why' in terms of the heritage significance and setting of the assets affected, together with the effects of the development upon them."

7.35. This Chapter also accords with the guidance and approach established in Historic England Advice Note 12 - Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019) and Conservation Principles, Policies and Guidance (2008).

## Assessment Methodology and Significance Criteria

### Scenarios Tested

7.36. Potential effects associated with the construction and operational phases of the Proposed Development will relate to indirect temporary visual/setting impacts and indirect permanent visual/setting impacts only as there are no designated or non-designated heritage assets within the Site.

7.37. In response to the sensitivity and complexity of the site with regards to both designed and non-designated heritage assets, the four baseline scenarios including the existence of the Charles Street Multi-Storey Car Park (MSCP) have been considered. This is considered to be the most robust set of scenarios, as the demolition of the MSCP would temporarily impact upon the setting of the identified heritage assets, followed by the construction phase of the Proposed Development. The scenarios which will be used to assess the Proposed Development in both the construction and operational phases will be:

- Scenario 1: Existing Baseline (Site as of September 2025, including developments defined within the Baseline section of the committed development schedule)
- Scenario 2: Existing Baseline + Plot H
- Scenario 3: Existing Baseline + Plot H + Cumulative
- Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan (future surrounds/future phases)

7.38. The potential impact of the recently submitted Weston Halls and Pendulum Hotel development to the south of the Site has also been assessed within scenarios 3 and 4 to ensure a robust approach despite the scheme's undetermined status in planning.

### The Study Area

7.39. A study area of 500m from the Site boundary has been determined by SLHA as being appropriate for the consideration of potential significant effects of the Proposed Development on the setting of heritage assets in the local area. The determination of the study area has been based on an understanding of the existing nature of the Site and its surroundings, heritage sensitivities in the locality of the Site, the form and character of the Proposed Development, a Zone of Theoretical Visibility ('ZTV') (refer to TVIA Appendix 6.1) and has been further informed by professional judgement and experience in similar assessments. It is acknowledged that there are heritage assets outside of the study area and in the wider setting of the Site.

7.40. Within the 500m radius (beyond the Plot H Site boundary), there are approximately 109 Listed Buildings (100 Grade II, 9 Grade II*), and 8 non-designated heritage assets, five of which have Certificate of Immunity Status. Following consideration of the Zone of Theoretical Visibility Study, 91 listed buildings and the George Street Conservation Area, St Peters Square Conservation Area, and the Albert Square Conservation Area were scoped out of the following assessment as there was considered to be *no impact* on their setting or significance as a

result of the Proposed Development. These assets are listed in full at Table 9, Appendix IV of the Heritage Statement. In total, 18 listed buildings, and 8 non-designated heritage assets have been scoped in for further assessment. These assets are listed in full at Table 1 and Table 2 of the Heritage Statement.

7.41. Due consideration has been given to heritage assets outside of the 500m study area. It has been determined that it is probable there will be no potential for significant effects on these receptors due to separating distance and interposing built form and landscape. Notwithstanding this, heritage assets outside of the study area will still be considered with regard to any potential material impact to their setting or an appreciation of their significance in the Heritage Statement. This assessment is informed by the verified views prepared by Our Studio to support the application.

7.42. This Chapter identifies and evaluates the nature and likelihood of the impacts of the Proposed Development, both permanent and temporary, in both the short term and long term, on built heritage receptors against clearly defined criteria.

## Surveys and Data Sources

7.43. Baseline data of the study area was collected utilising Historic England's Online Mapping tool (plotting structures identified on the NHLE), MCC's local designations information available online, primarily in regard to Conservation Areas, and through a visual survey undertaken in February and September 2025. Google Earth was also utilised as part of the baseline data collection.

7.44. The baseline assessment was undertaken using a combination of desk-based review of plans, maps, records, and other documents. The principal source of baseline information therefore included Historic England's National Heritage List for England (NHLE).

7.45. Desk based research has been supplemented by on-site survey in order to identify and assess the heritage significance of the heritage asset receptors (see Figure 7.1). It also establishes the way in which the settings and the Site contribute to the heritage significance of these assets.

7.46. Consideration has also been given to the historical development of the Site and the local area (set out in detail in the Heritage Statement at Appendix 7.1 and summarised below), building types and materials, key views to the notable historic buildings which contribute to the identification of the built form, and understanding of the special interest of the area.

7.47. Please refer to Figure 7.1 for a map of Listed Buildings and Non-designated Heritage Assets, and Figure 7.2 for a map of the Whitworth Street Conservation area in relation to the Site.

## Source of Effect

1.48. The assessment methodology for the historic environment is a synthesis of established guidance, best practice, and professional judgement. The assessment of effects of the Proposed Development has been undertaken in accordance with an adapted form of the methodology set out in the International Council on Monuments and Sites (ICOMOS) guidance on 'Heritage Impact Assessments' (January 2011), in which the value of heritage attributes is assessed in relation to statutory designations. The judgements on the significance or heritage value of assets are also informed by priorities or recommendations set out in national research agendas and ascribed values. Professional judgement is then used to determine the importance of the resource. The receptor (which for the purposes of this assessment are 'heritage assets') which has the potential to be affected by the Proposed Development is ascribed a value and subsequently the impact of the Proposed Development on them is assessed in order to determine the significance of the effect.

1.49. The following Historic England guidance has also informed the assessment undertaken in this Chapter:

- Historic England's Conservation Principles, Policies and Guidance (2008);
- Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets (2017);
- Historic England's Advice Note 4: Tall Building Guidance (2022); and

- Historic England's Understanding Place: Conservation Area Designation, Appraisal and Management (2019).

1.50. The aims of this assessment have been:

- To establish the baseline environment regarding designated heritage assets related to the historic built environment, i.e. Listed Buildings and Conservation Areas.
- Assessment of the significance of the assets.
- Evaluation of the magnitude of impacts on the identified assets.
- Identification of mitigation in the form of further surveys, investigation and recording to be undertaken in light of the identified impacts

1.51. The built heritage chapter will identify and evaluate the nature and likelihood of the impacts of the Proposed Development, both permanent and temporary, in both the short term and long term, on built heritage receptors against clearly defined criteria. Indirect effects relate to changes to a heritage receptor's setting, i.e. changing the ability to appreciate the significance of a heritage receptor in the view, or other experiential effects which might change the setting of a heritage asset, such as increased levels of public activity in their locality. Direct effects relate to physical change to a heritage receptor through intervention to its fabric.

## Significance Criteria

1.52. Criteria has been established to appraise a heritage asset's significance. Statutory criteria, as set out in the Principles of Selection for Listing Buildings', DCMS (2018), provides a list of principles of assessing significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity and national interest. Historic England's criteria outlined in 'Conservation Principles, Policies and Guidance' (2008), are also considered in this assessment.

1.53. Evaluation of significance has been informed primarily by the designation of the assets at an international, national, regional or local level as well as their ability to contribute to an understanding of the past. This value rating has also been applied when considering sensitivity of views containing heritage assets. Indicative definitions for each of these ratings are outlined in Table 7.1 below.

1.54. The relative 'value' and importance attributed to the identified heritage assets largely coincides with their national status. In line with ICOMOS terminology, generally, Grade I buildings are considered to be of very high significance; Grade II* of high significance; and Grade II of medium heritage significance. As indicated in Table 7.1 below, this tabulated approach is not intended to be prescriptive, but rather a guide to assessing significance. For instance, some Grade II listed buildings are identified as 'high-medium' due to the completeness / sensitivity of their setting and some Grade II* listed buildings are also identified as 'high-medium' due to their degree of alteration / greater capacity for change within their setting. The value of Conservation Areas is informed by the quality and significance of the built form within them and may be influenced by the status of listed and locally listed buildings which make up the designated area. The Heritage Statement (Appendix 7.1) has been written within this overarching framework.

| Table 7.1: Significance Criterion for Determining the Value of Heritage Assets | |
|---|---|
| Significance / Sensitivity | Definition of Receptor |
| Very High | • Grade I listed buildings / Grade I registered parks and gardens<br>• World Heritage Sites |
| High | • Grade I and Grade II* listed buildings.<br>• Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade.<br>• Conservation Areas containing very important buildings. |
| Medium | • Grade II listed buildings.<br>• Historic buildings that can be shown to have exceptional qualities in their fabric or historical associations.<br>• Conservation areas containing buildings that contribute significantly to its historic character. |
| Low | • Locally listed buildings / identified non-designated heritage assets<br>• Historic buildings of modest quality in their fabric or historical association. |
| Negligible | • Recorded on the HER in record form or as 'Find Sites'<br>• buildings, structures, or designed landscape features, which detract from the architectural design, historic, communal, or townscape interest of the principal heritage asset. |
| Unknown / none | • Buildings/sites where the potential importance interest requires determination<br>• Or sites determined to be of no heritage interest |

## Baseline Conditions

### Brief History of the Site

1.55. Historic mapping from the early-18th century indicates the Site and immediate surrounds formed part of an inherently rural area largely subdivided into rectangular parcels of land with a lack of built form beyond the confines of the meandering River Medlock. As the 18th century progressed, the population of Manchester rapidly expanded to accompany the growth of trade and industry in the city centre. The rural country lanes were replaced by formally laid out roads which enabled the development of dwellings and utilitarian buildings connected with local industries, principally the cotton trade. The River Medlock is shown in historic mapping as running directly along the southern boundary of the site, with various mills and warehouses constructed in the immediate vicinity.

1.56. In the late 18th and early 19th century, Charles Street extended diagonally from Oxford Street until it joined Sackville Street, then known as 'Zara Street.' Granby Row was oriented in its existing position along the northern periphery of the site. By 1836, the composition of buildings had been altered leaving an area to the west of the Site containing linear buildings fronting Princess Street, then known as 'Brook Street,' with an open area of land to the rear.

1.57. The construction of the Manchester South Junction and Altrincham Railway Viaduct in 1846-9 enveloped much of the existing open land to the south of Granby Row, and a rectangular block of buildings with a central internal passage and courtyard took shape to the west of the Site area. Following the construction of the Viaduct, a number of shops, works, and yards were added to the eastern area of the site to complement the businesses lining the corner of Charles Street and Princess Street. All buildings on site were demolished to facilitate the construction of the Charles Street MSCP in the 1970s.

1.58. The multi-storey car park is situated to the north-west aspect of the former UMIST campus, directly adjacent to the Grade II listed railway viaduct. A newspaper article from May 1971 indicates the car park was due to be completed by October that same year, at a total cost of £380,000. Historic images of the building being constructed illustrate the repetitive form of the expansive concrete girders which were cast in-situ on site, this being a standard construction method for 1970s multi-storey car parks.

1.59. The public house within the Site was situated to the eastern aspect of the car park, facing onto Altrincham Street. Originally known as 'the Swinging Sporran,' the public house served as a popular location for students and staff alike to socialise. The three-storey, grey brick building in stretcher bond contained a brick relief to the south-east corner, which housed a geometric flourish of brick detail.

1.60. The Swinging Sporran has since become known as 'The Retro Bar,' and the rest of the ground floor has been heavily altered and converted from a bank into a coffee shop and kiosk. Furthermore, the external form of the building has been continually adapted over the late-20th and early 21st centuries and has been visually impacted by contemporary signage and alterations to the windows and ground floor units.

## Heritage Context

### Listed Buildings

1.61. There are no designated heritage assets within the Site boundary. Within the 500m study area, there are 109 listed buildings (100 Grade II, 9 Grade II*). Following consideration of the Zone of Theoretical Visibility Study (ZTV), 91 listed buildings, and the George Street Conservation Area, St Peters Square Conservation Area, and Albert Square Conservation Area were scoped out of the following assessment as there was considered to be no impact on their setting or significance as a result of the Proposed Development. These assets are listed in full at Table 9, Appendix IV of the Heritage Statement.

1.62. Following consideration of the ZTV study, the listed buildings described below have been scoped in for further assessment. Please refer to **Figure 7.1** for further details.

**Table 7.2: Listed Buildings which have the potential to be impacted by the Proposed Development**

| Number, as per Figure 7.1 | Designated Heritage Asset | Grade |
|---|---|---|
| 1 | Lass O Gowrie | Grade II |
| 2 | Manchester House | Grade II |
| 3 | Former Refuge Assurance Company | Grade II* |
| 4 | Orient House | Grade II |
| 5 | Granby House | Grade II |
| 6 | Renold Building | Grade II |
| 7 | Sculptural Wall | Grade II |
| 8 | Train Shed and undercroft at Manchester Piccadilly Station | Grade II |
| 9 | Former Goods Offices to Piccadilly Station | Grade II |
| 10 | Police and Fire Station | Grade II* |
| 11 | Institute of Science and Technology (University of Manchester) | Grade II |
| 12 | Regency House with Barclays Bank | Grade II |
| 13 | 46 Sackville Street | Grade II |
| 14 | 42 and 44 Sackville Street | Grade II |
| 15 | The Shena Simon Sixth-Form College | Grade II |
| 16 | Minshull House | Grade II |
| 17 | Mintierna House | Grade II |
| 18 | Manchester South Junction and Altrincham Railway Viaduct | Grade II |

### Conservation Areas

1.63. Conservation areas are designated areas that are deemed to have special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance. The Site is located to the south of the Whitworth Street Conservation Area, which has been scoped into this assessment, and is identified in **Figure 7.2.**

### Non-designated Heritage Assets (NDHAs)

1.64. Local planning authorities may identify non-designated heritage assets. These are buildings, monuments, sites, places, areas, or landscapes identifies as having a degree of significance meriting consideration in planning decisions, but which are not formally designated heritage assets. In some areas, local authorities identify some non-designated heritage assets as 'locally listed.'

1.65. Manchester City Council does not have a list of such assets; however, as part of the wider redevelopment of the Sister Site, numerous have been identified within the study area. In total, there are 8 non-designated heritage assets within the immediate vicinity of the Site, five of which are registered with Certificate of Immunity Status. The assets taken forward for consideration are outlined in in **Table 7.3** below.

**Table 7.3: Non-designated heritage assets which have the potential to be impacted by the Proposed Development**

| Number, as per Figure 7.1 | Heritage Asset | Status |
|---|---|---|
| 19 | Barnes Wallis and Wright Robinson Building | Non-designated heritage asset, Certificate of Immunity |
| 20 | Moffat Building | Non-designated heritage asset, Certificate of Immunity |
| 21 | Butterfly Stairs and Walkway Bridge (formerly known as The Sir Hubert Worthington Stair) | Non-designated heritage asset, Certificate of Immunity |
| 22 | Staff House (Manchester Meeting Place) | Non-designated heritage asset, Certificate of Immunity |
| 23 | Morton Laboratory (Chemical Engineering Pilot Plant) | Non-designated heritage asset, Certificate of Immunity |
| 24 | The Mill | Non-designated heritage asset |
| 25 | Pariser Building | Non-designated heritage asset |
| 26 | MSS Tower | Non-designated heritage asset |

## Scenario 1 – Baseline Condition

1.66. This section of the Chapter outlines the baseline context relative to the Site and the Proposed Development, with particular focus on Built Heritage.

1.67. Scenario 1 (baseline) can this be summarised as containing no designated or non-designated heritage assets, and the Site does not lie within the boundary of a designated Conservation Area. The Site is within the setting of numerous heritage assets, identified in the heritage context section above.

## Identification and Evaluation of Likely Significant Effects

1.68. The assessment methodology for the Historic Built Environment is a synthesis of established guidance, best practice and professional judgement. In accordance with an adapted form of the methodology set out in the ICOMOS Guidance on 'Heritage Impact Assessments' (January 2011), in which the value of heritage attributes is assessed in relation to statutory designations, and priorities or recommendations set out in national research agendas, and ascribed values. Professional judgement is then used to determine the importance of the resource. The heritage assets which might be affected by the Proposed Development are valued and the impact on them is assessed in order to give a significance of effect.

1.69. A Heritage Statement (Appendix 7.1) has been prepared to support the Built Heritage Chapter and accompany the Planning Application. The Heritage Statement provides a detailed and robust baseline assessment of the identified heritage assets surrounding the Site, considering their significance and to what extent their setting contributes to an appreciation of this.

1.70. The Heritage Statement considers the potential indirect impact of the Proposed Development on heritage assets (i.e. change to setting or through indirect visual impact) of sensitive receptors within the defined study area (and beyond it where necessary). The Heritage Impact Assessment ('HIA') utilises relevant key views (prepared as Accurate Verified Views, 'AVRs') to inform an understanding of the potential effects of the Proposed Development.

1.71. The selection of viewpoint locations has been informed by ZTV Studies and verified views (produced by Layer / Our Studio). The views have been identified in consultation with the LPA. A total of 18 key views have been identified for the purposes of the EIA, 12 of which are relevant for the HIA.

1.72. The proposed representative viewpoint locations are provided at Figure 7.3. To assess the potential magnitude and significance of effect of the indirect impact of the Proposed Development on the setting of heritage assets, the following criteria is considered:

- The sensitivity and proximity of receptors (i.e. heritage assets);
- The nature of the existing views;
- The degree of change to existing views and the visibility of the Proposed Development;
- The availability and amenity of alternative views;
- Other experiential changes to the setting of receptors such as increased activity levels.

1.73. The assessment section of the Chapter will describe the potential impacts to the heritage assets as a result of the Proposed Development and outline suitable mitigation measures to deal with the potential effects of the Proposed Development on heritage assets.

1.74. The magnitude of impact or 'significance of effect' is a product of the extent of change which is likely to result from the Proposed Development on the setting of a heritage asset (indirect) or the fabric and character of a heritage asset (direct).

1.75. Where the proposed changes are considered to enhance the setting or appreciation of a heritage asset, the impact on its significance will be deemed to be beneficial. Conversely, where the Proposed Development is considered to compromise or diminish its positive heritage values, the impact on the significance will be deemed adverse.

1.76. Measuring the heritage impact of the Proposed Development is essentially an evaluation of change to the fabric, character, and appearance of the identified heritage asset, balanced against its relative significance. Table 7.4 and 7.5 provide a basis from which the magnitude of impact and the significance of the effect upon the identified heritage asset are derived. The effects are rated as: Major, Moderate, Minor, Negligible or Neutral, and can be direct or indirect, adverse, or beneficial. This follows the recommended approach to evaluating heritage impact derived by ICOMOS (2011) and the tests set by Historic England in the 2017 guidance on the evaluation of: 'The Setting of Heritage Assets' (Historic Environment Good Practice Advice in Planning. Note 3).

1.77. As Historic England's Guidance Note on producing Statements of Heritage Significance makes clear, the reliance and use of tabulated matrices can lead to a reductionist approach when assessing the true 'significance' of impact. Consequently, the following impact assessment is formed of a non-technical narrative argument that sets out 'what matters and why' in terms of the heritage significance and setting of the assets affected, together with the effects of the development upon them. These tables are therefore not considered to be prescriptive, and the assessment accounts for elements of setting and significance which can increase or decrease relative value, magnitude of change, and the significance of the effect of the change.

1.78. The significance of an environmental impact is determined by the interaction of magnitude and sensitivity, whereby the impacts can be positive, negative or neutral. The impact Significance Matrix is set out in **Table 7.5** below. Areas highlighted in **bold** are representative of a 'significant' effect, in EIA terms.

| Table 7.4: Magnitude of Impact - Criteria for Assessing Impact | |
|---|---|
| Major beneficial | The development considerably enhances the heritage values of the heritage assets, or the ability to appreciate those values. |
| Moderate beneficial | The development enhances to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values. |
| Minor beneficial | The development enhances to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values. |
| Negligible beneficial | The resultant difference will be imperceptible but have a positive impact on the understanding or appreciation of the heritage asset. |
| Neutral | This does not necessarily mean that there will be no physical or visual change, rather that the resultant difference will be imperceptible or appropriately balanced |
| Negligible adverse | The development would not diminish the value of the heritage assets' significant physical fabric, their settings or significance to any appreciable degree. |
| Minor adverse | The development erodes to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values. |
| Moderate adverse | The development erodes to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values. |
| Major adverse | The development severely erodes the heritage values of the heritage assets, or the ability to appreciate those values. |

| Table 7.5: Significance of Effect Matrix | | | |
|---|---|---|---|
| **Magnitude** | **Sensitivity** | | |
| | **Very High / High** | **Medium** | **Low** |
| **Major** | **Major Adverse/Beneficial** | **Major - Moderate Adverse/Beneficial** | **Moderate** – Minor **Adverse/Beneficial** |
| **Moderate** | **Major – Moderate Adverse/Beneficial** | **Moderate** – Minor **Adverse/Beneficial** | Minor Adverse/Beneficial |
| **Minor** | **Moderate –** Minor **Adverse/Beneficial** | Minor Adverse/Beneficial | Minor - Negligible Adverse/Beneficial |
| Negligible | Negligible Adverse/Beneficial | Negligible Adverse/Beneficial | Negligible Adverse/Beneficial |
| Neutral | Neutral | Neutral | Neutral |

## Construction Phase

1.79. During the demolition and construction phase, works related to the Proposed Development will trigger various construction impacts which in turn will temporarily and indirectly impact the heritage assets within the setting

of the Site. The following section addresses Scenario 2, with additional cumulative scenarios captured in the following section.

1.80. The assessment methodology and approach to the relative impact on heritage assets during the construction phase is based on evidence-based assumptions in relation to common indirect issues such as demolition, dust, noise, site hoarding, scaffolding, increased pressure on local road networks through presence of construction traffic and appearance of construction machinery in views which also take in heritage assets.

1.81. The construction phase will result in some disruption to the streetscape surrounding the Site, resulting in some temporary adverse impact upon the setting of the Whitworth Street Conservation Area, Manchester South Junction and Altrincham Railway Viaduct (Grade II), Lass O'Gowrie (Grade II), Manchester House (Grade II), Orient House (Grade II), Granby House (Grade II), Renold Building (Grade II). The construction phase will also result in some temporary adverse impact to the setting of the non-designated heritage assets within the former UMIST campus, primarily the Pariser Building.

1.82. It is therefore considered that the Proposed Development will give rise to **negligible adverse indirect temporary impacts** on the settings of these heritage asset during the construction phase. This is not considered to be a significant effect in EIA terms and would equate to the lower end of 'less than substantial harm' with regards to Paragraph 215 of the NPPF. Regarding the temporary negligible adverse impact on the settings of the non-designated heritage assets within the former UMIST campus Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset. The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

1.83. All other identified heritage assets are considered to be unaffected by the construction phase of the proposals resulting in a 'neutral' impact. Consequently, these are not reported further in this Chapter.

1.84. These non-significant effects will be mitigated in part during the operational phase through material benefits derived through enhancement to setting.

## Operational Phase

1.85. The following section addresses Scenario 2, with the additional cumulative scenarios captured in the following sections under Scenarios 3 and 4.

1.86. The assessment methodology and approach to the relative impact on heritage assets during the completed / operational phase has been assessed utilising the suite of application plans and drawings, the Design and Access Statement ('DAS') prepared by the project architect (Hodder + Partners) and the views prepared by Our Studio, as well as the application of professional judgement.

1.87. The potential visual effects of the Proposed Development are considered in full within the Heritage Statement (**Appendix 7.1**) and the assessed effect on individual assets summarised in **Table 7.6** below.

1.88. The Visual Impact Assessment (VIA), which is discussed in detail in the Heritage Statement (**Appendix 7.1**) assesses 12 key viewpoints (supporting a total of 18 views as part of the wider Townscape and Visual Impact Assessment prepared by Layer), demonstrates that the Proposed Development has the potential to result in the following impacts on the settings of 15 identified heritage assets:

- 8 instances of **minor adverse impact** on the settings of the Renold Building (Grade II), Institute of Science and Technology (Grade II), Regency House with Barclays Bank (Grade II), 46 Sackville Street (Grade II), 42 and 44 Sackville Street (Grade II), The Shena Simon Sixth-Form College (Grade II), the Barnes Wallis and Wright Robinson building (NDHA) and the Whitworth Street Conservation Area.

- 1 instance of **negligible-to-minor adverse impact** on the setting of the Manchester South Junction and Altrincham Railway Viaduct (Grade II).

- 6 instances of **negligible adverse impact** to the settings of the Lass O' Gowrie (Grade II), Former Refuge Assurance Company Offices (Grade II*), Granby House (Grade II), listed Sculptural Wall (Grade II), Moffat Building (NDHA), and Pariser Building (NDHA).

1.89. As previously noted, utilising the findings from the Zone of Theoretical Visibility Study, all other identified heritage assets were considered to sustain *no impact* on their setting or significance as a result of the Proposed Development. Consequently, these assets are not reported further in this Chapter, but are listed in full at Table 9, Appendix IV of the Heritage Statement (Appendix 7.1).

1.90. There are no impacts that have been identified that are considered to result in significant effects in EIA terms. All represent an impact to the lower end of 'less than substantial' as per Paragraph 215 of the NPPF. Regarding the minor adverse impact on the non-designated Barnes Wallis and Wright Robinson building, Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset." The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

## Cumulative Effects

1.91. In assessing the likely significant effects of the Proposed Development, due consideration has been paid to the other committed developments (i.e. those that have already commenced construction or those that have not commenced but have a valid planning permission or those that are reasonably foreseeable, i.e. as part of an approved Masterplan), where there are likely to be significant effects. Additional committed developments are set out in the Committed Developments List (**Appendix 7.1**).

1.92. The cumulative assessment within this Chapter considers the cumulative effect of the Proposed Development in conjunction with other developments in the local and wider townscape which, when considered individually might be insignificant, but when considered together could create a significant cumulative effect.

1.93. Cumulative: upon assessment of the cumulative AVRs, it will be evident the developments of relevance to the assessment are Hotspur House (View 4), Student Castle Hulme Street (View 3), Sister Plot C (View 6, 12), Viadux Phase 2 (View 11), and the Weston Hall Scheme (currently in planning, View 4, 5, 6, 7, 8, 18.) It is considered that only the Sister Plot C development and the proposed Weston Hall Scheme would result in a material change to the proposed situation. This is considered in Scenario 3 and Scenario 4 below. The other committed developments outlined above are not considered to result in any material change to the proposed situation and will incur no further / greater impact on heritage assets. There are not considered to be any significant effects in EIA terms relating to the cumulative effects of the above committed developments.

### Construction

1.94. Scenario 3: Existing Baseline + Plot H + Cumulative - With the exception of the Plot C development, the identified impacts / significance of effect on built heritage for Scenario 3 (construction phase) will remain unchanged when compared with Scenario 2 (discussed above). It is not considered that in any of the additional cumulative developments outlined above will result in any material change to the conclusions as set out in Scenario 2. If the construction phase of the Proposed Development runs concurrently with the construction phase of the Plot C development, there is expected to be further disruption to the streetscape surrounding the Site, resulting in some additional temporary adverse impact upon the setting of the Whitworth Street Conservation Area, Manchester South Junction and Altrincham Railway Viaduct (Grade II), Lass O'Gowrie (Grade II), Manchester House (Grade II), Orient House (Grade II), Granby House (Grade II), Renold Building (Grade II). The construction phase will also result in some temporary adverse impact to the setting of the non-designated heritage assets within the former UMIST campus, primarily the Pariser Building. This is not considered to be a significant effect in EIA terms and would equate to the lower end of 'less than substantial' harm with regard to Paragraph 215 of the NPPF. Regarding the impact on the settings of the non-designated heritage assets within the former UMIST campus Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset. The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

1.95. Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan (future surrounds/future phases). The identified impacts / significance of effect on built heritage for Scenario 4 (construction phase) will remain unchanged when compared with Scenario 3 (discussed above) if the adjacent plots proposed for development within the IDM Masterplan come forward prior to or following the construction phase of the Proposed Development. If the construction phase of the Proposed Development runs simultaneously alongside future IDM masterplan phases, there is expected to be further disruption the streetscape surrounding the Site, resulting in some additional temporary adverse impact upon the setting of the Whitworth Street Conservation Area, Manchester South Junction and Altrincham Railway Viaduct (Grade II), Lass O'Gowrie (Grade II), Manchester House (Grade II), Orient House (Grade II), Granby House (Grade II), Renold Building (Grade II). The construction phase will also result in some temporary adverse impact to the setting of the non-designated heritage assets within the former UMIST campus, primarily the Pariser Building. It should be noted the IDM masterplan is currently illustrative, and any additional development beyond the approved Plot C scheme would need to be considered individually, and alongside ongoing development. This is not considered to be a significant effect in EIA terms and would equate to the lower end of 'less than substantial' harm with regard to Paragraph 215 of the NPPF. Regarding the impact on the settings of the non-designated heritage assets within the former UMIST campus Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset. The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

1.96. For both Scenario 3 and Scenario 4, should the Proposed Development run concurrently with the now live Weston Hall and Pendulum Hotel planning application to the south of the Site, there is expected to be further disruption the streetscape surrounding the Site, resulting in some additional temporary adverse impact upon the setting of the Whitworth Street Conservation Area, Manchester South Junction and Altrincham Railway Viaduct (Grade II), Lass O'Gowrie (Grade II), Manchester House (Grade II), Orient House (Grade II), Granby House (Grade II), Renold Building (Grade II). The construction phase will also result in some temporary adverse impact to the setting of the non-designated heritage assets within the former UMIST campus, primarily the Pariser Building. It is assumed that the proposed Weston Hall and Pendulum Hotel scheme will conduct an appropriate assessment of potential construction effects on the setting of built heritage assets regarding any increase in impact as a result of the Proposed Development coming forward simultaneously to ensure overall impacts remain negligible.

## Operation

1.97. Scenario 3: Existing Baseline + Plot H + Cumulative – With the exception of the Plot C development and the proposed Weston Hall scheme, the identified impacts / significance of effect on built heritage for Scenario 3 (operation phase) will remain unchanged when compared with Scenario 2 (discussed above). It is not considered that in any of the additional cumulative developments outlined above will result in any material change to the conclusions as set out in Scenario 2. The application material demonstrates how the Proposed Development could integrate with committed developments. The scale, massing and character of the identified cumulative schemes is, in overall terms, consistent with that of the Proposed Development. Regarding the Plot C development, the proposed new buildings would be highly visible and viewed alongside the Proposed Development, however, it is considered that the Plot C development would ensure public realm enhancements and encourage the integration of the Proposed Development within the evolving streetscape, thereby improving the existing situation. On this basis it is considered that no greater cumulative adverse effect on the settings of heritage assets would be experienced, and this is not considered to result in a significant effect in EIA terms. The assessed level of harm to the settings of designated heritage assets would therefore remain ascribed as 'less than substantial,' as per Paragraph 215 of the NPPF. Regarding the impact on the settings of the non-designated heritage assets within the former UMIST campus Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset." The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

1.98. Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan (future surrounds/future phases). As part of the wider IDM masterplan, the Paper Science building is to be removed and replaced with modern buildings of scale. Architectural design and massing are key to ensuring the proposed future phases of the masterplan

integrate coherently with the Proposed Development. As the wider IDM masterplan comes forward separate assessments, and associated mitigation will be required.

1.99. For both Scenario 3 and Scenario 4, should the adjacent Weston Halls and Pendulum Hotel scheme gain approval, the Proposed Development will be highly visible and viewed alongside the Proposed Development. Due to the scale and massing of the Weston Halls development, it would radically alter the skyscape and streetscape surrounding the Site and may introduce greater adverse impacts on the immediate and wider settings of identified heritage assets, which would have to be assessed individually. The cumulative impact would be most apparent in View 4, View 5, View 6, View 7, View 8, and View 18, and would principally impact the settings of the Renold building, MSJ&AR viaduct, Lass O' Gowrie public house, Former Refuge Assurances Building, and the setting of the Whitworth Street Conservation Area. While the cumulative impact would marginally increase the impacts on the settings of the assets identified above when viewed in tandem, the cumulative impact is not considered to be significant in EIA terms.

## Mitigation Measures

### Construction Phase

1.100. During the construction phase, works related to the Proposed Development will trigger various construction impacts which in turn will directly and indirectly affect heritage assets within and within the setting of the Site (temporary and permanent effects).

1.101. The assessment methodology and approach to the relative impact on heritage assets during the construction phase is based on evidence-based assumptions in relation to common indirect issues such as dust, noise, site hoarding, scaffolding, increased pressure on local road networks through presence of construction traffic ad appearance of construction machinery in views which also take in heritage assets.

1.102. Prior to any demolition, a method statement by a suitably trained contractor should be submitted to the council. This should include relevant protection measures to avoid unnecessary dust, noise and debris impacting upon the surrounding built environment.

1.103. Recommended measures, to be included within a Construction Environmental Management Plan ('CEMP'), traditionally secured via condition, include:

- Use of high quality hoardings;
- Dust management;
- Regular cleaning of roads and the public realm surrounding the site;
- Edge protection to be affixed whilst concreting operations are in place;
- Implementation of a traffic management plan; and
- Vibration monitoring.

### Operational Phase

1.104. Mitigation for the impacts derived from the Proposed Development on heritage assets in the operational phase is embedded in the high-quality architecture and design of the buildings, and the regeneration of a complex site to bring forwards the Innovation District. This includes the choice of high-quality materials and detailed design elements which respond and are complementary to the surrounding townscape, the provision of high-quality public realm with hard and soft landscaping, the activation of frontages across the Site, and enhanced connections with neighbouring developments and to Piccadilly Station. On balance, it is considered that the mitigation (embodied in the high-quality design of the replacement building) will have a limited impact on the identified likely significant effects on heritage assets, and thus the impacts remain the same pre-and-post mitigation.

1.105. The assessment methodology and approach to the relative impact on heritage assets during the operational phase has been assessed utilising the suite of application plans and drawings, the 'DAS' by Hodder + Partners, the AVRs prepared by Our Studio, and professional judgement.

## Residual Effects

1.106. The residual impacts, i.e. the remaining impacts of the proposed development following implementation of proposed mitigation, are summarised in the Construction and Operational phases in **Table 7.6** below. These effects are not considered to be significant in EIA terms and would equate to the lower end of 'less than substantial' as per Paragraph 215 of the NPPF. Regarding the setting of non-designated heritage assets, Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset." The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

1.107. It should be noted that as part of the Sister Plot C development, which secured resolution to grant at planning committee in November 2025, the Barnes Wallis and Wright Robinson Building, Moffat Building, Manchester Meeting Place, and Morton Laboratory are to be demolished. If these NDHAs are demolished as approved prior to the construction of the Proposed Development, there would be 'no impact' of the Proposed Development on these assets.

**Table 7.6: Residual Effects**

| Receptor | Sensitivity / significance value | Scale of Impact | Mitigation Measure | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Demolition and Construction Phase | | | | |
| Lass O' Gowrie (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Manchester House (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Orient House (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Granby House (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Renold Building (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Manchester South Junction and Altrincham Railway Viaduct (Grade II) | Medium | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Barnes Wallis and Wright Robinson | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Moffat Building | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Butterfly Stairs | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |

| | | | | |
|---|---|---|---|---|
| Manchester Meeting Place (Staff House) | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Morton Laboratory | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| The Mill | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Pariser Building | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| MSS Tower | Low | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Whitworth Street Conservation Area | High | Negligible | Ensure that CEMP is adhered to | Negligible adverse (temporary indirect) |
| Operational Phase | | | | |
| Lass O' Gowrie (Grade II) | Medium | Negligible | Embedded design quality | Negligible beneficial and adverse (permanent indirect) |
| Former Refuge Assurance Company Offices (Grade II*) | High | Minor | Embedded design quality | Negligible adverse (permanent indirect) |
| Granby House (Grade II) | Medium | Minor adverse | Embedded design quality | Negligible adverse (permanent indirect) |
| Renold Building (Grade II) | Medium | Minor | Embedded design quality | Minor adverse (permanent indirect) |
| Sculptural (Holloway) Wall (Grade II) | Medium | Minor | Embedded design quality | Negligible adverse (permanent indirect) |
| Institute of Science and Technology (University of Manchester) (Grade II) | Medium | Minor-to-Moderate | Embedded design quality | Minor adverse (permanent indirect) |
| Regency House with Barclays Bank (Grade II) | Medium | Minor | Embedded design quality | Minor adverse (permanent indirect) |
| 46 Sackville Street (Grade II) | Medium | Minor | Embedded design quality | Minor adverse (permanent indirect) |
| 42 and 44 Sackville Street (Grade II) | Medium | Minor | Embedded design quality | Minor adverse (permanent indirect) |
| The Shena Simon Sixth-Form College (Grade II) | Medium | Minor | Embedded design quality | Minor adverse (permanent indirect) |

| | | | | |
|---|---|---|---|---|
| Manchester South Junction and Altrincham Railway Viaduct (Grade II) | Medium | Minor | Embedded design quality | Negligible-to-Minor adverse (permanent indirect) |
| Barnes Wallis and Wright Robinson | Low | Minor | Embedded design quality | Minor adverse (permanent indirect) |
| Moffat Building | Low | Minor | Embedded design quality | Negligible adverse (permanent indirect) |
| Pariser Building | Low | Negligible | Embedded design quality | Negligible adverse and beneficial (permanent indirect) |
| Whitworth Street Conservation Area | High | Minor-to-Moderate | Embedded design quality | Minor adverse (permanent indirect) |

## Monitoring

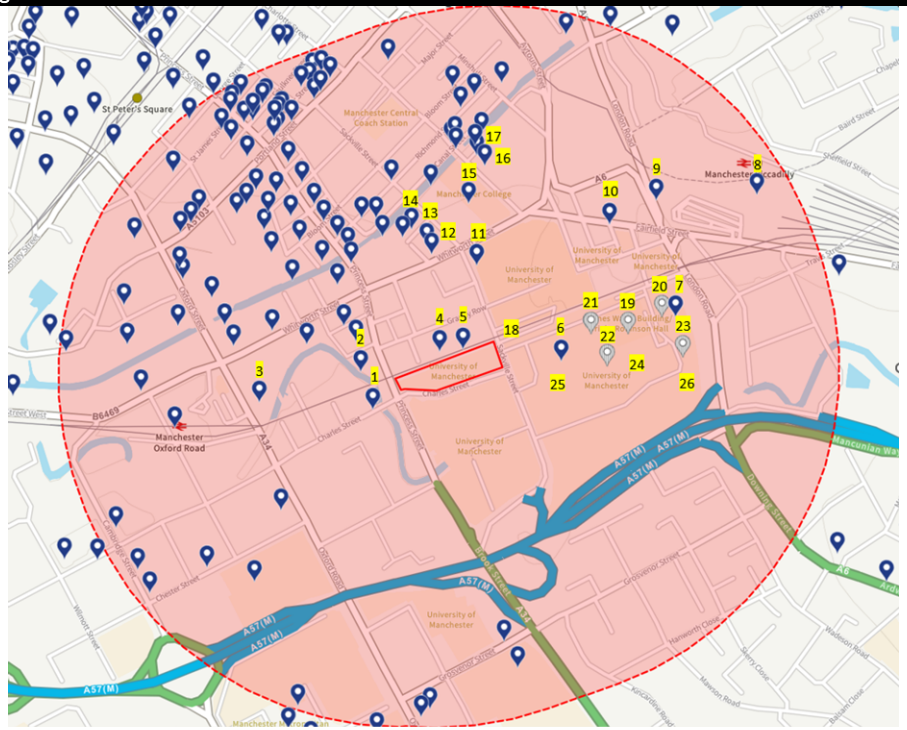
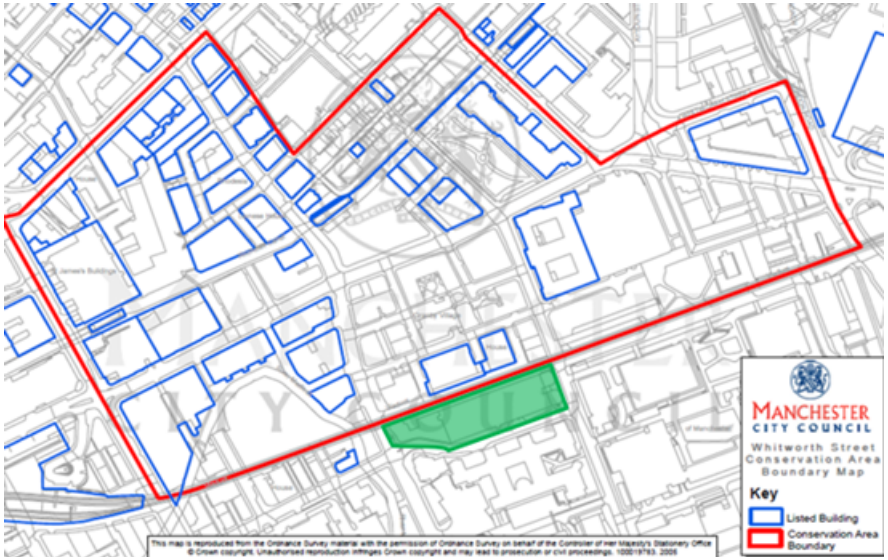
1.108. As stated above, a suitable CEMP should be produced in order to ensure appropriate monitoring during the construction stage.

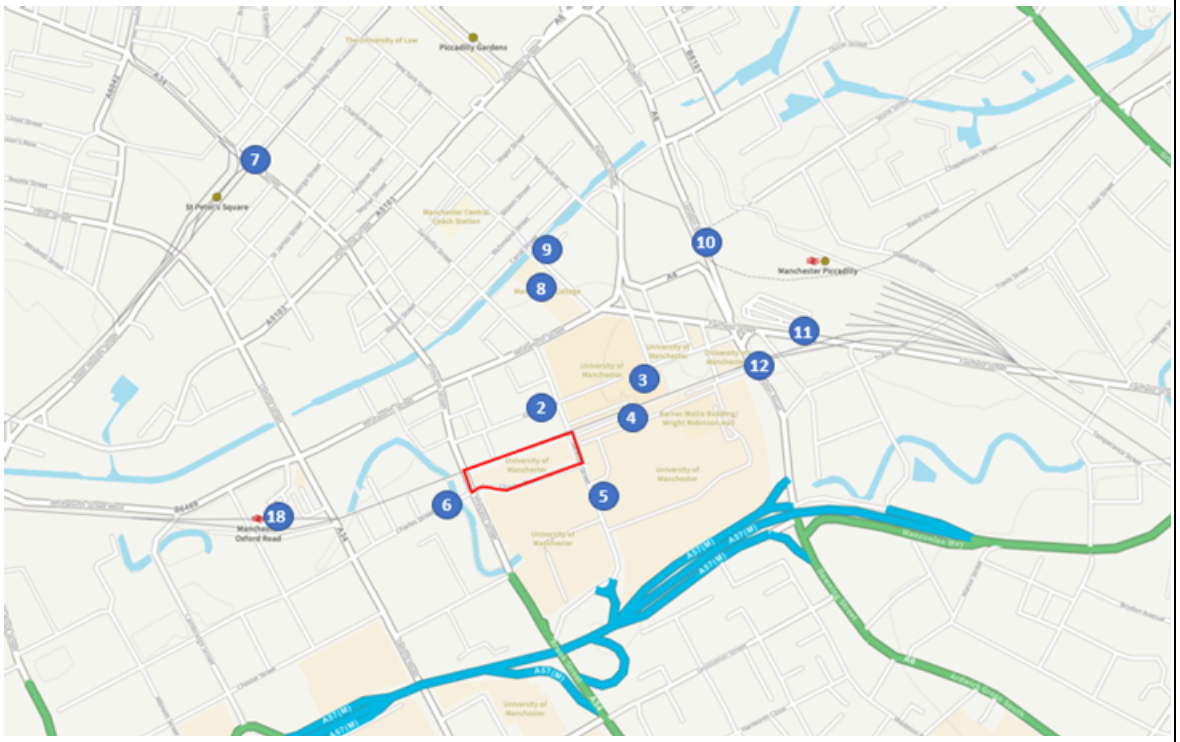
## Reference List

1.109. References within this chapter are as follows:


- DCMS's Principles of Selection for Listing Buildings (2018);
- Historic England's Conservation Principles, Policies and Guidance (2008);
- Historic England's Good Practice Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment (March 2015);
- Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets (2017);
- Historic England's Understanding Place: Conservation Area Designation, Appraisal and Management (2019).
- Historic England, Education Buildings Listing Selection Guide (December 2017)
- Historic England, Local Heritage Listing: Identifying and Conserving Local Heritage (January 2021).

## Figures

| Figure 7.1 | | Figure 7.2 |
|---|---|---|
|  | |  |
| Heritage Asset Plan based on 500m study area shaded in red. Site boundary indicatively outlined in red. Identified receptors for inclusion within the scoping assessment numbered 1-26 and denoted in Table 7.4. Base map source: Historic England, National Heritage List for England. | | Location of Whitworth Street Conservation Area (red line) in relation to the Site (Plot H boundary indicatively shown in area shaded green). Source: Manchester City council, overlay by SLHA. |
| **To Scale** **No** Date: October 2025 | | **To Scale** **No** Date: October 2025 |

| Figure 7.3 | |
|---|---|
|  | Viewpoint locations with potential effects on heritage as identified within the TVIA to be assessed are:<br><br>• 2 – Granby Row at Granby House<br>• 3 – Vimto Park (SRF view B)<br>• 4 – Altrincham Street<br>• 5 – Sackville Street<br>• 6 – Charles Street at Lass O' Gowrie pub<br>• 7 – Princess Street<br>• 8 – Sackville Gardens (SRF view 5)<br>• 9 – Chorlton Street (SRF view 2)<br>• 10 – London Road (SRF view 3)<br>• 11 – Fairfield Street (SRF view 4)<br>• 12 – Altrincham Street<br>• 18 – Oxford Street Station |
| To Scale No | Date: October 2025 |

# 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, RGRE Ltd, 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 redevelopment of the Plot H site for Purpose Built Student Accommodation (PBSA), with ancillary flexible commercial uses, landscaping, access and associated works. The Site is located within the ID Manchester Strategic Regeneration Framework (SRF) area in Manchester City Centre, bounded by Charles Street, the Manchester South Junction and Altrincham Railway Viaduct, Granby Row, Sackville Street and Princess Street. The Site currently comprises a disused multi-storey car park and vacant commercial units, which are proposed to be demolished to facilitate the new development.

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 construction (including demolition) and operational 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 construction (including demolition) and operational phases, 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 – 8.5, as applicable.

8.6. Cumulative effects have been considered within this discipline in accordance with the agreed EIA approach.

8.7. This ES Chapter was written by James Williams and reviewed by Sam Laws, with details presented in Table 8.1.

Table 8.1: ES Chapter Authors

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

## 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.

8.9. For completeness, reference is also made to the iQ Weston Halls & Pendulum Hotel redevelopment. The scheme has been validated by the Local Planning Authority and, given its immediate proximity to the Site, has been considered as part of the cumulative assessment for noise and vibration effects.

8.10. At the time of preparing this Environmental Statement, insufficient detailed information is available in the public domain to allow a robust quantitative cumulative assessment to be undertaken. In particular, construction phasing, programme overlap, plant inventories and operational plant specifications have not been published. A qualitative assessment has therefore been undertaken, which is considered proportionate and consistent with the EIA Regulations.

## Scope of the Assessment

8.11. An EIA Scoping Report was submitted to MCC on 28 November 2025, as presented as Appendix 2.1. The EIA Scoping Opinion was received on 30 December 2025 (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

8.12. The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:

- Construction Traffic Vibration
  There is potential for adverse effects due to construction traffic vibration where sensitive receptors are in very close proximity to roads which do not regularly experience heavy goods vehicle movements. There is no set methodology for the assessment of construction traffic vibration; however, receptors that are likely to experience adverse effects are expected to be the same as those identified in the assessment of construction traffic noise. The mitigation measures implemented to reduce the impact of construction traffic noise (i.e. the routing and management of construction traffic) will also reduce construction traffic vibration. A separate assessment of construction traffic vibration is therefore not deemed necessary or proportionate.
- Road Traffic Noise Increase
  The Proposed Development replaces a disused multi-storey car park and does not include significant parking provision, so it is not expected to generate significant road traffic during operation. As such, there is limited potential for significant adverse noise effects due to increased traffic flows on nearby roads, and assessment of operational road traffic noise is therefore not deemed necessary.

### Effects Considered Potentially Significant

8.13. The following effects were considered potentially significant and are reported within this Chapter:

- Demolition / Construction Noise
  There are sensitive receptors near the Proposed Development Site boundary which could be subject to temporary significant adverse effects due to demolition and construction noise.
- Construction Traffic Noise
  There are sensitive receptors located on or near roads likely to be used by construction traffic accessing the Site. There is potential for temporary adverse effects due to increases in road traffic noise during construction.
- Construction Vibration
  There are sensitive receptors near the Proposed Development Site boundary which could be subject to temporary significant adverse effects due to demolition and construction vibration.
- Environmental Noise Impacts (Operation)
  Baseline noise levels are typical of urban sites close to transport infrastructure. Appropriate building envelope specifications and ventilation strategies will be required to achieve guideline internal noise levels and avoid significant effects within the Proposed Development.
- Environmental Vibration Impact (Operation)
  Rail vibration has the potential to cause perceptible vibration and/or re-radiated noise within the Proposed Development. Baseline ground-borne vibration measurements are required to confirm the level of risk. If

significant, design mitigation (e.g. foundation isolation, structural detailing, or layout controls) may be necessary to avoid significant effects.

- Noise from Building Services Plant (Operation)
  There is likely to be a considerable amount of building-services plant, and the existing background noise levels are relatively low. Therefore, noise emissions from building services plant have the potential to cause significant adverse noise effects at nearby sensitive receptors if not properly controlled.
- Retail / Gym Noise Impacts (Operation)
  Appropriate operational controls and building-fabric specifications will be required to ensure that noise from proposed retail and gym activities does not result in significant effects at adjoining or off-site sensitive receptors.

## Assumptions and Limitations

### Assumptions

**General**

8.14. The assessment is based on the Proposed Development design, massing, and layouts available at the time of writing (October 2025).

- It is assumed that the final development will be constructed broadly in accordance with these designs and will incorporate the mitigation and control measures identified in this Chapter.
- It is assumed that any limiting criteria and performance thresholds specified within this Chapter (for example, façade design, plant noise limits, or construction controls) will either be achieved through design or secured by planning condition if required by the Local Planning Authority (LPA).
- The assessment assumes that national and local policy guidance, as set out in Section 1.21, remains applicable at the time of determination.

**Construction Programme and Activities**

8.15. Construction phasing, sequencing, and durations are based on the indicative programme supplied by the Applicant.

- It is assumed that demolition and construction will be carried out using the methods and equipment types defined in the supporting technical assessments (Appendix 8.3 and Appendix 8.4).
- All phases have been assessed assuming typical working hours in accordance with Manchester City Council's (MCC) Technical Guidance (2022):
  - Monday – Friday: 07:30–18:00
  - Saturday: 08:30–14:00
  - No Sunday or Bank Holiday working.
- Night-time working or extended hours have not been considered.
- It is assumed that Continuous Flight Auger (CFA) piling will be used, as confirmed by the design team, representing a low-vibration foundation method.

**Plant and Equipment Use**

8.16. Construction plant noise levels are based on standard reference data from BS 5228-1:2009 +A1:2014 and manufacturer information.

- It is assumed that all plant and machinery will be properly maintained, fitted with standard noise-control devices (e.g. silencers, mufflers), and operated according to Best Practicable Means (BPM).
- Plant usage factors (percentage on-time) are assumed to be typical of comparable projects of similar scale.

**Site Layout and Operations**

8.17. The assessment assumes that the site layout and positioning of plant, stockpiles, and access routes will remain as described in the supporting assessments.

- Where final construction layouts are unknown, area sources have been used to cover the site working area.
- Construction traffic is assumed to use the designated primary access routes via Sackville Street, Charles Street and Princess Street, consistent with the Construction Logistics Plan.

**Environmental Conditions**

8.18. The assessment assumes typical meteorological conditions conducive to sound propagation (light downwind or neutral).

- Baseline noise levels recorded in July 2025 and vibration levels recorded in October 2025 are assumed to be representative of average conditions within this urban, transport-dominated area.
- It is assumed that environmental noise conditions in the surrounding area will not materially change before or during construction, other than temporary variations typical of the city centre.

**Vibration Survey and Structural Response**

8.19. The baseline vibration survey was undertaken at one location adjacent to the railway viaduct, representing a reasonable worst-case ground-borne input.

- It is assumed that the measured vibration levels at this location are representative of those likely to affect the nearest parts of the Proposed Development.
- The proposed building structure and foundations will differ in form and mass from the existing car park; it is assumed that this will result in equal or greater attenuation of vibration transmission.
- It is assumed that detailed structural design will maintain vibration isolation performance consistent with the design intent described in Appendix 8.2.

**Environmental Noise (External Sources)**

8.20. The environmental noise assessment reflects the current architectural layouts, façade geometries, and window-to-wall ratios.

- It is assumed that the façade systems, glazing, and ventilation will be designed to achieve the internal noise targets in BS 8233:2014 and ProPG: Planning and Noise (2017).
- Internal room acoustic conditions are based on standard assumptions for furnished residential spaces.
- It is recognised that minor design changes (e.g. room layouts, façade materials, ventilation systems) could marginally alter predicted internal noise levels.

**Operational Plant, Retail and Gym Uses**

8.21. The operational assessments assume that:

- All external plant will be designed to achieve noise levels at least 5 dB below background in accordance with BS 4142:2014 +A1:2019 and MCC Technical Guidance (2022).
- Commercial units will operate as daytime retail or café uses without amplified music or night-time entertainment.
- The residents' gym will operate within 07:00–23:00, with management controls restricting free-weight use, amplified music, and other high-impact activities in accordance with ProPG: Gym Acoustics (2023).
- The final detailed design will incorporate the specified sound insulation and vibration isolation measures outlined in Appendix 8.5.

## Limitations

**Construction Programme and Plant Variability**

8.22. Actual construction durations, sequences, and equipment may vary as the project develops. Such variations could produce localised increases or decreases in noise and vibration relative to those predicted.

**Design Development**

8.23. Architectural, structural, and building services designs remain subject to refinement through detailed design. Changes to façade composition, plant locations, or room layouts could marginally alter future noise and vibration performance. The assessment therefore represents a reasonable worst-case based on the current information.

**Environmental Variability**

8.24. Baseline noise and vibration measurements represent a finite period of observation. Longer-term seasonal or meteorological variations are not captured. Noise propagation can be affected by temperature, humidity, and wind direction, which may lead to small variations from the modelled results.

**Model Simplifications**

8.25. The assessment models sources and receptors using simplified geometries and standardised ground conditions. Local irregularities, complex reflections, or heterogeneous soil properties have not been explicitly modelled but are not expected to alter overall conclusions.

**Mitigation and Implementation**

8.26. Where mitigation measures are proposed but not yet fully detailed (e.g. acoustic barriers, plant enclosures, floating floors), the assessment assumes typical performance levels based on industry-standard data. Actual performance will depend on final design, installation quality, and maintenance.

**Scope of Operational Assessment**

8.27. The operational phase assessment considers typical day-to-day activity associated with the approved land uses. Future changes in occupancy, trading hours, or commercial uses outside the current consent would require separate assessment.

**Human Perception and Response**

8.28. The assessment applies objective, standards-based thresholds for evaluating significance. Individual sensitivity to noise or vibration can vary and is not accounted for beyond the established comfort and annoyance criteria defined in BS 5228, BS 6472, and related standards.

# Relevant Legislation, Policy and Guidance

8.29. This Chapter has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended), which require that Environmental Statements identify, describe, and assess the likely significant environmental effects of development proposals, and set out appropriate mitigation measures. These Regulations are made under the Town and Country Planning Act 1990, which provides the broader legal basis for planning control in England.

8.30. The assessment also takes into account other relevant legislation that directly informs the management, control, and evaluation of environmental noise and vibration, including the Environmental Protection Act 1990 (EPA), the Control of Pollution Act 1974 (CoPA), and the Building Regulations. Together, these frameworks establish the statutory context for assessing and mitigating potential impacts during the demolition, construction, and operational phases of the Proposed Development.

## Legislation

8.31. The following legislation informs the assessment of noise and vibration effects within this Chapter:

- Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended): Establish the statutory process for undertaking Environmental Impact Assessments in England, including the requirement to identify and mitigate likely significant environmental effects such as noise and vibration.

- Environmental Protection Act 1990 (EPA): Defines statutory nuisance provisions under Section 79, including noise and vibration emitted from premises and construction sites, and gives local authorities powers to take enforcement action where such nuisances occur.
- Control of Pollution Act 1974 (CoPA): Provides mechanisms for controlling noise and vibration from demolition and construction activities. Under Section 61, developers may apply for prior consent to agree working hours, plant, and noise limits with the local authority in advance of works.
- Building Regulations: Set minimum standards for the design and construction of buildings to ensure the health, safety, and comfort of occupants. The regulations include provisions relevant to acoustic performance, sound insulation, and the maintenance of acceptable internal noise levels within habitable spaces.

## Policy

**National Planning Policy**

8.32. In accordance with the EIA Regulations 2017, this assessment aligns with national planning policy, which provides the overarching framework for managing noise and vibration impacts through the planning system.

- 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.
- Planning Practice Guidance: Noise (PPG-Noise, 2019): Supplements the NPPF and NPSE by defining the Observed Effect Levels (NOEL, LOAEL, SOAEL) and establishing the principles of good acoustic design. It provides context for the identification of appropriate assessment methodologies and significance criteria.

**Regional Policy**

8.33. The following regional planning policy informs the assessment of noise and vibration:

- Places for Everyone Joint Development Plan (2024): The strategic plan for Greater Manchester provides policy support for mitigating environmental impacts of development, including noise and vibration. It emphasises the need for Construction Management Plans to control environmental effects (air quality, noise, and traffic) and to ensure sustainable delivery practices.

**Local Policy and Guidance**

8.34. The Proposed Development has been assessed in the context of the Manchester Core Strategy (Adopted 2012, updated 2024) and Manchester City Council's Planning and Noise Technical Guidance (October 2022), which set the local policy framework for assessing, managing, and mitigating noise and vibration effects.

- Policy DM1 – Development Management: Requires that all development has regard to "the effect on amenity, including noise, vibration, air quality, light pollution and visual appearance". The policy seeks to ensure that new development minimises adverse effects through good design and appropriate mitigation.
- Policy H12 – Purpose Built Student Accommodation: Supports the delivery of purpose-built student accommodation that is "compatible with surrounding land uses" and "does not have an unacceptable impact on residential amenity through increased noise, disturbance or impact on the streetscene".
- Policy C10 – Health and Wellbeing: Requires new development to "protect residents from environmental hazards such as noise and pollution" and to promote health and wellbeing through the creation of high-quality, safe, and comfortable living environments.
- Manchester City Council Planning and Noise Technical Guidance (October 2022): Provides detailed local guidance for assessing and managing noise and vibration during both construction and operation. It sets out the following key principles and criteria:

- Section 3.7.1.1 – Residential Developments: New dwellings should achieve internal and external noise levels consistent with the guidance in BS 8233:2014 and ProPG: Planning and Noise (2017), ensuring acceptable living conditions.
- Section 3.7.1.2 – Mixed-Use Developments: Sound insulation between different uses should meet the performance standards in BS 8233:2014 and Approved Document E, ensuring commercial or leisure activities do not cause unreasonable disturbance.
- Section 3.7.1.3 – Entertainment and Night-time Uses: Low-frequency noise and structure-borne sound must be adequately controlled, with assessment methods referencing BS 4142:2014 +A1:2019 and the ANC Good Practice Guide for entertainment noise.
- Section 3.7.1.4 – Construction and Demolition Activities: Assessments should be undertaken in accordance with BS 5228-1:2009 +A1:2014 and BS 5228-2:2009 +A1:2014, with Best Practicable Means (BPM) applied and noisy works restricted to agreed daytime hours.
- Section 3.7.1.5 – Industrial and Commercial Developments: Fixed plant and machinery should be designed so that the rating level of noise is typically at least 5 dB below the existing background sound level, consistent with BS 4142:2014 +A1:2019.

## Guidance and Technical Standards

8.35. The assessment has been undertaken in accordance with the following recognised standards and guidance documents, which collectively define the accepted methodologies, thresholds, and criteria for evaluating and mitigating noise and vibration impacts:

- 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:* Primary reference for predicting and mitigating construction (including demolition) noise and vibration.
- DMRB LA 111: Noise and Vibration (2020): Provides the framework for assessing and determining impact significance for construction and construction-traffic noise and vibration within the EIA context.
- BS 7445-2:2003 – *Description and Measurement of Environmental Noise:* Provides guidance for acquiring environmental noise data relevant to land-use assessment.
- ANC Environmental Noise Measurement Guide (2021): Establishes good practice for environmental noise surveys, instrumentation, and data interpretation.
- BS 8233:2014 – *Guidance on Sound Insulation and Noise Reduction for Buildings:* Sets indoor ambient noise criteria for dwellings, hotels, and educational buildings, including façade and ventilation performance.
- ProPG: Professional Practice Guidance on Planning and Noise (2017): Framework for integrating good acoustic design into residential developments, complementing BS 8233.
- BS 4142:2014 +A1:2019 – *Methods for Rating and Assessing Industrial and Commercial Sound:* Used for evaluating operational plant noise against background sound levels at nearby sensitive receptors.
- BS 6472-1:2008 – *Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz):* Provides the basis for assessing vibration dose values (VDV) and thresholds for human comfort and perception within buildings.
- ANC Measurement & Assessment of Groundborne Noise and Vibration (2020): Provides guidance on measuring, assessing, and interpreting ground-borne vibration and re-radiated noise, particularly for developments near railways and other transport infrastructure.
- Calculation of Road Traffic Noise (CRTN, DfT/Welsh Office, 1998): Defines methodologies for predicting and assessing noise impacts associated with changes in road traffic.
- ISO 9613-2:2024 – Attenuation of Sound During Propagation Outdoors: Establishes propagation algorithms used in 3D noise modelling (e.g., Cadna/A).
- IEMA Guidelines for Environmental Noise Impact Assessment (2014): Sets out EIA best practice for assessing, evaluating, and reporting noise significance.

- ProPG: Gym Acoustics Guidance (2023): Provides criteria and design guidance to manage noise from gym and fitness uses within mixed-use buildings.
- Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2006): Provides supplemental reference data for construction vibration prediction and control.
- Building Regulations (Approved Document O – Overheating, 2021): Establishes design criteria for balancing ventilation, overheating risk, and acoustic performance in new buildings.
- Approved Document E (Resistance to the Passage of Sound, 2015): Defines minimum sound insulation standards for walls, floors, and ceilings between residential and commercial uses.

## Assessment Methodology and Significance Criteria

8.36. 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

8.37. In accordance with the overall Environmental Impact Assessment (EIA) methodology presented in Chapter 2, and the approach agreed through the EIA Scoping process, the noise and vibration assessment considers the following scenarios for the Proposed Development. These align with the scenario framework adopted across all ES technical disciplines.

- Scenario 1 – Existing Baseline (2025):
  Represents the current noise and vibration environment at and around the Site prior to redevelopment, with the existing multi-storey car park and ancillary commercial units in situ. This establishes the reference conditions for assessing the potential effects of the Proposed Development.
- Scenario 2 – Existing Baseline + Plot H:
  Assesses the likely changes in noise and vibration levels resulting from the construction (including demolition) and operation of the Proposed Development, relative to baseline conditions.
- Scenario 3 – Existing Baseline + Plot H + Cumulative:
  Considers the combined noise and vibration effects of the Proposed Development together with other consented or committed developments within the study area that may be under construction concurrently. As part of the cumulative considerations, reference has been made to the validated iQ Weston Halls & Pendulum Hotel redevelopment, located immediately adjacent to the Site and supported by an Environmental Impact Assessment.
- Scenario 4 – Existing Baseline + Plot H + Cumulative + ID Manchester Masterplan:
  Provides a future assessment scenario incorporating the cumulative influence of the wider ID Manchester regeneration area and other foreseeable future schemes, representing a potential long-term context for the Proposed Development. This scenario has been considered but not assessed because the operational road traffic noise increases have been scoped out of this assessment, and there are no other aspects of the wider regeneration area that are expected to alter the findings of the relevant assessments in this chapter.

8.38. Alternative Baseline Scenarios (1a–4a), representing conditions with the existing buildings demolished but the Proposed Development not yet built, have been scoped out. The 2025 baseline (with buildings in situ) is considered to represent the likely operational worst-case condition. Removal of the existing structures would not materially alter noise or vibration exposure at receptors within this transport-dominated environment, and any demolition-only noise would mirror the early construction activities of the main scheme.

8.39. Accordingly, Scenarios 1–3 are taken forward as proportionate and representative for the assessment (4 is considered but not assessed).

## The Study Area

8.40. 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- and vibration-sensitive receptors (NSRs) during the construction (including demolition) and operational phases of the Proposed Development. The Site is located within a dense, mixed-use urban environment in Manchester City Centre, where residential, educational, commercial and hotel receptors are situated in close proximity. The approach reflects the methodology agreed through the EIA Scoping process.

**Construction Noise and Operational Noise and Vibration Study Area (100 m)**

8.41. The study area for construction noise and operational noise and vibration extends approximately 100 metres from the Site boundary, as illustrated in Figure 8.1, and has been defined based on the following considerations:

- A 100 m radius ensures inclusion of the vast majority of receptors with direct line of sight to the Proposed Development, capturing those most likely to experience measurable noise and vibration effects.
- Receptors outside this distance are generally either more remote or acoustically screened by intervening structures, meaning effects would be significantly attenuated.
- The 100 m extent provides a worst-case but proportionate study area for evaluating potential noise and vibration effects during construction (including demolition) and operation.

**Construction Traffic Study Area (50 m)**

8.42. The study area for construction traffic noise extends approximately 50 metres from the kerb line of relevant public roads, consistent with DMRB LA 111: Noise and Vibration (2020).

**Construction Vibration Study Area (50 m)**

8.43. The study area for construction vibration extends approximately 50 metres from the Site boundary and has been defined as follows:

- Ground-borne vibration decays rapidly with distance due to geometric spreading and soil damping effects.
- Beyond around 50 m, vibration from typical construction activities (e.g. piling, excavation or heavy vehicle movements) is expected to fall below thresholds of human perception and well below any building damage criteria.
- This extent therefore focuses the assessment on receptors with a realistic potential for perceptible or significant vibration impacts, without unnecessarily expanding the study area into zones where effects would be negligible.

8.44. This approach ensures the assessment remains proportionate, targeted and in line with recognised best practice, capturing all receptors with potential to experience significant noise or vibration effects from the Proposed Development.

## Surveys and Data Sources

8.45. The following studies and technical assessments 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 provide the technical basis for evaluating the potential impacts arising from the construction (including demolition) and operational phases of the Proposed Development. 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 Impact Assessment (Blackbird Acoustics – Appendix 8.1) | Technical baseline report setting out the methodology, monitoring results, and interpretation of existing environmental noise conditions, providing the basis for setting operational plant noise limits and façade performance requirements to ensure appropriate internal and external acoustic environments. | October 2025 |

| | | |
|---|---|---|
| Ground-borne Vibration Impact Assessment (Heyda Ltd – Appendix 8.2) | Baseline environmental vibration survey undertaken by Heyda between 13-15 October 2025, using unattended logging at one location representative of the nearest façade to the railway viaduct. The survey was conducted in accordance with the ANC Measurement & Assessment of Groundborne Noise & Vibration Guide (2020) to establish prevailing vibration levels at the worst-case location. | October 2025 |
| Demolition Noise and Vibration Impact Assessment (Appendix 8.3) | 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 |
| Construction Noise, Vibration and Road Traffic Noise Assessment (Heyda Ltd – Appendix 8.4) | Detailed quantitative assessment of on-site construction noise and vibration impacts at the nearest sensitive receptors, undertaken in accordance with BS 5228-1:2009+A1:2014, BS 5228-2:2009+A1:2014, and DMRB LA 111 (2020). Includes 3D noise modelling, vibration predictions, impact thresholds, and recommended mitigation and monitoring strategies. | October 2025 |
| Commercial Units and Resident's Gym Noise and Vibration Assessment (Heyda Ltd – Appendix 8.5) | Assessment of potential operational noise and vibration impacts from the proposed ground-floor commercial uses and first-floor resident's gym. Prepared in accordance with BS 4142:2014+A1:2019, BS 8233:2014, and ProPG: Gym Acoustics Guidance (2023). Evaluates internal/external noise break-out, sound insulation requirements, and vibration design guidance for on-site and off-site receptors. | October 2025 |

## Source of Effect

**Construction Stage**

8.46. The assessment of likely significant effects of noise and vibration from the Proposed Development has been undertaken in accordance with the relevant legislation, standards, and guidance set out in Section 1.21. Baseline conditions were established through environmental noise monitoring undertaken by Blackbird Acoustics, with detailed assessments for each construction-related effect presented in Appendices 8.3 and 8.4.

8.47. Demolition / Construction Noise:

- What is assessed: Potential noise effects on nearby residential, educational, and commercial receptors during demolition and construction works.
- How it is assessed: Predicted using a 3D model developed in Cadna/A, following the methods in BS 5228-1:2009 +A1:2014 and ISO 9613-2 for propagation.
- Impact thresholds: Significance determined using the BS 5228-1 "ABC" and 5 dB methods, with reference to the significance framework in DMRB LA 111 (2020).

8.48. Construction Traffic Noise:

- What is assessed: Temporary changes in road traffic noise resulting from construction vehicle movements on surrounding road links.
- How it is assessed: Calculated using the Calculation of Road Traffic Noise (CRTN, 1998) Basic Noise Level method, in line with DMRB LA 111 (2020), applying 2025 baseline and forecast construction traffic data.
- Impact thresholds: Based on the short-term magnitude-of-change categories defined in DMRB LA 111 (2020) for changes in $L_{A10,18hr}$ road traffic noise levels.

8.49. Demolition / Construction Vibration:

- What is assessed: Ground-borne vibration effects on people and buildings from demolition and construction activities, including piling, excavation and compaction.
- How it is assessed: Predicted using empirical relationships from BS 5228-2:2009 +A1:2014, supported by BS 6472-1:2008 and the ANC Measurement & Assessment of Groundborne Noise and Vibration (2020) guidance.
- Impact thresholds: Determined with reference to BS 5228-2 (Annex B) for human response and cosmetic building damage.

**Operational Stage**

8.50. The assessment of likely significant operational noise and vibration effects has been undertaken in accordance with the relevant legislation, standards, and guidance set out in Section 1.21. Baseline conditions were established through environmental noise and vibration monitoring undertaken by Blackbird Acoustics and Heyda Ltd, with detailed assessments for each operational effect presented in Appendices 8.1, 8.2 & 8.5. The assessment considers environmental noise and vibration affecting future occupants of the Proposed Development, as well as noise emissions generated by the operation of building services plant and commercial/gym uses.

8.51. Environmental Noise Impacts:

- What is assessed: The potential for external transport noise (road and rail) to affect future occupants of the Proposed Development.
- How it is assessed: Predicted using propagation methods set out in ISO 9613-2, and evaluated in accordance with BS 8233:2014 and ProPG: Planning and Noise (2017), using the measured baseline noise levels.
- Impact thresholds: Internal and external noise criteria defined in BS 8233:2014 and ProPG (2017) for residential developments, taking account of recommended façade and ventilation design performance.

8.52. Environmental Vibration Impacts:

- What is assessed: The potential for ground-borne vibration and re-radiated noise from nearby rail infrastructure to affect building occupants.
- How it is assessed: Evaluated using measured and predicted vibration data in accordance with BS 6472-1:2008 and the ANC Measurement & Assessment of Groundborne Noise and Vibration (2020) guidance.
- Impact thresholds: Human exposure and perception thresholds defined in BS 6472-1 (Table 1) and guidance criteria set out in ANC (2020).

8.53. Noise from Building Services Plant:

- What is assessed: Operational noise from mechanical and electrical plant associated with the Proposed Development, including rooftop and external units.
- How it is assessed: Assessed in accordance with BS 4142:2014 +A1:2019, comparing predicted rating levels of plant noise with representative background sound levels established during the baseline survey.
- Impact thresholds: Determined using the BS 4142 impact scale, which categorises effects based on the difference between rating and background levels.

8.54. Retail / Gym Noise Impacts:

- What is assessed: Noise and vibration from operation of the proposed ground-floor commercial units and first-floor residents' gym, including internal activity noise breakout and potential transmission to nearby dwellings.
- How it is assessed: Assessed using the methods and criteria in BS 4142:2014 +A1:2019, BS 8233:2014, and ProPG: Gym Acoustics Guidance (2023), supported by predictive modelling in Cadna/A.

- Impact thresholds: Based on internal and external noise and vibration design targets defined in BS 4142:2014 +A1:2019, BS 8233:2014, ProPG (2017), and ProPG Gym Acoustics (2023).

## Significance Criteria

8.55. 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**

8.56. 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.

8.57. 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. |

8.58. 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**

8.59. 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.

8.60. 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. |

8.61. 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/Construction Noise**

8.62. The magnitude of impact for demolition/construction 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.

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

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

| Magnitude of Impact | Construction 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 – Construction Noise – Weekends (Saturdays)

| Magnitude of Impact | Construction 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 – Construction Traffic Noise**

8.64. The magnitude of change from construction traffic has been assessed based on short-term changes in road traffic noise levels, as outlined in DMRB LA 111, as presented in Table 8.7.

Table 8.7: Magnitude of Impact Classifications – Construction Traffic Noise

| Magnitude of Change | Short-term Change in Road Traffic Noise Level (dB, $L_{A10,18hours}$) |
|---|---|
| Major | > 5.0 |
| Moderate | 3.0 – 4.9 |
| Minor | 1.0 – 2.9 |
| Negligible | 0.1 – 0.9 |

**Construction Stage Magnitude of Impact Classifications – Demolition/Construction Vibration**

8.65. The magnitude of impact for vibration during demolition/construction activities has been determined in terms of Peak Particle Velocity (PPV) in accordance with BS 5228-2:2009+A1:2014, as presented in Table 8.8.

Table 8.8: Magnitude of Impact Classifications – Demolition/Construction Vibration

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

**Operational Stage Magnitude of Impact Classifications – Environmental Noise Impacts**

8.66. The magnitude of impact, defined in Table 8.10 and 8.11, has been determined relative to the ProPG: Planning and Noise internal noise level guidelines which are stated in Table 8.9.

Table 8.9: ProPG Internal Noise Level Guidelines

| Location | Period | Equivalent Continuous Sound Pressure Level $L_{Aeq,T}$ (dB) | Maximum Sound Pressure Level $L_{Amax,F}$ (dB) |
|---|---|---|---|
| Living Rooms and Bedrooms | Daytime (07:00–23:00) | 35 | - |
| Bedrooms Only | Night-time (23:00–07:00) | 30 | 45 (10 times/night) |

8.67. The magnitude of impact during the whole-dwelling ventilation condition has been determined based on the degree of exceedance above these guidelines.

Table 8.10: Magnitude of Impact Classifications – Operational Environmental Noise Impacts – Whole Dwelling Ventilation

| Magnitude of Impact | Exceedance of the ProPG Criteria (dB) |
|---|---|
| Major | > 10 |
| Moderate | 5 – 10 |
| Minor | 0 – 5 |
| Negligible | ≤ 0 |

8.68. The magnitude of impact during the overheating ventilation condition has been determined based on the following degree of exceedance above these guidelines. This assessment covers the night time period only.

Table 8.11: Magnitude of Impact Classifications – Operational Environmental Noise Impacts – Overheating Ventilation

| Magnitude of Impact | Exceedance of the ProPG Criteria (dB) |
|---|---|
| Major | > 15 |
| Moderate | 10 – 15 |
| Minor | 5 – 10 |
| Negligible | ≤ 5 |

**Operational Stage Magnitude of Impact Classifications – Environmental Vibration Impacts**

8.69. The magnitude of impact due to tactile vibration has been determined in accordance with BS 6472 and The ANC Measurement & Assessment of Groundborne Noise & Vibration, as presented in Table 8.12.

Table 8.12: Magnitude of Impact Classifications – Operational Environmental Vibration Impacts – Tactile Vibration

| Magnitude of Impact | Vibration Dose Value ($ms^{-1.75}$) | |
|---|---|---|
| | Day | Night |
| Major | > 0.8 | > 0.4 |
| Moderate | 0.4 – 0.8 | 0.2 – 0.4 |
| Minor | 0.2 – 0.4 | 0.1 – 0.2 |
| Negligible | ≤ 0.2 | ≤ 0.1 |

8.70. The magnitude of impact due to groundborne noise (resulting from environmental vibration sources) has been determined in accordance with The ANC Measurement & Assessment of Groundborne Noise & Vibration, as presented in Table 8.13.

Table 8.13: Magnitude of Impact Classifications – Operational Environmental Vibration Impacts – Groundborne Noise

| Magnitude of Impact | Maximum Sound Pressure Level (dB $L_{Amax,slow}$) |
|---|---|
| Major | > 45 |
| Moderate | 40 – 45 |
| Minor | 35 – 40 |
| Negligible | ≤ 35 |

**Operational Stage Magnitude of Impact Classifications – Noise from Building Services Plant**

8.71. The magnitude of impact from building services plant has been determined by comparing predicted rating noise levels against background noise levels, as set out in BS 4142:2019 and Manchester City Council's SPG for Noise.

Table 8.14: Magnitude of Impact Classifications – Noise from Building Services Plant

| Magnitude of Impact | Rating Noise Level Relative to Background (dB $L_{Ar,T}$) |
|---|---|
| Major | > 10 |
| Moderate | 5 – 10 |
| Minor | 0 – 5 |
| Negligible | ≤ 0 |

**Operational Stage Magnitude of Impact Classifications – Retail/Gym Noise Impacts**

8.72. The likely level of noise breakout from the proposed retail and gym spaces to external facades of the nearest noise sensitive receptors have been predicted and compared against the existing background sound level at the relevant receptor location. The impact thresholds have been determined using BS 4142, and are the same as those stated for building services noise in Table 8.14.

8.73. The level of noise transfer likely to occur between retail spaces and the adjacent residential properties has been determined, and the magnitude of impact has been determined relative to the exceedance of the ProPG Planning and Noise internal noise guidelines which were presented in Table 8.9. The impact magnitudes are presented in Table 8.15.

Table 8.15: Magnitude of Impact Classifications – Retail Unit Noise Impacts – Noise Transfer to Adjoining Residential

| Magnitude of Impact | Exceedance of the ProPG Criteria |
|---|---|
| Major | > BS 8233 guideline levels |
| Moderate | 5 – 0 dB below |
| Minor | 10 – 5 dB below |
| Negligible | ≥ 10 dB below |

8.74. The criteria for airborne and structure-borne noise transfer from the proposed gym to adjoining residential properties have been taken from the ProPG Gym Acoustics Guidance (2023), as presented in Table 8.16.

Table 8.16: ProPG Gym Noise Transfer Limits

| Receptor Type | Airborne Sound ($L_{eq,T}$, dB) | Heavy Impact Sound ($L_{max,F}$, dB) |
|---|---|---|
| Residential | Daytime: G15 – G25 | Daytime: G20 – G25 |
| | Night-time: G10 – G20 | Night-time: G15 – G20 |

8.75. For structure-borne vibration, the following limits apply:

Table 8.17: ProPG Gym Vibration Transfer Limits

| Receptor Type | Tactile Vibration ($mm/s^2$, rms) | Peak Vibration ($mm/s^2$) |
|---|---|---|
| Residential | 7 $mm/s^2$ | 21 $mm/s^2$ |

8.76. The magnitude of impact has been determined based on the degree of exceedance of these criteria as per Table 8.18.

Table 8.18: Magnitude of Impact Classifications – Gym Noise and Vibration Impacts – Transfer to Adjoining Residential

| Receptor Type | Airborne Noise Impact | Structure-Borne Vibration Impact |
|---|---|---|
| Major | > 5 dB above | Above stated criteria |
| Moderate | 0 – 5 dB above | Above stated criteria |
| Minor | Within stated criteria | Below stated criteria |
| Negligible | Below stated criteria | Below stated criteria |

**Determining the Level of Effect**

8.77. 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 8.19 has been a tool which has assisted with this process.

8.78. Whilst Table 8.19 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 8.19: Matrix to Support Determining the Level of Effect

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

8.79. 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.

8.80. 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**

8.81. 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.

8.82. Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

## Baseline Conditions

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

### Site Context

8.84. 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 and vibration 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 and vibration 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

8.85. 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 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

8.86. 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.

8.87. 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 8.20.

Table 8.20: 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 |

8.88. 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.

8.89. Detailed monitoring results, including time-history graphs are provided in Appendix 8.1.

## Vibration Survey

8.90. An environmental vibration survey was conducted over a weekday period from Monday 13th to Wednesday 15th October 2025 to capture representative conditions. All vibration monitoring was carried out using a 01dB Orion vibration monitor.

## Measurement Locations

8.91. Measurements were undertaken at one position:

- **Vibration Position 1 (P1):** Unattended vibration measurement position in the location of the nearest façade to the adjacent railway viaduct (approximately 5 meters from its nearest structure).

8.92. Further details on the monitoring position can be found in Appendix 8.2.

## Summary of Measured Vibration Levels

The measured vibration levels relevant to this assessment are summarised in Table 8.21; values are presented for the Z-axis only as these were the highest.

Table 8.21: Summary of Measured Vibration Levels – VDVs at VP1 – Z-Axis

| Measurement Position | Period | Vibration Dose Value (ms-1.75) |
|---|---|---|
| VP1 | Daytime (07:00 – 23:00) | 0.013 |
| | Night Time (23:00 – 07:00) | 0.010 |

8.93. The results of the vibration measurements have also been used to determine and predict ground-borne re-radiated noise levels within a typical first-floor bedroom located nearest to the railway viaduct. In this case, the re-radiated noise was derived directly from the measured vibration velocity, which was processed by the vibration monitor to determine the equivalent A-weighted sound pressure level ($L_p$) using slow time-weighting and appropriate correction factors for a typical furnished room and vertical structural transmission losses. The three highest vibration events are presented below to represent worst-case conditions.

Table 8.22: Summary of Measured $L_p$ Re-radiated Noise at VP1 – Highest Events

| Measurement Position | Period | Event | $L_p$ (dBA) and Axis |
|---|---|---|---|
| VP1 | Daytime (07:00 – 23:00) | 1st highest | 52 (Y Axis) |
| | | 2nd highest | 43 (X Axis) |
| | | 3rd highest | 38 (Y Axis) |
| | Night Time (23:00 – 07:00) | 1st highest | 40 (X & Y Axis) |
| | | 2nd highest | 39 (Y Axis) |
| | | 3rd highest | 36 (X and Y Axis) |

8.94. The groundborne noise levels within a typical bedroom have been predicted using the ANC guidance methodology by applying relevant transfer functions and amplification factors from the "Transportation Noise Reference Book" (1987) to the measured data.

8.95. The highest predicted groundborne noise level in the worst-affected proposed first-floor bedroom is 52 dB $L_{ASmax}$ during the daytime period. However, this is an isolated and short-duration event, with the second-highest event reducing markedly to 43 dB $L_{Amax,S}$ and all subsequent events falling at or below 40 dB $L_{Amax,S}$.

8.96. The highest predicted groundborne noise level in the worst-affected proposed first-floor bedroom is 40 dB $L_{ASmax}$ during the night-time periods.

8.97. Detailed monitoring results are provided in Appendix 8.2.

## Identification and Evaluation of Likely Significant Effects

### Demolition/Construction Noise

8.98. 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 8.23 below and identified in Figure 8.1.

Table 18.23: 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 | High |
| Pendulum Hotel, Weston Halls and Echoes Day Nursery | Hotel/PBSA Residences and Nursery | High/Medium |
| Ibis Hotel | Hotel/PBSA Residences | High |
| Vita Students | Hotel/PBSA Residences | High |
| Sackville Street Building | Educational/Research | Medium |
| James Lighthill Building | Educational/Research | Medium |
| Parisier Building | Educational/Research | Medium |
| Reynold Building | Educational/Research | Medium |

8.99. Echoes Day Nursery has been listed in Table 18.23 for completeness. However, as it is situated within the same building as Weston Halls/Pendulum Hotel and is of medium sensitivity, the predicted noise and vibration effects are expected to be comparable to, or lower than, those identified for Weston Halls/Pendulum Hotel. Accordingly, the assessment results presented for Weston Halls/Pendulum Hotel are considered directly representative of the effects at Echoes Day Nursery, and separate results have not been reported.

8.100. 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 8.3.

8.101. 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.

8.102. To avoid overcomplication, the demolition phases have been combined when reported in the following tables. This means that the presented assessment of demolition noise impacts are the highest that are expected to occur during the whole demolition period. Full details and predictions are presented in Appendix 8.3.

8.103. Following demolition, the construction works have been divided into five primary phases, as defined in the Construction Noise and Vibration and Road Traffic Increase Assessment (Appendix 8.4):

- Phase 1 – Piling Mat Installation: Preparation of the piling mat and initial site set-up.

- Phase 2 – Piling Works (CFA): Installation of Continuous Flight Auger (CFA) piles to form building foundations.
- Phase 3 – Superstructure: Erection of the primary frame and structural elements.
- Phase 4 – Building Envelope: Installation of façades, windows, and external cladding.
- Phase 5 – Fit-Out: Internal construction, services, and finishes (acoustically contained within the building envelope). These works are not expected to contribute significantly to noise emissions due to containment within the building envelope. Consequently, noise breakout during this phase is deemed negligible, and no further assessment was undertaken.

8.104. These phases represent the full sequence of on-site activities assessed for potential noise and vibration effects. Each phase has been modelled separately within the 3D noise prediction model, using representative plant lists and operating assumptions as detailed in Appendices 8.3 and 8.4.

8.105. Predicted noise levels for each demolition/construction phase are summarised for these receptors, with the magnitude of impact determined based on the thresholds defined in Tables 8.5 and 8.6.

Table 8.24: Predicted Demolition/Construction Noise Levels – 90 Princess Street (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 70 | Moderate/Moderate |
| P1 | 58 | Negligible/Negligible |
| P2 | 63 | Minor/Minor |
| P3 | 65 | Minor/Minor |
| P4 | 59 | Negligible/Minor |

Table 8.25: Predicted Demolition/Construction Noise Levels – Salisbury House (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 77 | Major/Major |
| P1 | 64 | Minor/Minor |
| P2 | 70 | Moderate/Moderate |
| P3 | 71 | Moderate/Moderate |
| P4 | 65 | Minor/Minor |

Table 8.26: Predicted Demolition/Construction Noise Levels – Orient House (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 77 | Major/Major |
| P1 | 66 | Minor/Minor |
| P2 | 71 | Moderate/Moderate |
| P3 | 73 | Moderate/Moderate |
| P4 | 67 | Minor/Minor |

Table 8.27: Predicted Demolition/Construction Noise Levels – Granby House (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 78 | Major/Major |
| P1 | 67 | Minor/Minor |

| | | |
|---|---|---|
| P2 | 72 | Moderate/Moderate |
| P3 | 73 | Moderate/Moderate |
| P4 | 67 | Minor/Minor |

Table 8.28: Predicted Demolition/Construction Noise Levels – Fairbairn Building (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 79 | Major/Major |
| P1 | 66 | Minor/Minor |
| P2 | 72 | Moderate/Moderate |
| P3 | 73 | Moderate/Moderate |
| P4 | 67 | Minor/Minor |

Table 8.29: Predicted Demolition/Construction Noise Levels – 1 Samuel Ogden Street (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 70 | Moderate/Moderate |
| P1 | 54 | Negligible/Negligible |
| P2 | 59 | Minor/Minor |
| P3 | 63 | Minor/Minor |
| P4 | 57 | Negligible/Negligible |

Table 8.30: Predicted Demolition/Construction Noise Levels – Granby Village (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 73 | Moderate/Moderate |
| P1 | 56 | Negligible/Negligible |
| P2 | 61 | Minor/Minor |
| P3 | 66 | Minor/Minor |
| P4 | 60 | Minor/Minor |

Table 8.31: Predicted Demolition/Construction Noise Levels – Montana House (Residential) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 66 | Moderate/Moderate |
| P1 | 54 | Negligible/Minor |
| P2 | 60 | Minor/Minor |
| P3 | 64 | Minor/Moderate |
| P4 | 58 | Minor/Minor |

Table 8.32: Predicted Demolition/Construction Noise Levels – 121 Princess Street (Hotel/PBSA Residences) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 68 | Minor/Moderate |
| P1 | 48 | Negligible/Negligible |

| | | |
|---|---|---|
| P2 | 54 | Negligible/Negligible |
| P3 | 59 | Minor/Minor |
| P4 | 53 | Negligible/Negligible |

Table 8.33: Predicted Demolition/Construction Noise Levels – Pendulum Hotel and Weston Halls (Hotel/PBSA Residences) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 79 | Major/Major |
| P1 | 69 | Moderate/Moderate |
| P2 | 74 | Moderate/Moderate |
| P3 | 74 | Moderate/Moderate |
| P4 | 67 | Moderate/Moderate |

Table 8.34: Predicted Demolition/Construction Noise Levels – Ibis Hotel (Hotel/PBSA Residences) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 79 | Major/Major |
| P1 | 67 | Moderate/Moderate |
| P2 | 72 | Moderate/Moderate |
| P3 | 72 | Moderate/Moderate |
| P4 | 66 | Moderate/Moderate |

Table 8.35: Predicted Demolition/Construction Noise Levels – Vita Students (Hotel/PBSA Residences) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 68 | Moderate/Moderate |
| P1 | 57 | Minor/Minor |
| P2 | 63 | Minor/Moderate |
| P3 | 63 | Minor/Moderate |
| P4 | 57 | Minor/Minor |

Table 8.36: Predicted Demolition/Construction Noise Levels – Sackville Street Building (Educational/Research) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 70 | Moderate/Moderate |
| P1 | 55 | Negligible/Negligible |
| P2 | 60 | Minor/Minor |
| P3 | 62 | Minor/Minor |
| P4 | 56 | Negligible/Negligible |

Table 8.37: Predicted Demolition/Construction Noise Levels – James Lighthill Building (Educational/Research) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 80 | Major/Major |
| P1 | 67 | Moderate/Moderate |

| | | |
|---|---|---|
| P2 | 72 | Moderate/Moderate |
| P3 | 71 | Moderate/Moderate |
| P4 | 65 | Moderate/Moderate |

Table 8.38: Predicted Demolition/Construction Noise Levels – Parisier Building (Educational/Research) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 73 | Moderate/Moderate |
| P1 | 59 | Minor/Minor |
| P2 | 65 | Moderate/Moderate |
| P3 | 65 | Moderate/Moderate |
| P4 | 59 | Minor/Minor |

Table 8.39: Predicted Demolition/Construction Noise Levels – Reynold Building (Educational/Research) Receptor

| Phase | Predicted Noise Levels (dB $L_{Aeq,10hours}$) | Magnitude of Impact (Weekday/Weekend) |
|---|---|---|
| Demolition | 74 | Moderate/Moderate |
| P1 | 59 | Minor/Minor |
| P2 | 65 | Moderate/Moderate |
| P3 | 67 | Moderate/Moderate |
| P4 | 61 | Minor/Minor |

## Discussion

8.106. All demolition and construction noise effects are temporary, short-term and direct, occurring only during the active works period. The magnitude and resulting significance of effect vary depending on receptor sensitivity, proximity to the Site, and construction phase. For this assessment, and given the temporary nature of the works and the mitigation measures available (as detailed later in this Chapter), moderate residual effects are not considered significant in EIA terms.

8.107. Only major adverse effects are considered significant and must be mitigated or avoided to ensure that no residual significant effects remain.

**Residential Receptors**

8.108. All residential receptors are of high sensitivity. Based on the predicted demolition and construction noise levels in Tables 8.24 to 8.31, the following effects are identified:

- 90 Princess Street: Magnitude of impact negligible to moderate → negligible to moderate adverse effect.
- Salisbury House: Magnitude of impact minor to major, highest during demolition → minor to major adverse effect.
- Orient House: Magnitude of impact minor to moderate, greatest during demolition → minor to moderate adverse effect.
- Granby House: Magnitude of impact minor to moderate, peaking during demolition → minor to moderate adverse effect.
- Fairbairn Building: Magnitude of impact minor to major, with demolition producing the highest levels → minor to major adverse effect.

- 1 Samuel Ogden Street: Magnitude of impact negligible to moderate, limited to certain phases → negligible to moderate adverse effect.
- Granby Village: Magnitude of impact negligible to moderate → negligible to moderate adverse effect.
- Montana House: Magnitude of impact minor to moderate → minor to moderate adverse effect.

8.109. Residential receptors are expected to experience negligible to major adverse effects, depending on proximity and work phase.

8.110. The most affected receptors, Salisbury House and Fairbairn Building, are predicted to experience major adverse effects during demolition, which are significant in EIA terms.

8.111. All other residential receptors are predicted to experience negligible to moderate effects, which are not significant, though standard construction noise management measures will be applied to minimise disturbance.

**Hotel/PBSA Receptors**

8.112. Hotel and PBSA receptors are of high sensitivity. Based on the predicted noise levels in Tables 8.32 to 8.35, the following effects are identified:

- 121 Princess Street: Magnitude negligible to moderate → negligible to moderate adverse effect.
- Pendulum Hotel and Weston Halls: Magnitude moderate to major → moderate to major adverse effect.
- Ibis Hotel: Magnitude moderate to major → moderate to major adverse effect.
- Vita Students: Magnitude minor to moderate → minor to moderate adverse effect.

8.113. Hotel and PBSA receptors are predicted to experience minor to major adverse effects overall.

8.114. The Pendulum Hotel / Weston Halls and Ibis Hotel are expected to experience major adverse effects during demolition, which are significant.

8.115. All other hotel/PBSA receptors are predicted to experience moderate or lower effects, which are not significant given the temporary nature of the works and the availability of mitigation.

**Educational/Research Receptors**

8.116. Educational and research receptors are of medium sensitivity. Based on the predicted noise levels in Tables 8.36 to 8.39, the following effects are identified:

- Sackville Street Building: Magnitude negligible to moderate → negligible to moderate adverse effect.
- James Lighthill Building: Magnitude moderate to major → moderate to major adverse effect.
- Pariser Building: Magnitude minor to moderate → minor to moderate adverse effect.
- Renold Building: Magnitude minor to moderate → minor to moderate adverse effect.

8.117. Educational and research receptors are predicted to experience negligible to major adverse effects, depending on proximity and activity phase.

8.118. The James Lighthill Building is expected to experience major adverse effects during demolition and early structural works, which are significant in EIA terms.

8.119. All other educational receptors are expected to experience moderate or lower effects, which are not significant, though continued implementation of Best Practicable Means will ensure impacts remain minimal.

8.120. Across all receptor groups, demolition and construction noise impacts are temporary, short-term, and reversible, occurring only during active working periods.

8.121. The following receptors are predicted to experience major adverse effects, which are significant in EIA terms:

- Salisbury House (Residential)
- Fairbairn Building (Residential)
- Pendulum Hotel / Weston Halls (Hotel/PBSA)
- Ibis Hotel (Hotel/PBSA)
- James Lighthill Building (Educational/Research)

8.122. All other receptors experience negligible to moderate effects, which are not significant. Mitigation measures will be applied to all receptors, but the major effects must be addressed to ensure no residual significant effects remain once mitigation is implemented.

## Construction Traffic Noise

8.123. The Construction Road Traffic Noise Increase Assessment, provided in Appendix 8.4, evaluates the potential noise increases resulting from construction traffic on local roads during the daytime period.

8.124. The assessment follows the methodologies set out in DMRB LA 111: Noise and Vibration (2020) and the Calculation of Road Traffic Noise (CRTN, 1998) Basic Noise Level method. Predictions are based on a comparison between 2025 baseline traffic flows and baseline flows plus construction traffic, considering the proportion of heavy goods vehicles (HGVs) expected during peak construction activity.

Table 8.40: Road Traffic Increase During Construction Phase

| Link and Location | Existing AAWT (All Vehicles) | Existing % HGVs | Future AAWT (All Vehicles) | Future % HGVs | Calculated Road Traffic Increase (BNL) dB | Significance in the short-term |
|---|---|---|---|---|---|---|
| Princess Street between Whitworth Street and Charles Street | 3,722 | 37.7 | 3,852 | 35.9 | +0.0 | Negligible |
| Princess Street between Charles Street and Newman Street | 3,722 | 37.7 | 3,736 | 37.7 | +0.0 | Negligible |
| Newman Street between Oxford Road and Princess Street | 7,370 | 2.7 | 7,499 | 2.7 | +0.1 | Negligible |
| Princess St. south of Newman St. | 9,072 | 2.9 | 9,125 | 3.0 | +0.1 | Negligible |
| Princess St. north of Whitworth St. | 3,722 | 37.7 | 3,788 | 36.8 | +0.0 | Negligible |
| Mancunian Way between Cambridge Street and Brook Street | 99,325 | 2.6 | 99,454 | 2.6 | +0.0 | Negligible |
| Charles Street west of Princess Street | 2,464 | 9.0 | 2,520 | 8.8 | +0.1 | Negligible |
| Charles Street between Princess Street and Sackville Street | 2,464 | 9.0 | 2,574 | 10.5 | +0.6 | Negligible |
| Sackville Street north of Charles Street | 5,580 | 5.5 | 5,721 | 5.4 | +0.1 | Negligible |
| Sackville Street south of Charles Street | 4,654 | 6.9 | 4,736 | 7.5 | +0.2 | Negligible |

8.125. The results indicate negligible changes in Basic Noise Level (BNL) across all assessed road links, with increases of +0.1 dB or less, well below the 1 dB threshold for perceptibility identified in DMRB LA 111 (2020).

8.126. All receptors adjacent to the assessed road links are therefore predicted to experience negligible changes in noise level. Given the temporary, short-term and direct nature of construction traffic, and the very small scale of change relative to the existing traffic flows, the resulting effects are negligible and not significant in EIA terms.

8.127. Standard construction traffic management measures will be implemented through the Construction Environmental Management Plan (CEMP) to maintain low impact levels. These measures, combined with the very limited change in road traffic noise, ensure no residual significant effects remain following mitigation.

## Demolition/Construction Vibration

8.128. The demolition and construction vibration impact assessment, detailed in Appendix 8.3 and Appendix 8.4, evaluates potential vibration effects on sensitive receptors, including private residences, hotels, PBSA, and educational buildings, across the demolition and subsequent construction phases. Predicted vibration levels are based on the methodologies set out in BS 5228-2:2009 +A1:2014, BS 6472-1:2008, and the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2006).

8.129. Table 8.41 presents predicted vibration levels for key vibration-producing equipment for the demolition phase, including the high reach, lorries, and excavators. Impact magnitudes are assigned based on thresholds from Table 8.8.

Table 8.41: 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 |

8.130. Table 8.42 presents predicted vibration levels for key vibration-producing equipment for the construction phase, including the CFA piling rig, vibratory roller, lorries, and excavators. Impact magnitudes are assigned based on thresholds from Table 8.8.

Table 8.42: Predicted Construction Vibration Levels at Nearest Receptors

| Receptor | Distance (m) | Predicted Construction Vibration Levels (PPV mm/s) | | | | Magnitude of Impact |
|---|---|---|---|---|---|---|
| | | CFA Piling Rig | Vibratory Roller | Lorry | Excavator | |
| Nearest Residential Receptor | 15 | < 1.0 | 1.9 | < 1.0 | < 1.0 | Minor – Moderate |
| Nearest Hotel/PBSA Receptor | 15 | < 1.0 | 1.9 | < 1.0 | < 1.0 | Minor – Moderate |
| Nearest Educational/Research Receptor | 16.5 | < 1.0 | 1.6 | < 1.0 | < 1.0 | Minor – Moderate |

8.131. All demolition and construction vibration effects are temporary, short-term, and direct, occurring only during active working periods. The magnitude and resulting significance of effects vary by receptor sensitivity, proximity to the works, and type of activity. Consistent with the approach adopted for construction noise, moderate residual vibration effects are not considered significant in EIA terms, while major adverse effects are considered significant and will require mitigation to ensure no residual significant effects remain.

**Residential Receptors**

8.132. Residential receptors are of high sensitivity. Predicted vibration impact magnitudes during demolition and construction range from minor to moderate. Overall, the effect is a temporary, short-term, direct adverse effect of minor to moderate significance, which is not significant in EIA terms.

**Hotel/PBSA Receptors**

8.133. Hotel and PBSA receptors are of high sensitivity. Predicted vibration impact magnitudes are moderate during demolition and minor to moderate during construction. The effect is a temporary, short-term, direct adverse effect of minor to moderate significance, which is not significant given the short-term duration and the availability of standard mitigation and monitoring.

**Educational/Research Receptors**

8.134. Educational and research receptors are of medium sensitivity. Predicted vibration magnitudes are minor during demolition and minor to moderate during construction. The effect is a temporary, short-term, direct adverse effect of minor to moderate significance, which is not significant.

## Environmental Noise Impacts

8.135. The assessment of potential disturbance from existing environmental noise has been undertaken by Blackbird Acoustics and is presented in Appendix 8.1. The assessment considers the suitability of the noise environment for future residents of the Proposed Development in accordance with ProPG: Planning and Noise (2017), BS 8233:2014, and Building Regulations Approved Document O (2023).

8.136. Two ventilation conditions have been assessed for typical residential rooms:

1. Whole dwelling ventilation condition (typical background ventilation scenario).
2. Overheating ventilation condition (ventilation to combat overheating during warmer months).

8.137. Under the whole dwelling ventilation condition, internal noise levels are predicted to meet the guideline values in ProPG (2017) and BS 8233:2014 across all habitable rooms, through incorporation of suitable building envelope specifications, including high-performance glazing and alternative ventilation systems. The magnitude of impact is negligible.

8.138. Under the overheating ventilation condition, internal noise levels are predicted to remain within approximately 10 dB of the ProPG night-time criteria (40 dB $L_{Aeq,8hr}$ and 55 dB $L_{Amax,F}$). This performance is achieved by keeping windows closed in noise-affected façades and relying on alternative overheating mitigation measures (e.g. mechanical or passive ventilation). The magnitude of impact is minor.

8.139. The sensitivity of future residential receptors is considered high. The magnitude of impact is negligible under the whole dwelling ventilation condition and minor under the overheating condition. The resulting effect is therefore a direct, permanent, long-term adverse effect of negligible to minor significance, which is not significant in EIA terms.

## Environmental Vibration Impacts

8.140. The assessment of environmental vibration and groundborne noise has been undertaken by Heyda Ltd and is presented in Appendix 8.2. The assessment considers the potential for tactile vibration and re-radiated (groundborne) noise generated by nearby railway operations to affect future occupants of the Proposed Development.

8.141. Baseline measurements of groundborne vibration were undertaken at representative locations along the railway-facing boundary of the Site. The assessment followed the guidance and measurement methodologies in BS 6472-1:2008 – Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz) and the ANC Measurement & Assessment of Groundborne Noise and Vibration (2020).

8.142. The magnitude of impact due to tactile vibration has been determined in accordance with BS 6472-1:2008 and ANC (2020), as presented in Table 8.12, and is defined by the Vibration Dose Value (VDV). The magnitude of impact due to groundborne noise has been determined in accordance with the ANC (2020) guidance, as presented in Table 8.13, and is defined by the maximum sound pressure level ($L_{Amax,slow}$).

8.143. The measured vibration levels were well below the BS 6472 negligible thresholds of 0.2 $ms^{-1.75}$ (day) and 0.13 $ms^{-1.75}$ (night), indicating negligible magnitude of impact for tactile vibration.

8.144. The measured and predicted ground-borne re-radiated noise levels indicate that while the majority of events fall within the minor or negligible magnitude of impact range (≤40 dB $L_{Amax,S}$), one daytime event was recorded at 52 dB $L_{Amax,S}$, corresponding to a major magnitude of impact, and a second event at 43 dB $L_{Amax,S}$, representing a moderate magnitude of impact. Beyond these two highest daytime occurrences, all remaining events were at or below 40 dB $L_{Amax,S}$. During the night-time period, the highest predicted level was 40 dB $L_{Amax,S}$, corresponding to a worst-case minor magnitude of impact. In summary, given the isolated nature of the two exceedances and the predominance negligible and minor impacts from events, the overall magnitude of impacts for ground-borne re-radiated noise are considered to be negligible to minor.

8.145. The sensitivity of future residential receptors is considered to be high, while the magnitude of impact is negligible for both tactile vibration and groundborne noise. The resulting effect is therefore a direct, permanent, long-term adverse effect of negligible significance, which is not significant in EIA terms.

## Noise from Building Services Plant (Operation)

8.146. The assessment of potential noise disturbance from building services plant has been undertaken by Blackbird Acoustics and is presented in Appendix 8.1. The assessment defines limiting noise criteria for external plant associated with the Proposed Development, including condensers, air handling units, and extract fans serving the PBSA and ground-floor commercial uses.

8.147. The limiting criteria require cumulative external plant noise emissions to be at least 5 dB below the representative background sound level at the nearest noise-sensitive receptors (NSRs), in accordance with BS 4142:2014 +A1:2019 – Methods for Rating and Assessing Industrial and Commercial Sound and Manchester City Council's Noise Technical Guidance (October 2022).

8.148. The assessment confirms that compliance with these criteria is achievable through appropriate plant selection, acoustic screening, and detailed design measures, ensuring that operational plant noise remains below the specified limits at all receptor locations.

8.149. On this basis, noise impacts from building services plant are expected to be controlled to a negligible level. The sensitivity of the nearest receptors is considered high, and the magnitude of impact is negligible. The resulting effect is therefore a direct, permanent, long-term adverse effect of negligible significance, which is not significant in EIA terms.

## Retail/Gym Noise Impacts (Operation)

8.150. The assessment of potential noise and vibration impacts associated with the proposed retail and gym uses has been undertaken by Heyda Ltd and is presented in Appendix 8.5. The assessment evaluates four key potential impact pathways:

- Noise breakout from the retail units to external façades of the nearest noise-sensitive receptors.
- Noise breakout from the residents' gym to external façades of the nearest noise-sensitive receptors.
- Airborne noise transfer between the proposed retail spaces and adjoining residential accommodation within the Proposed Development.
- Airborne and structure-borne noise and vibration transfer between the proposed residents' gym and adjoining residential accommodation within the Proposed Development.

8.151. The magnitude of impact for retail and gym noise breakout has been determined by comparing the predicted rating noise level against the existing background sound level at the relevant receptor, in accordance with BS 4142:2014 +A1:2019 and Manchester City Council's Noise Technical Guidance (October 2022). The impact thresholds are presented in Table 8.14, where a rating level equal to or below the background level is classified as negligible.

8.152. The magnitude of impact for noise transfer between the proposed retail units and adjoining residential accommodation has been determined relative to the ProPG: Planning and Noise (2017) and BS 8233:2014 internal noise guideline values, as presented in Table 8.15 (Retail Unit Noise Impacts – Noise Transfer to Adjoining Residential).

8.153. The magnitude of impact for gym noise and vibration transfer has been determined in accordance with the ProPG: Gym Acoustics Guidance (2023) and the ANC Measurement & Assessment of Groundborne Noise and Vibration (2020), using the airborne and structure-borne limits presented in Tables 8.16 to 8.18.

**Assessment Findings**

8.154. Predicted external noise levels for both the retail units and residents' gym are at least 5 dB below the background sound level at the nearest off-site noise-sensitive receptors, corresponding to a negligible magnitude of impact in accordance with Table 8.14.

8.155. Predicted internal noise transfer levels between the proposed retail units and adjoining residential rooms are at least 10 dB below the relevant ProPG (2017) and BS 8233:2014 internal noise criteria, representing a negligible magnitude of impact.

8.156. For the residents' gym, predicted airborne noise and structure-borne vibration levels in adjoining residential spaces are within or below the ProPG: Gym Acoustics (2023) and ANC (2020) limits, also corresponding to negligible magnitudes of impact for both noise and vibration transfer.

8.157. These results confirm that, subject to implementation of the design and mitigation measures specified in Appendix 8.5, all impacts are expected to fall within the negligible category.

8.158. The sensitivity of affected receptors (both existing off-site and proposed on-site residential uses) is considered high, while the magnitude of impact for all four assessment pathways is negligible. The resulting effect is therefore a direct, permanent, long-term adverse effect of negligible significance, which is not significant in EIA terms.

## Cumulative Effects

8.159. The assessment of cumulative noise and vibration effects has considered the potential for impacts to arise from the Proposed Development in combination with other existing, committed, or planned developments within the surrounding area.

### Demolition and Construction Stages

8.160. During construction (including demolition), several other developments may be active in the wider area and could generate temporary noise and vibration. These include schemes within the ID Manchester Strategic Regeneration Framework (SRF) area and other city-centre sites within approximately 500 m of Plot H.

8.161. Given the dense urban context, it is recognised that some receptors considered in this assessment could also be affected by noise from nearby construction works. However, any concurrent activities are expected to occur on different façades of the relevant receptors or at separate times. Consequently, the overall noise level at any given receptor façade is unlikely to increase materially beyond the levels already predicted in this assessment.

8.162. On this basis, no meaningful change in the predicted impacts or significance of effects is anticipated when other construction schemes are considered cumulatively.

8.163. Specific consideration has also been given to the validated iQ Weston Halls & Pendulum Hotel redevelopment, which is located immediately adjacent to the northern boundary of Plot H and is supported by an Environmental Impact Assessment. While the iQ scheme has progressed through the EIA process, sufficient detailed information is not currently available in the public domain to support a robust quantitative cumulative noise and vibration assessment, particularly in relation to construction phasing, programme overlap, and detailed plant inventories. A qualitative assessment has therefore been undertaken, which is considered proportionate and appropriate.

8.164. The iQ Environmental Statement indicates that demolition and construction noise and vibration will be managed through a Construction Environmental Management Plan (CEMP), applying BS 5228 best practicable means, low-noise working methods, monitoring, and phased activity controls. These assumptions are consistent with those adopted

within this assessment for Plot H. In addition, the Plot H assessment already assumes that the existing iQ buildings remain occupied during the noisiest phases of demolition and construction, representing a conservative worst-case scenario. While concurrent construction activity across both sites could result in short-term increases in ambient noise levels at certain receptors, the dominant noise contribution at any given receptor would vary depending on proximity, intervening screening, construction phasing, and the façade under consideration. In practice, each development would be expected to primarily affect different receptors, or different façades of the same receptor, rather than combining to produce a materially higher cumulative exposure at a single sensitive location. Any temporary overlap in activity would therefore be limited in magnitude and duration and would not be sufficient to alter the impact magnitude or significance classifications reported in this Chapter. Accordingly, the cumulative effects of both schemes are not expected to materially increase the predicted impact levels, and the significance of the assessed effects for Plot H remains unchanged.

### Operational Stage

8.165. Cumulative operational effects have also been considered. As set out in the Scoping Report and confirmed through agreement with Manchester City Council, road traffic noise increases associated with the Proposed Development, either individually or cumulatively with other schemes, have been scoped out of detailed assessment. This is because the development will not generate significant levels of new vehicle movements and therefore will not contribute measurably to traffic-related noise increases.

8.166. Any cumulative change in operational road traffic noise would instead be attributable to other developments within the wider regeneration area, and not directly related to this application. No other sources of cumulative operational noise or vibration have been identified.

8.167. Accordingly, no significant cumulative operational noise or vibration effects are anticipated.

## Mitigation Measures

### Demolition and Construction Stages

8.168. The Proposed Development will incorporate Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974 and BS 5228-1:2009 +A1:2014 and BS 5228-2:2009 +A1:2014, to control noise and vibration at source during both the demolition and construction phases.

8.169. These measures will be embedded within the Construction Environmental Management Plan (CEMP) and secured by planning condition. Key BPM measures will include, but are not limited to:

- Use of quieter modern plant and methods, prioritising equipment with low sound power and vibration emission ratings.
- Erection of acoustic hoarding or temporary barriers along sensitive site boundaries to reduce airborne noise propagation.
- Phasing and sequencing of high-noise activities to minimise duration and avoid overlap of concurrent high-impact operations.
- Use of continuous flight auger (CFA) piling to minimise vibration emissions relative to driven or percussive methods.
- Regular servicing and maintenance of all construction plant to prevent unnecessary noise and vibration.
- Routing of construction traffic via the primary road network (Charles Street and Princess Street), avoiding residential areas where practicable.
- Optimisation of site layout to locate fixed plant and high-noise operations as far from sensitive receptors as feasible.
- Limiting vibration-intensive activities, such as roller compaction, close to sensitive boundaries unless monitoring confirms compliance with thresholds.

8.170. The following site management and regulatory controls will also be implemented and secured by condition through the CEMP:

- 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 notification of high-noise or vibration works.
    - Publicised contact details and staffed enquiry line.
    - Regular newsletters and progress updates to residents and stakeholders. advance notifications of noisy activities, complaints management processes, and the establishment of a contact point for concerns.

8.171. The CEMP will include provision for the Local Planning Authority to secure, monitor and enforce compliance with all agreed noise and vibration limits. Section 61 consent under the Control of Pollution Act 1974 may be sought to formalise specific working methods, noise thresholds, and mitigation requirements.

8.172. Where noise levels are predicted to result in potentially significant (major) adverse effects, additional secondary measures will be implemented to avoid or reduce impacts. These measures will include:

- Targeted liaison with occupants of buildings identified as potentially subject to significant noise or vibration levels (e.g., Salisbury House, Fairbairn Building, Pendulum Hotel/Weston Halls, Ibis Hotel, and James Lighthill Building).
- Assessment of occupant sensitivity and working patterns to refine scheduling of high-impact activities.
- Provision of site-specific mitigation where required, including temporary noise insulation works (secondary glazing or alternative ventilation) or temporary re-housing for occupants during short-term periods of major impact.
- Temporary relocation of sensitive equipment or functions (for example within educational buildings) where feasible.

8.173. These measures will ensure that all major adverse construction impacts are either directly mitigated or avoided, reducing residual effects to no greater than moderate.

8.174. Given the temporary and short-term nature of construction, these moderate residual effects are not considered significant in EIA terms.

## Operational Stage

8.175. Operational mitigation measures will be embedded within the detailed design to ensure all predicted operational noise and vibration impacts remain within negligible or minor levels. Where appropriate, these measures can be secured by condition if the Local Planning Authority (LPA) considers this necessary to ensure compliance with the agreed thresholds.

**Environmental Noise Mitigation**

8.176. The residential building envelope will include high-performance glazing and façade systems capable of achieving internal noise levels compliant with ProPG: Planning and Noise (2017), BS 8233:2014, and Approved Document O (2023).

8.177. The final façade and glazing specification will be designed to achieve these requirements and, if deemed necessary by the LPA, details can be secured by condition to confirm that the required acoustic performance is delivered.

8.178. Where necessary, habitable rooms will incorporate alternative means of ventilation (mechanical or passive systems) to maintain internal acoustic comfort with windows closed.

8.179. This will ensure compliance with both acoustic and overheating performance standards. This requirement is secured by Approved Document O of the Building Regulations, however, should the LPA consider it necessary, submission of detailed ventilation design drawings and a detailed noise assessment can be secured by condition to demonstrate compliance.

**Environmental Vibration Mitigation**

8.180. No specific mitigation measures are likely to be necessary as the existing levels of vibration are not expected to result in significant effects.

**Building Services Plant Mitigation**

8.181. All external building services plant will be designed so that the cumulative rating level is at least 5 dB below the representative background sound level at the nearest receptor, in accordance with BS 4142:2014 +A1:2019 and Manchester City Council's Noise Technical Guidance (2022).

8.182. Appropriate plant selection, screening, acoustic enclosures, and attenuation will be employed to meet these limits.

8.183. Where plant selections are finalised at a later design stage, a Plant Noise Compliance Report could be required by condition to demonstrate that the agreed noise limits will be achieved.

**Retail and Gym Noise and Vibration Mitigation**

8.184. External façades and separating elements for the retail units and gym will be constructed to meet or exceed the sound insulation standards set out in Appendix 8.5, ensuring compliance with BS 8233:2014, BS 4142:2014 +A1:2019, and ProPG: Gym Acoustics (2023).

8.185. A detailed acoustic design assessment shall be undertaken during the design stage to ensure that compliance is maintained. Should the LPA consider it necessary, this can be secured by condition.

8.186. The residents' gym design will incorporate:

- Preliminary acoustic testing to evaluate the proposed floor finishes under simulated conditions.
- Floating or resiliently mounted floors within free-weight and cardio areas;
- Resilient floor finishes and isolation pads beneath heavy or impact-producing equipment; and
- Operational management controls (e.g. restrictions on dropping weights or music levels).

8.187. These management controls will form part of a Gym Operational Noise Management Plan, which can be secured by condition if required by the LPA.

8.188. Collectively, these operational-stage design and management measures represent those likely to be required to ensure compliance with the relevant noise and vibration limits and thereby avoid significant effects. Where considered necessary, the LPA may secure these measures through planning conditions to ensure compliance is maintained during operation.

8.189. With the identified measures incorporated into the detailed design and management of the scheme, and subject to LPA control where required, all operational noise and vibration impacts will remain negligible or minor and not significant in EIA terms.

## Residual Effects

### Demolition Phase

8.190. When accounting for the mitigation measures identified above, the residual effects for all receptors are adjusted from those reported in the unmitigated scenario. The assessments summarised below confirm that, following implementation of primary and secondary mitigation, no significant residual adverse effects are expected during any phase of the Proposed Development.

Table 8.43: Summary of Residual Effects

| Likely Significant Effect | Receptor | Unmitigated Effect – Significance and Duration (Temporary/Permanent) | Mitigation Measures | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Demolition and Construction Phases | | | | |
| Demolition/ Construction Noise | Salisbury House, Fairbairn Building, Pendulum Hotel, Ibis Hotel, James Lighthill Building | Direct, temporary, short-term adverse effects of up to major significance during demolition and early construction phases. | BPM; Acoustic Barriers; CEMP Controls; Noise Insulation / Temporary Rehousing (where required) | Direct, temporary, short-term adverse effects reduced to minor–moderate, not significant. |
| | All other identified receptors (Residential, PBSA, Educational) | Direct, temporary, short-term adverse effects of negligible–moderate significance. | BPM; CEMP; Construction Traffic Management | Direct, temporary, short-term adverse effects remain negligible–moderate, not significant. |
| Construction Traffic Noise | All receptors adjacent to affected road links | Direct, temporary, short-term negligible adverse effect. | Construction Logistics Plan; CEMP Routing Controls | Direct, temporary, short-term negligible adverse effect (not significant). |
| Demolition/ Construction Vibration | All identified receptors (Residential, PBSA, Educational) | Direct, temporary, short-term minor–moderate adverse effects. | BPM; Vibration Monitoring; Method Control; CFA Piling | Direct, temporary, short-term minor–moderate adverse effect (not significant). |
| Operational Phase | | | | |
| Environmental Noise Impacts (External Sources) | Future Residential Occupants | Direct, permanent, long-term adverse effect (negligible–major pre-mitigation). | High-Performance Glazing; Acoustic Ventilation Strategy | Direct, permanent, long-term negligible adverse effect (not significant). |
| Environmental Vibration Impacts (Railway) | Future Residential Occupants | Direct, permanent, long-term negligible adverse effect. | - | Direct, permanent, long-term negligible adverse effect (not significant). |
| Noise from Building Services Plant | Nearest Residential and PBSA Receptors | Direct, permanent, long-term negligible adverse effect. | Plant Design to BS 4142 Limits; Screening / Enclosures; Noise Compliance Report | Direct, permanent, long-term negligible adverse effect (not significant). |
| Retail/ Gym Noise Impacts | Off-Site and Adjoining Residential Receptors | Direct, permanent, long-term negligible adverse effect. | Façade Sound Insulation; Internal Acoustic Treatments; Enhanced Partitions; Floating Floors; Equipment Isolation; Management Controls | Direct, permanent, long-term negligible adverse effect (not significant). |

8.191. A review of the validated iQ Weston Halls & Pendulum Hotel redevelopment, which is supported by an Environmental Impact Assessment, confirms that its construction and operational characteristics do not alter the findings reported in this Chapter. While the iQ scheme has progressed through the EIA process, sufficient detailed information is not currently available to support a robust quantitative cumulative noise and vibration assessment. A qualitative review has therefore been undertaken, which is considered proportionate and appropriate.

8.192. The iQ Environmental Statement indicates that demolition and construction noise and vibration will be managed through a Construction Environmental Management Plan (CEMP), applying BS 5228 best practicable means. These assumptions are consistent with those adopted within this assessment for Plot H. In addition, the Plot H assessment already assumes that the existing iQ buildings remain occupied during the noisiest phases of demolition and construction, representing a conservative worst-case scenario. Once operational, the iQ redevelopment will remain in student accommodation use and will not introduce new significant noise or vibration sources. Receptor sensitivity

therefore remains comparable, and the presence of the iQ scheme does not introduce any new or heightened noise or vibration constraints. Accordingly, the residual effects reported for the Proposed Development remain valid.

## Monitoring

8.193. As discussed in Appendices 8.3 and 8.4, 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/construction works.

8.194. Full details of the proposed monitoring locations and appropriate trigger levels are included in the Appendices.

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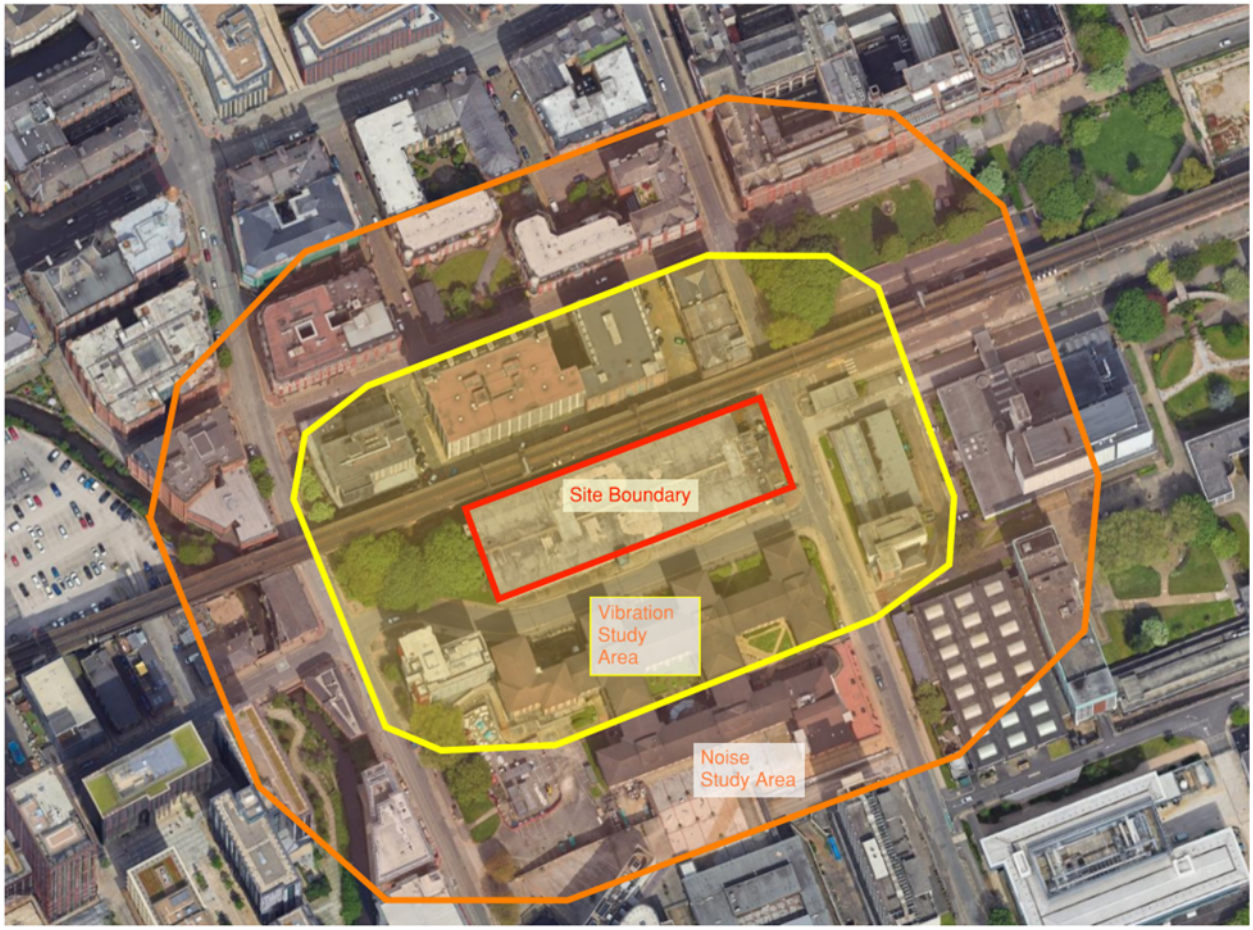
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| | | | | |
|---|---|---|---|---|
| | **Figure:** | **8.1** | | |
| | **Title:** | **Noise & Vibration Study Areas** | | |
| | **Project:** | **Sister Plot H, Manchester** | | |
| | **Date:** | **15/10/2025** | **Scale:** | **NTS** |

# 9. Air Quality

## Introduction

9.1. This Chapter of the ES has been prepared by Buro Happold and assesses the likely significant air quality impacts of the Proposed Development 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.

9.2. The authors of this Chapter have the following qualifications and experience as shown in Table 8.1.

Table 9.1: Technical competence of chapter authors

| | Lead Author | Reviewer |
|---|---|---|
| Name | Rachael Harrison | Kathryn Woolley |
| Company | Buro Happold | Buro Happold |
| Qualifications/Accreditations relevant to technical area incl. 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

9.3. There is always some uncertainty regarding the prediction of air quality. The main source of uncertainty in this assessment will be in the monitored concentrations presented within the Baseline Assessment, particularly monitoring locations , which will have a residual uncertainty of +/- 20%. In addition, the Site is located adjacent to elevated railway tracks, which introduces an uncertainty in predicting current and future emissions from railway source.

9.4. Potential effects during the Construction 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.

9.5. 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 future year 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

9.6. This section appraises the current legislation used to inform the Air Quality Assessment:

- Air Quality Standards Regulations 2010 (HM Government, 2010);
- Environment Act 2021 (The Stationary Office, 2021); and

- $PM_{2.5}$ Interim Targets Guidance (Department for Environment Food & Rural Affairs, 2024).

9.7. Full details of relevant legislation are outlined within Appendix 9.1.

**Air Quality Objective**

9.8. This air quality assessment is conducted to assess compliance with UK air quality objectives (AQO). The air quality objectives relevant to this assessment are presented in Table 9.2. It should be noted that air quality objectives are numerically the same as 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 9.2 National Air Quality Objectives relevant to the assessment

| Pollutant | Concentration ($\mu g/m^3$) | Averaging Period | Number of allowable exceedances per calendar year |
|---|---|---|---|
| Nitrogen dioxide ($NO_2$) | 40 | Annual mean | N/A |
| | 200 | Hourly mean | 18 |
| Particulates <10µm in diameter ($PM_{10}$) | 40 | Annual mean | N/A |
| | 50 | Daily mean | 35 |
| Particulates <2.5µm in diameter ($PM_{2.5}$) | 20 | Annual mean | N/A |
| Sulphur Dioxide ($SO_2$) | 266 | 15 minute | N/A |
| | 350 | 1 Hour mean | 24 |
| | 125 | 24 Hour Mean | 3 |

9.9. The Environment Act (The Stationery Office, 1995) was amended in 2021, requiring the government to set new targets for fine particulate matter ($PM_{2.5}$). The subsequent Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (HM Government, 2023) set the following targets:

- Annual mean $PM_{2.5}$ concentration of 10 $\mu g/m^3$ by 2040; and
- At least a 35% reduction in population exposure of $PM_{2.5}$ by the end of 2040.

9.10. 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 $PM_{2.5}$:

- Annual mean $PM_{2.5}$ concentration of 12 $\mu g/m^3$ by 2028; and
- At least a 22% reduction in population exposure of $PM_{2.5}$ by the end of 2028.

9.11. The $PM_{2.5}$ 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 $PM_{2.5}$ 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 $PM_{2.5}$ emissions.

9.12. This report outlines qualitative actions taken to address the interim guidance in Appendix 9.1.

## Policy

**National Planning Policy**

9.13. The National Planning Policy Framework (NPPF) (MHCLG, 2025) sets out the Government's planning policy for England. The legislation mandates 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.

9.14. With particular regard to air quality management, Section 9 of the NPPF notes that the environmental impact of transport and traffic should be identified and assessed, while mitigating adverse effects to bring about net environmental gains. The guidance states that the planning system should actively manage patterns of growth, offering a choice of transport modes to reduce air pollution.

9.15. Further to this, Section 15 of the NPPF notes 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. So 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 Policy**

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

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

9.17. Full details of relevant policy are outlined within Appendix 9.1

## Guidance

**National Guidance**

9.18. Planning Practice Guidance (PPG) (MHCLG, 2019) provides guiding principles on how the planning process can consider the impact of new development 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 9.1.

9.19. The following national guidance documents has 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**

9.20. 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);
- Greater Manchester Transport Strategy 2040 (TfGM, 2021a) and Our Five-Year Transport Delivery Plan 2021-2026 (TfGM, 2021b);
- GMCA 5-year Environment Plan 2025-2030 (GMCA, 2024);

- GMCA Air Quality Action Plan (GMCA / TfGM, 2016); and
- GM Clean Air Plan (GMCA, 2023).

9.21. Full details of relevant national and local guidance are outlined within Appendix 9.1.

## Assessment Methodology and Significance Criteria

### Scenarios Tested

9.22. For the purpose of this ES Chapter, the need to conduct detailed dispersion modelling of construction and operational traffic for each scenario has been determined using the criteria set out in the IAQM/EPUK guidance on land-use planning and development control.

9.23. Within the Scoping report 2025, where detailed modelling was determined to be required to assess the impacts of the Proposed Development on air quality, the following scenarios were outlined to be considered within Air Quality ES Chapter:

- Scenario 1: Existing Baseline (existing EIA Site, as of September 2025)
- Scenario 3: Existing Baseline + Proposed Development + Cumulative
- Scenario 4: Existing Baseline + Proposed Development + IDM Masterplan (future surrounds/ future phases) + Cumulative

9.24. Transport data provided by Civic Engineering has indicated that, given the Proposed Development is to be car-free, there is a predicted maximum AADT trip generation of 78 LGVs and 24 HDVs movements during construction phase and of 34 LGVs and 1 HDVs movements during operational phase on any single road network within the vicinity of the Proposed Development. Therefore for both the construction and operation the trips generated fall below the IAQM/EPUK criteria of 100 LGV's and/or 25 HDV's for a detailed assessment (dispersion modelling).

9.25. Given the traffic data falls below relevant EPUK/IAQM thresholds, the scenarios outlined for testing within the Scoping Report 2025 (Scenario 1, 3 and 4 as outlined within Chapter 2), do not require a detailed assessment.

9.26. It is also acknowledged that a planning application has been submitted in relation to the demolition of the existing structures (MSCP and retail units) on the Plot H Sister Site (under planning permission 143741/FO/2025). It is anticipated that demolition is unlikely to have commenced prior to the submission the main redevelopment application. For Air Quality, the worst-case scenario is considered to be represented by the existing baseline (as of September 2025) and so consideration of an alternative baseline with the existing building having been demolished have been scoped out this ES Chapter.

9.27. As updated traffic data has been received following the submission of the Scoping Report 2025, which falls below the relevant criteria for detailed modelling, emissions from vehicles associated with the Proposed Development during both the construction and operational phases have been scoped out of this ES Chapter.

### The Study Area

9.28. The study area has been defined based on baseline monitoring conducted by GMCA and MCC within a 1km radius of the Proposed Development. This monitoring identifies pollution sources and pollutant concentrations that may affect future sensitive receptors within the development.

9.29. In addition, worst-case existing sensitive receptors within 250 m of construction activities at the Site boundary have been identified, including high sensitive receptors areas (residential) and medium sensitivity (higher educational, commercial) receptors such as Weston Hall and Echoes Days Nursey immediately to the south and residential building along Granby Row to the north. 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 9.5 within Appendix 9.3A.

## Surveys and Data Sources

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

- Appendix 9.1 Legislation and Guidance
- Appendix 9.2 Construction Dust Risk Assessment
- Appendix 9.3 Air Quality Assessment Appendices

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

- Air quality data for MCC and GMCA, including a review of the most recent GMCA air quality annual status report and Clean Air Plan monitoring data (GMCA, 2025);
- Background pollution maps from Defra's Local Air Quality Management (LAQM) website (Defra, 2025);
- Environment Agency Pollution Inventory (Environmental Agency, 2025); and
- Aerial photography from Google Maps (Google, 2025).

## Source of Effect

9.32. The source of effects scoped in to the assessment as the potential effects have been identified as potentially significant include:

- Effects associated with sources of air pollutant emissions on future receptors that would be introduced to the area through the Proposed Development.

9.33. The following sources of effects are to be scoped out of the ES chapter as the potential effects have been identified as not significant:

- The effects of construction dust on dust soiling and human health impacts are scoped out of the ES. The IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2024) 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. The reason for this is that for almost all construction activities, the application of effective mitigation should prevent any Significant effects from occurring to existing sensitive receptors, and therefore the residual effect will normally be Negligible. However, a construction dust risk assessment has been carried out to inform the appropriate mitigation measures. The assessment, alongside the mitigation measures are presented in Appendix 9.2; and
- Exhaust emissions of NOx and fine particulate matter ($PM_{10}$ 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. 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."* It is therefore considered the likely effects of construction plant on local air quality would not be significant and has been scoped out of this ES; and
- Emissions from vehicles associated with the Proposed Development during both the construction and operational phases.

## Significance Criteria

9.34. To determine the significance of predicted air quality impacts based upon a Site Suitability assessment, the EPUK and IAQM guidance states:

9.35. *"Where the air quality is such that an air quality objective at the building façade is not met, the effect on residents or occupants will be judged as significant, unless provision is made to reduce their exposure by some means"*

9.36. Where predicted or measured pollutant concentrations exceed or are within 10% of the relevant annual mean AQO, the Proposed Development may be considered to have potential for significant air quality effects. In such cases, further assessment and/or mitigation measures may be required to ensure compliance with the AQOs during operation, to minimise exposure of future sensitive receptors.

9.37. A qualitative 'Site Suitability' assessment has been undertaken to consider the exposure of future occupants, introduced by the Proposed Development, to current air quality and is outlined within paragraphs 9.68 to paragraph 8.79. The short term and long-term AQO have been considered for the proposed PBSA use to predict compliance.

## Baseline Conditions

### Existing Baseline

9.38. 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 $NO_2$. These exceedances are predominantly due to pollution from road transport, which accounts for 65% of the total $NO_2$ emission within Greater Manchester (GMCA , 2019). The entirety of the Site is within the AQMA.

9.39. 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 24 automatic monitoring locations and 337 non-automatic monitoring locations (diffusion tube) for LAQM. In addition, 267 non-automatic roadside monitoring locations have been operated for monitoring and evaluation purposes of GM CAP in 2024.

9.40. Monitoring data from 2024 is the latest available and is used as baseline for this assessment. Figure 9.1 and Figure 9.2 within Appendix 9.3A, present the CAP and LAQM monitoring locations in close proximity to the Site. Monitoring data from the recent five years are presented in Table 9.4 and Table 9.5, respectively.

9.41. The non-automatic monitoring locations by GMCA and CAP are mainly deployed along A57 Mancunian Way, A635 Great Ancoats Street and A6 Downing Street. Elevated pollution levels are shown by monitoring stations along Oxford Road (260 m west of the Site), in which 2024 annual average concentrations recorded at most stations exceeded the UK AQO for annual average $NO_2$ (40 µg/m$^3$). The highest $NO_2$ level was recorded at monitoring stations CAP_MANC_183 and MA29ANO, with annual average concentrations of 53 µg/m$^3$ and 51.3 µg/m$^3$ respectively. $NO_2$ concentrations recorded near Downing Street Junction (335m southeast of the Site) indicate pollution levels in compliance with the annual average AQO for all but one monitoring station. Site CAP_MANC_006 (280 m to the southeast) monitored 26.5 µg/m$^3$, and site CAP_MANC_022 monitored 31.8 µg/m$^3$, whereas the annual mean $NO_2$ level at monitoring station CAP_MANC_167 is 44.6 µg/m$^3$, exceeding the AQO level of 40 µg/m$^3$.

9.42. Figure 9.3, within Appendix 9.3A demonstrates the annual average $NO_2$ concentrations at all nearby monitoring locations during 2020-2024. Overall, pollution concentrations have remained stable over the five years, with a slight increase in 2022 followed by decrease to 2020-2021 levels. The lowest concentrations were recorded in 2020, attributed to behavioural changes during the COVID-19 pandemic. The 2024 annual average $NO_2$ concentrations at all sites remain lower than the 2021 level, with some lower than 2020 level.

Table 9.4 Monitoring results from CAP monitoring locations in proximity to the Site.

| Site ID | Distance from the Site (m) | Site type | Annual average $NO_2$ concentration (µg/m$^3$) | | | | |
|---|---|---|---|---|---|---|---|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 |
| CAP_MANC_184 | 203 | Roadside | - | - | **41.1** | 39.5 | 39.4 |
| CAP_MANC_183 | 220 | Roadside | - | - | **54.4** | **54.1** | **53.1** |
| CAP_MANC_186 | 221 | Roadside | - | - | **42.4** | **43.0** | **42.0** |
| CAP_MANC_185 | 230 | Roadside | - | - | **49.7** | **48.5** | **46.5** |
| CAP_MANC_019 | 264 | Roadside | - | - | **44.4** | **41.3** | **40.9** |
| CAP_MANC_006 | 267 | Roadside | 26.9 | 29.9 | 30.8 | 28.6 | 26.5 |
| CAP_MANC_022 | 321 | Roadside | 32.9 | 32.7 | 35.5 | 33.3 | 31.8 |
| CAP_MANC_004 | 363 | Roadside | 28.4 | 31.2 | 33.4 | 33.0 | 30.1 |

| Site ID | Distance from the Site (m) | Site type | Annual average $NO_2$ concentration (µg/m$^3$) | | | | |
|---|---|---|---|---|---|---|---|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 |
| CAP_MANC_002 | 405 | Roadside | 32.2 | 33.8 | 35.5 | 34.2 | 32.6 |
| CAP_MANC_167 | 454 | Roadside | - | - | **48.1** | **49.1** | **44.6** |

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.

Table 9.5 Monitoring results from GMCA monitoring locations in proximity to the Site.

| Site ID | Distance from the Site (m) | Site Type | Annual average $NO_2$ concentration (µg/m$^3$) | | | | |
|---|---|---|---|---|---|---|---|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 |
| MA29ANO | 229 | Roadside | 39.0 | **44.8** | **49.8** | **49.6** | **51.3** |
| MA82NO, MA83NO, MA84NO | 297 | Roadside | 34.1 | **40.7** | **42.6** | **41.4** | **41.7** |
| MA24NO | 641 | Kerbside | 26.8 | 31.8 | 32.4 | 29.8 | 27.2 |
| MA9ANO | 700 | Kerbside | 32.5 | 35.7 | 37.5 | 36.2 | 33.8 |
| MA59NO MA60NO MA61NO | 752 | Urban Background | 22.4 | 24.6 | 25.3 | 24.4 | 24.4 |
| MA77NO | 770 | Urban Background | 26.9 | 30.8 | 33.1 | 31.6 | 28.4 |
| MA96BNO | 782 | Roadside | 36.4 | **41.0** | **43.5** | **46.1** | 36.4 |
| MA112BNO | 869 | Roadside | - | 21.4 | 22.7 | 19.8 | 19.3 |
| MA113BNO | 883 | Roadside | - | 28.1 | 29.2 | 28.2 | 27.6 |
| MA71NO | 947 | Roadside | 31.4 | 34.2 | 34.4 | 30.7 | 29.0 |

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.

9.43. As outlined within Table 9.6, the Manchester Oxford Road site (MAN1) is the closest automatic monitoring location to the Site, approximately 300 m to the southwest of the Site. The annual average $NO_2$ levels at the MAN1 were above the AQO level of 40 µg/m$^3$ 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. The 1-hour averages at the MAN1 did not exceed the 200 µg/m$^3$ threshold over the past two years, complying with the permitted 18 allowable exceedances outlined in the AQO (Table 9.6).

9.44. The Manchester Piccadilly (MAN3) site is about 755 m away from the Site. Annual average $NO_2$ concentrations measured at MAN3 have constantly achieved the AQO level of 40 µg/m$^3$, and no short-term exceedance were recorded in the past five years.

9.45. Similar to $NO_2$, the MAN1 site recorded higher annual average $PM_{10}$ concentrations and greater number of short-term exceedances, compared to the MAN3 site (Table 9.6). Despite this, long-term and short-term AQOs for $PM_{10}$ have been achieved at both sites since 2020 and annual average concentrations have been stable in the recent five years. A slight increase has been observed at MAN1 concentrations in 2024.

9.46. MAN3 is the only nearby automatic monitoring site that monitors $PM_{2.5}$. This has not exceeded the annual average $PM_{2.5}$ AQO (20 µg/m$^3$) since 2020 (Table 9.6).

Table 9.6 Monitoring results at automatic monitoring locations 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 | 2024 |
| **$NO_2$** | | | | | | | | | |
| MAN1 | 301 | Kerbside | Annual Mean (40 µg/m$^3$) | **59** | 36 | **44** | **43** | **41** | **44** |
| | | | Number of hours with concentrations >200 µg/m$^3$ (18 allowable) | 1 | 0 | 0 | 3 | 0 | 0 |
| MAN3 | 755 | Urban Centre | Annual Mean (40 µg/m$^3$) | 36 | 27 | 30 | 29 | 27 | 27 |
| | | | Number of hours with concentrations >200 µg/m$^3$ (18 allowable) | 0 | 0 | 0 | 0 | 0 | 0 |
| **$PM_{10}$** | | | | | | | | | |
| MAN1 | 301 | Kerbside | Annual Mean (40 µg/m$^3$) | 26 | 18 | 18 | 18 | 18 | 21 |
| | | | Number of hours >50 µg/m$^3$ (35 allowable) | 18 | 5 | 2 | 8 | 4 | 0 |
| MAN3 | 755 | Urban Centre | Annual Mean (40 µg/m$^3$) | 20 | 15 | 15 | 17 | 15 | 15 |
| | | | Number of hours >50 µg/m$^3$ (35 allowable) | 7 | 1 | 2 | 4 | 1 | 1 |
| **$PM_{2.5}$** | | | | | | | | | |
| MAN3 | 755 | Urban Centre | Annual Mean (20 µg/m$^3$) | 12 | 8 | 9 | 10 | 9 | 9 |

## Defra Predicted Concentrations

9.47. Defra model grid background concentrations across the UK on 1 km x 1 km grid squares, utilising a base year of 2021 (Defra, 2024). Table 9.7 presents the Defra Modelled background pollution concentrations for $NO_2$, $PM_{10}$ and $PM_{2.5}$ for the grid square in which the Site lies (384500,397500) for the existing baseline year 2024, alongside the 2024 monitored data recorded at automatic monitoring location MAN3. Monitored and modelled annual mean background concentrations of $NO_2$, $PM_{10}$, and $PM_{2.5}$ across the study area are all below their relevant AQOs.

9.48. The monitored background concentration for $PM_{10}$ at MAN3 is 2% lower than the Defra predicted background concentrations.

Table 9.7 Defra modelled background concentrations for the baseline year (2024).

| Year | Defra modelled annual average background concentration (µg/m$^3$) (Grid square: 384500,397500) | | | | Monitored annual average concentrations at Urban Centre monitoring location (MAN3) (µg/m$^3$) | | |
|---|---|---|---|---|---|---|---|
| | $NO_2$ | NOx | $PM_{10}$ | $PM_{2.5}$ | $NO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| **2024** | **22.5** | **33.0** | **15.1** | **8.1** | **27.0** | **14.8** | **8.5** |

9.49. Air quality is generally expected to improve with time with the increased uptake of cleaner vehicles and with newer vehicles having more stringent emission standards. In order to give an indication of potential future baseline concentrations, the predicted background concentrations for $NO_2$, $PM_{10}$ and $PM_{2.5}$ for the grid squares covering the Site are provided in Table 9.8 for the 2027 for the construction year and the 2030 the earliest operational year for the Proposed Development

Table 9.8 Defra modelled background concentrations for the peak construction year (2028) and earliest operational year (2030)

| Year | Defra modelled annual average background concentration (µg/m$^3$) (Grid square: 384500,397500) | | | |
|---|---|---|---|---|
| | $NO_2$ | NOx | $PM_{10}$ | $PM_{2.5}$ |
| Construction Year (2027) | 20.1 | 28.9 | 15.0 | 8.0 |
| Opening Year (2030) | 17.8 | 25.1 | 14.8 | 7.8 |

9.50. It can be seen from Table 9.8 that background concentrations at the Site are anticipated to reduce over time, with an improvement in concentrations predicted when compared against the background concentrations for 2024 (Table 9.7).

9.51. However, it is important to note that these future baseline concentrations are only predictions and there remains some uncertainty regarding future concentrations of $NO_2$ as emissions from diesel vehicles have not declined as expected. Therefore, the future year background concentrations are provided for information only and 2024 background have been used within the dispersion modelling to provide a worst case and conservative approach.

## Railway Emissions

9.52. The Site is adjacent to elevated railway tracks. Pollution from the railway station can arise from exhaust (from diesel-powered engines) and non-exhaust emissions (e.g., from abrasion and mechanical wear). Diesel or coal-fired stationary and mobile locomotives have the potential to give rise to elevated short-term $NO_2$ and sulphur dioxide ($SO_2$) concentrations in the local area

9.53. LAQM TG22 (Defra, 2022) (Appendix 9.1), provides the following screening criteria in order to determine whether emissions from stationary diesel or steam locomotives require assessment:

- Identify locations where diesel or steam locomotives are regularly (at least three times a day) stationary for periods of 15 minutes or more; and
- Determine relevant exposure within 15m of the locomotives.

9.54. For moving diesel locomotives, the following two screening criteria are set out in the LAQM.TG(22):

- Determine relevant exposure within 30m of the relevant railway tracks (Table 7-2 in LAQM.TG(22) provides information on which lines should be considered); and
- Identify whether the background annual mean $NO_2$ concentration is above 25µg/m$^3$ in these areas.

9.55. The railway tracks are approximately 7m in height and are within 7m of the proposed Purpose Built Student Accommodation (PBSA), as shown in Figure 9.4. Additionally, the Manchester Piccadilly to Manchester Deansgate rail line is identified in TG22 as a line with heavy traffic of diesel passenger trains. Therefore, sensitive receptors at the Site are likely to experience significant long-term impacts on air quality from railway emissions. Regarding the short-term impacts from stationary locomotives, Figure 9.4 shows that the Site is approximately 400m away from the Manchester Oxford Road to the west and from Manchester Picadilly west, the nearest respective stations where stationary locomotives are most frequent.

9.56. A review of Defra modelled background pollution concentrations (38400,397500) for the source apportionment of $NO_x$, $PM_{10}$ and $PM_{2.5}$ emissions generated by rail has been outlined within Table 9.9.

Table 9.9 Proportion of emissions generated by rail in Defra Modelled background pollution concentrations (384500,397500) for the baseline year (2024).

| Year | Proportion of emissions generated by rail (%) | | |
|---|---|---|---|
| | NOx | $PM_{10}$ | $PM_{2.5}$ |
| 2024 | 5.1 | 0.21 | 0.36 |

9.57. As shown in Table 9.9, the proportion of emissions generated by rail emissions is less than 6% for NOx emissions and >1% for $PM_{10}$ and $PM_{2.5}$, As such rail emissions are not considered to contribute as a significant source of emissions at the Site. However it should be noted that emissions at source (i.e. where the railway tracks are located) may experience higher concentrations.

9.58. An assessment of the emission from rail is outlined within paragraphs 9.74 to 9.78.

### Industrial Pollution Sources

9.59. There is one industrial facility located approximately 360 m southwest of the Site registered under the National Atmospheric Emission Inventory (NAEI) (NAEI, 2024). Due to the nature of the facility (University of Manchester administration) and the urban fabric between the facility and the Site, it is assumed that there will not be significant impacts on air quality at the Site. There are no UK pollutant release and transfer register (PRTR) registered emission sources (Defra, 2012) or Defra registered Part A1 air pollution emission sources (Environmental Agency, 2024) within 500 m from the Site. The nearest facilities registered under Part B Environmental Permits (Manchester City Council, 2024) are more than 500 m away and therefore will not have a significant impact on air quality at the Site, so have been scoped out.

### Summary of Baseline

9.60. The baseline assessment has shown that monitored baseline concentrations along the Mancunian Way, adjacent to the Site, are in compliance with the UK $NO_2$ AQO. Whilst the majority of monitoring locations are in compliance with the annual average AQO, there are several roadside locations in the wider area that are in exceedance of the annual average $NO_2$ AQO. The nearest automatic monitoring location have all been in compliance with the $PM_{10}$ and $PM_{2.5}$ AQOs in recent years.

9.61. Furthermore, the Defra predicted background concentrations for $NO_2$, $PM_{10}$ and $PM_{2.5}$ are predicted to be in compliance with the relevant air quality objectives at the Site in 2024.

9.62. The Site is adjacent to elevated railway tracks, in which emissions (especially NOx and $SO_2$) from the railway station can arise from exhaust and non-exhaust emissions. A review of the Defra modelled background pollution concentrations indicates that proportion of emission from rail account for less than 6% of total emissions for NOx, $PM_{10}$ and $PM_{2.5}$.

## Identification and Evaluation of Likely Significant Effects

### Construction Phase

9.63. As outlined within paragraph 9.33, the effect of construction dust on dust soiling and human health impacts are scoped out of the ES. The IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2024) 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. The reason for this is that for almost all construction activities, the application of effective mitigation should prevent any significant effects from occurring to existing sensitive receptors (including Echoes Day Nursery and Weston Hall), and therefore the residual effect will normally be Negligible. A full construction dust risk assessment methodology, results and mitigation is outlined within Appendix 9.2.

9.64. Transport data provided by Civic Engineering for the construction phases of the Proposed Development has indicated that there is a predicted maximum AADT trip generation of 78 LGVs and 24 HDVs movements during construction

phase. This is below the with the criteria for a detailed assessment outlined in the EPUK/IAQM guidance and the Proposed Development is predicted to have a negligible effect on air quality.

9.65. As such, the overall significance of construction vehicle emission impacts from the Proposed Development on $NO_2$ $PM_{10}$ and $PM_{2.5}$ concentrations will be not significant in line with EPUK and IAQM guidance.

## Operational Phase

**Effects of emissions generated by operational traffic**

9.66. Transport data provided by Civic Engineering has indicated that, given the Proposed Development is to be car-free, there is a predicted maximum AADT trip generation of 34 LGVs and 1 HDVs movements during operational phase on any single road network within the vicinity of the Proposed Development. This is below the with the criteria for a detailed assessment outlined in the EPUK/IAQM guidance and the Proposed Development is predicted to have a negligible effect on air quality.

9.67. As such, the overall significance of operational vehicle emission impacts from the Proposed Development on $NO_2$ $PM_{10}$ and $PM_{2.5}$ concentrations will be not significant in line with EPUK and IAQM guidance.

**Effects associated with sources of air pollutant emissions on future receptors**

9.68. A qualitative site suitability assessment has been undertaken to consider the exposure of future occupants introduced by the Proposed Development, to current air quality. In line with LAQM.TG (22), the annual mean AQOs for $NO_2$, $PM_{10}$ and $PM_{2.5}$ applies to the Proposed Development due to its proposed use as PBSA. As such, this section considers the annual mean $NO_2$, $PM_{10}$ and $PM_{2.5}$ concentrations at the Site.

9.69. Given the proximity of the Proposed Development to the adjacent railway tracks, there is potential for exceedances short-term sulphur dioxide ($SO_2$) objectives and the annual mean $NO_2$ objective were there are relevant receptors within 15 m of stationary locomotives or 30 m from railway tracks. The railway tracks are at approximately 7m height and are within approximately 7m of the proposed bedrooms with the PBSA on Site, as shown in Figure 9.4.

9.70. Air quality monitoring in the vicinity of the Proposed Development is presented in Figure 9.1 and Figure 9.2 within Appendix 9.3A. The closest monitoring locations to the Proposed Development are located along the Oxford Road corridor to the West. Automatic monitoring location MAN1, alongside diffusion tube monitoring locations MA82NO and CAP_MANC_19 are located approximately 232 m to the west of the Application Site and within 3m of Oxford Road. These locations all recorded exceedances of the $NO_2$ annual mean AQO in 2024. These exceedances can be attributed to the nearby pollutant sources such as Mancunian Way and a high proportion of buses that utilise this route (35%), with the adjacent bus stops within 10m of the monitoring locations.

9.71. In addition, $NO_2$ concentrations at CAP Monitoring Locations CAP_MANC_183/184/185/186 and MCC monitoring MAN 29ANO located approximately 280 m to the west of the Proposed Development is also influenced by the rail lines(<20m), Oxford Road (approximately 5m) and bus stops within 10m of the monitoring locations. These monitoring locations, with the exception of CAP_MANC_184 (39.4 $\mu g/m^3$) all recorded exceedances of the $NO_2$ annual mean AQO in 2024 ( a shown in Table 9.4 to 9.6).

9.72. Concentration of $PM_{10}$ and $PM_{2.5}$ monitored at MAN1 ($PM_{10}$ only) and MAN3 are both in compliance with their respective annual mean AQOs.

9.73. The Proposed Development is setback approximately 50m from Princess Street and 232m from Oxford Road, as such pollutant concentrations are likely to be lower than those monitored by the aforementioned monitoring locations and these monitoring locations are likely to represent the worst-case air quality conditions at the Site.

9.74. Monitoring location MA77NO located on Hewitt Street approximately 780m to the west of the Proposed Development, is considered most representative tube for railway/transport emissions given its proximity to the rail lines (approximately 8m) and Albion Street (approximately 39m). In 2024, MA77NO recorded $NO_2$ concentrations of 28.4 $\mu g/m^3$, which is in compliance with the annual mean AQO. Concentrations at the Proposed Development are likely to be comparable to MA77NO due to the similar surrounding context with the rail lines and as the AADT along Albion Street (11647) is higher than Princess Street (6964) in 2024.

9.75. In line with the criteria outlined within LAQM.TG(22), where the Proposed Development falls within 30m of the relevant railway tracks with moving locomotive and in an area where the $NO_2$ background exceeds 25 µg/m$^3$ an assessment of the potential exposure should be considered. As shown in Table 9.7, 2024 annual mean $NO_2$ Defra background concentration monitored is 22.5 µg/m$^3$, which falls below the 25 µg/m$^3$ criteria than outlined within LAQM.TG(22), however concentrations recorded at MA77NO (considered most representative for rail exposure), exceeds the 25 µg/m$^3$ background concentrations criteria outlined in LAQM TG22 for screening out an assessment of rail from moving locomotives.

9.76. Therefore, there is potential for sensitive receptors at the Site have the potential to experience significant long-term impacts on air quality from railway emissions. Regarding the short-term impacts from stationary locomotives (within 15m), Figure 9.4 shows that the Site is approximately 400m away from the nearest station Manchester Oxford Road and more than 400 m away from Manchester Picadilly and therefore not considered further. Taking into account the monitored concentrations at nearby monitoring locations and due to the distance of the Proposed Development to the rail lines, NOx filters are to be provided on intake air ducts terminating up to and including level 03 (4th floor) on the north, east and west façades that lie adjacent to the rail lines.

9.77. The railway lines between Manchester Piccadilly and Manchester Deansgate have undergone electrification; however, the current proportion of electric versus diesel-powered train movements on this line remains unknown. It is anticipated that as the uptake in electric train fleet increases, concentrations of $NO_2$ will decrease over time, however some uncertainty remains regarding the timeline and extent of this transition. Should the line become fully electrified, with the cessation of diesel passenger trains before the development is built, then the requirement for $NO_X$ filters should be reviewed prior to occupation.

9.78. Given that potential for exceedance of the considered AQO is predicted due surrounding baseline concentrations and proximity to the nearby rail lines, mitigation measures in the form of $NO_x$ filtration is recommended up to including level 03 (4th floor) on the north, east and west façades of the Proposed Development to minimise exposure to elevated $NO_2$ concentrations at these sensitive. With the implementation of $NO_x$ filtration, the overall effect is considered to be 'not significant'.

## Cumulative Effects

### Construction

9.79. There is potential for cumulative effects on construction dust impacts from other major developments in the vicinity of the Proposed Development at nearby receptors (shown in in Figure 9.5 within Appendix 9.3), should the construction phases overlap for each scheme.

9.80. IAQM guidance indicates that with appropriate mitigation measures in place, the impact from construction dust will be not significant. 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. The cumulative schemes within 500m of the Proposed Development are outlined within Appendix 9.2 and a full list of potential cumulative schemes is detailed within Appendix 2.3. This assessment considers all assessment within a 500m proximity, including the IQ (Ref:144791/FO/2025) located adjacent to the Proposed Development at Weston Hall and Pendulum Hotel, submitted in December 2025.

9.81. It is assumed that an appropriate assessment of potential construction effects will have been carried out at cumulative schemes and necessary mitigation will have been identified. Mitigation for this Proposed Development will therefore compliment the mitigation identified for the other cumulative developments and ensure overall impacts are negligible.

### Operation

9.82. As the Proposed Development is considered to be car free, the impact of operational traffic on nearby receptors is predicted to be negligible, as such cumulative effects are not considered significant.

## Mitigation Measures

### Construction Phase

9.83. As the impact of construction traffic on all human receptors will be negligible, no additional mitigation is recommended.

9.84. In line with best practice, the IAQM construction guidance sets out the recommended mitigations measures to be implemented in order to mitigate the potential impacts during the construction phase. Table 9.11 within Appendix 9.2 outline the specific mitigations measures to be incorporated into the DMP for the Proposed Development, as a result of the dust risk assessment undertaken within Appendix 9.2.

9.85. Examples of high risk general mitigation measures include but are not limited to:

- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the Site.
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked;
- Agree dust deposition, dust flux, or real-time $PM_{10}$ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.

### Operational Phase

9.86. As the impact of operational traffic on all human receptors will be negligible, no additional mitigation is recommended.

9.87. As there is potential for exceedance of the considered AQO is predicted due to proximity to the nearby rail lines, mitigation measures in the form of $NO_x$ filtration is recommended up to Level 03 of the Proposed Development to minimise exposure to elevated $NO_2$ concentrations. With the implementation of mitigation measures, the overall effect is considered to be 'not significant'.

## Residual Effects

### Construction Phase

9.88. The residual effects for the construction phase are presented in Table 9.9.

Table 9.9 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) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Effects of emissions arising from dust generated during the construction phase Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | Recommended mitigation measures has been outlined within Appendix 9.2. | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition. | Negligible, short-term and temporary |
| Effects of emissions arising from traffic generated by onsite NRMM during construction phase of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | Recommended mitigation measures has been outlined within Appendix 9.2. | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Negligible, short-term and temporary |
| Effects of emissions arising from traffic generated by the construction phase of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | 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. | | | | |

## Operational Phase

9.89. The residual effects for the operational phase are presented in Table 9.10.

Table 9.10 Summary of Operational Phase Residual Effects

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Effects of emissions arising from traffic generated by the operation of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | No mitigation is required | N/A | Negligible, Permanent |
| Effect of air pollution on new exposure introduced by the Proposed Development | Future sensitive uses on-site, including residential properties (high) | NOx filtration on Levels 00 to Level 03 | Through suitably worded condition, in which the applicability of NOx filtration is to be reviewed prior to occupation | Negligible, Permanent |
| **All existing sensitive receptors have been considered as high sensitivity receptors to provide a robust assessment. | | | | |

## Monitoring

9.90. As outlined within Appendix 9.2,real time dust monitoring of dust deposition has been identified as a measure to ensure that the construction activities do not give rise to any exceedances of the air quality objectives for $PM_{10}$ and/or $PM_{2.5}$, or any exceedances of recognised threshold criteria for dust deposition.

9.91. Additionally, air quality monitoring (passive diffusion tube or real time) is recommended prior to occupation to determine the requirements for $NO_x$ filtration.

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9.92. This ES Chapter has been prepared in reference to the following:


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# 10. Transport

## Introduction

10.1. This Chapter of the ES has been prepared by Civic Engineers and assesses the likely Transport impacts of the Proposed Development 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. This Chapter is accompanied by seven technical appendices, a Construction Traffic Information (Appendix 10.1), Construction Phase Impacts (Appendix 10.2), Operational Phase Impacts (Appendix 10.3), Cumulative Assessment (Appendix 10.4), IDM Masterplan Assessment with Cumulative Trips (Appendix 10.5), Scoping in/out of Cumulative Site (Appendix 10.6) and the Transport Assessment (Appendix 10.7).

## Chapter Author

Table 10- 1- Authorship Information.

| | Lead Author | Reviewer |
|---|---|---|
| Name | Joel Sorsby | Emily Ingham |
| Company | Civic Engineers | Civic Engineers |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | Sustainability in Transport MSc | MEng Civil and Environmental Engineering |
| Years technical experience (in technical area) | 4 | 11 |
| Number of EIA's delivered to date | 4 | 22 |

## Assumptions and Limitations

10.2. To calculate the distribution of vehicle trips originating from The Proposed Development, commuting data derived from a 2011 NOMIS dataset (dataset WUE0EW) has been used. This data is limited by its age but is considered appropriate for this assessment.

10.3. Assumptions about traffic generated during the Construction Phase have been provided by one of the Applicants (RGRE).

10.4. Details of cumulative traffic have been taken from the Transport Assessments or Environmental Statements of the respective developments, accessed via MCC's public access.

10.5. Details of traffic generated by the IDM masterplan have been taken from the IDM SRF (2023) document. The SRF states parameters of 1,500 homes and 2 million sq. ft. of commercial space will be contained within the development.

## Relevant Legislation, Policy and Guidance

### Legislation

10.6. The Highways Act 1980: This act sets out the legal framework for the creation, maintenance, and management of public highways in the UK. It governs how roads, footpaths, and related infrastructure are regulated by authorities.

10.7. The Environment Act 2011: This act is relevant to transport as it empowers local authorities to address air quality issues caused by traffic emissions, promoting sustainable and low-emission transport solutions.

## Policy

**National Policy**

10.8. National Planning Policy Framework (2024): Chapter 9 is of primary relevance to the transport element of the development. This chapter focuses on promoting sustainable transport, and a review is provided in the Transport Assessment at Appendix 10.7.

**Regional Policy**

10.9. Places for Everyone (2024): Policies JP-C1, JP-C3, JP-C4, JP-C5, JP-C8 and JP-14 are of relevance to the transport element of the development, and a review is provided in the Transport Assessment at Appendix 10.7.

**Local Policy**

10.10. Manchester City Council Core Strategy (2024 Addendum): Policies T1 (Sustainable transport), T2 (Accessible areas of opportunity and need), SP1 (Spatial Principles) and DM1 (Development Management) are of relevance to the transport element of the development.

## Guidance

10.1. IEMA Guidelines for the Environmental Assessment of Traffic and Movement (2023): This document provides a framework for evaluating the environmental impacts of traffic-related changes, emphasizing the need to assess areas with sensitive receptors, manage traffic flow increases, and ensure sustainable transport solutions in development planning.

10.2. Greater Manchester Transport Strategy 2040: includes right mix aspirations of 50% of journeys to be by sustainable modes by 2040, and also a target to reduce baseline traffic by 8% by 2040.

10.3. ID Manchester Strategic Regeneration Framework (2023).

10.4. MCC's Guide to Development in Manchester Planning Guidance (2007): This document emphasizes the integration of sustainable transport into new developments, prioritizing walking, cycling, and public transport over private car use. It encourages high-quality design that supports accessibility, reduces car dependency, and enhances connectivity within and around Manchester.

10.5. City Centre Transport Strategy to 2040: The strategy sets a long-term vision for a cleaner, greener, and more accessible Manchester city centre by prioritizing active travel and public transport. It aims to reduce car trips by 50%, enhance pedestrian and cycling infrastructure, and improve public transport efficiency to support inclusive economic growth and climate goals.

10.6. Planning Practice Guidance: Travel Plans, Transport Assessments and Statements (2014): This national guidance outlines when and how developers should prepare transport assessments, statements, and travel plans to ensure developments are accessible and promote sustainable transport.

10.7. A detailed review of the above policy and guidance is provided in the Transport Assessment at **Appendix 10.7**.

# Assessment Methodology and Significance Criteria

## Scenarios Tested

10.8. The following scenarios are included in the assessment of Traffic and Transport effects of the Proposed Development.

- Scenario 1: Existing Baseline (site as of September 2025)
- Scenario 2: Existing Baseline + Plot H
- Scenario 3: Existing Baseline + Plot H + Cumulative
- Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan (future surrounds/future phases)

**Trip Generation Methodology**

10.9. The following trip generation methodology has been used to derive vehicle trips during the Construction Phase and the Operational Phase:

- Construction Phase: information has been provided by one of the Applicants, RGRE, which is included at Appendix 10.2. Vehicles will arrive and leave via Princess Street to the west or Sackville Street to the east, and then onto the wider network.
- Operational Phase: the change in Annual Average Daily Traffic Flow (AADT) is used to define impacts. These are derived from the TRICS database. This gives a trip rate per student bed, which can then be multiplied by the number of beds (1,014). These trips are then distributed on the highway network using NOMIS 2011 data (See assumptions at Paragraph 10.2). LDVs and taxis arrive from London Road south and leave via London Road north. HDVs arrive from London Road south and leave via Sackville Street.
- Cumulative Assessment: the table at Appendix 10.6 sets out which of the Cumulative Sites have been scoped in/out of this assessment. For the sites scoped in, data has been taken from the respective Transport Assessments and Environmental Statements available on the planning file.
- Assessment of full IDM Masterplan: Trips have been taken from the Transport chapter of the ES for Plot C at Sister, planning reference 143024/FO/2025. The ID Manchester SRF document[1] sets out parameters for 1,500 apartments and up to 2m sqft (190,000sqm) commercial. The land use of commercial has been assumed to be split as per Plot C, i.e. 1.7% café, 1.7% restaurant, 2.7% gym and the remainder office. Each plot is assumed to have an equal proportion of the total apartments and commercial land uses. The apartments are assumed to have a parking space for 5% of homes, and the car trip rates from TRICS has been reduced to 5% to respond to this. Trips have then been distributed as shown in the table at Appendix 10.5.

## The Study Area

10.10. The study area relevant to this Chapter broadly involves the highway network surrounding the site.

10.11. The initial study area was defined as links which would receive an increase in AADT (Annual Average Daily Traffic) of 100 or more during either the demolition and construction phase or the operational phase.

10.12. The approach to further define the study area, to understand links where effects should be assessed in more detail, uses Rules 1 and 2 defined by the IEMA Guidelines.

10.13. IEMA Guidelines state that 'following the determination of a study area, it is recommended the competent traffic and movement expert applies two broad rules of thumb as criteria to assist in delimiting the scale and extent of the environmental assessment':

- Rule 1: Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%).
- Rule 2: Include highway links of high sensitivity where traffic flows have increased by 10% or more.

## Surveys and Data Sources

10.14. Baseline traffic data has been taken from the following sources:

- Department for Transport count points around the site
- Automatic Traffic Count data on Sackville Street and Charles Street

10.15. TRICs software has been used to estimate the number of trips that will be generated by the Proposed Development. The category selected from the TRICs survey database was 03 - residential/G - student accommodation. This gave a

[1] Available at https://www.manchester.gov.uk/download/downloads/id/29071/id_manchester_area_of_the_oxford_road_corridor_framework_pdf.pdf

daily trip rate per student bed, which is multiplied by the number of beds (1,014) to derive the total number of trips generated by the Proposed Development.

10.16. To distribute the trips generated by the Proposed Development onto the surrounding highway network, Census travel to work data (dataset WUE0W) has been used.

## Source of Effect

10.17. The effects which will be considered in this ES Chapter are as follows:

- Severance of Communities
- Non-motorised User Delay
- Non-motorised User Amenity
- Fear and Intimidation on and by Road Users
- Road User and Pedestrian Safety

**Severance of Communities**

10.18. The IEMA Guidelines paragraph 3.13 states that "*severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure*."

10.19. The measurement for assessing severance is difficult to predict as according to the Guidelines for the Environmental Assessment of Traffic and Movement, 2023: "*the correlation between the extent of severance and the physical barrier of a road is not clear and there are no predictive formulae which give simple relationships between traffic factors and levels of severance*."

10.20. Nevertheless, the IEMA Guidelines refers to the Department for Transport's 1983 Manual for Environmental Appraisal[2] and suggests using the range of indicators for determining the magnitude of change in severance of communities as set out in Table 10-3.

Table 10-3: Magnitude of Change.

| Sensitivity | Examples of Receptor |
|---|---|
| **Magnitude of Change** | **Change in Traffic Flow** |
| No Change | No Change |
| Negligible | < 30% |
| Low | 30% - 60% |
| Medium | 60% - 90% |
| High | > 90% |

10.21. However, it is noted that caution will be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes in traffic.

**Non-motorised User Delay**

10.22. The IEMA Guidelines note that a change in the volume, composition and/or speed of traffic may affect the ability of a person to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development site. The guidelines do not set any thresholds for assessing non-motorised user delay, recommending instead that assessors use their judgement to determine whether non-motorised user delay constitutes a significant effect. In

[2] Manual for Environmental Appraisal. Department of Transport, 1983

densely populated areas with highly sensitive, receptors, it may be necessary to quantify the number of pedestrians impacted.

10.23. There is a relationship between non-motorised user delay and increased traffic volume. On this basis the significance of the change in traffic magnitude on Severance of Communities is used as a suitable measure of the significance of the change in traffic magnitude on non-motorised user delay.

**Non-motorised User Amenity**

10.24. With respect to 'Non-motorised User Amenity' this is described in the IEMA Guidelines as 'relative pleasantness of a journey'. It is affected by traffic flow, traffic composition, footway width and separation from the carriageway. The IEMA 1993 Guidelines suggested a tentative threshold for judging the significance of a change in pedestrian amenity where the traffic flow (or the HGV component) is halved or doubled. The 2023 Guidelines suggests that thresholds are expressed as a starting point and have been adopted in considering the significance of effect. However, the IEMA Guidelines state that any assessment of amenity should pay full regard to specific local conditions.

**Fear and Intimidation on and by Road Users**

10.25. A further environmental impact that affects people is the fear and intimidation created by all moving objects. This can include motorcycles, cars, lorries, and buses, and it also has to consider other modes of travel, including horses, cycles, mobility scooters, e-scooters and e-cycles if appropriate. The extent of fear and intimidation is dependent on heavy vehicle composition, the speed vehicles are passing and proximity of traffic to people.

10.26. There is no commonly agreed guidance on the thresholds for estimating levels of danger and in the absence of such, the updated IEMA Guidelines put forward a weighting system to help assessors provide a first approximation of the likelihood of pedestrian fear and intimidation. This is assessed based on the degree of hazard to pedestrians by average traffic flow, 18-hour heavy vehicle flow and average speed over an 18-hour day in miles/hour. The degree of hazard is assessed with reference to the established thresholds, and a score provided for each combination on a highway link under consideration (see Table 10-4).

Table 10-4: Fear and Intimidation Degree of Hazard Levels of Fear and Intimidation.

| Average traffic flow over 18-hour day –all vehicles / hour 2-way (a) | Total 18-hour heavy vehicle flow (b) | Average vehicle speed (c) | Degree of hazard score |
|---|---|---|---|
| +1,800 | +3,000 | ->40 | 30 |
| 1,200–1,800 | 2,000–3,000 | 30–40 | 20 |
| 600–1,200 | 1,000–2,000 | 20–30 | 10 |
| <600 | <1,000 | <20 | 0 |

10.27. The total score from all three elements is combined to provide a 'level' of fear and intimidation for all three elements. The thresholds suggested in the IEMA Guidelines are set out in Table 10-5.

Table 10-5: Levels of Fear and Intimidation.

| Level of fear | Total hazard score (a) + (b) + (c) |
|---|---|
| Extreme | 71+ |
| Great | 41-70 |
| Moderate | 21-40 |
| Small | 0-20 |

10.28. The magnitude of impact is approximated with reference to the changes in the level of fear and intimidation from baseline conditions as set out in Table 10-6, taken from the IEMA Guidelines.

Table 10-6: Fear and Intimidation Magnitude of Impact.

| Magnitude of Impact | Change in step/traffic flows from baseline conditions |
|---|---|
| High | Two step changes in level |
| Medium | One step change in level, but with<br>>400 vehicle increase in average 18hr average two-way all vehicle flow; and/or<br>>500 hv increase in total 18hr hv flow |
| Low | One step change in level, with<br><400 vehicle increase in average 18hr average two-way all vehicle flow; and/or<br><500 hv increase in total 18hr hv flow |
| Negligible | No step changes |

**Road User and Pedestrian Safety**

10.29. The IEMA Guidelines highlight that professional judgement will be needed to assess the implications of local circumstance or factors which may increase or decrease the risk of collisions, e.g. junction conflicts. The IEMA Guidelines encourage assessors to review the baseline conditions to identify any collision clusters and assess the effects of additional development traffic for all users (including vulnerable groups).

Table 10-7. Road User and Pedestrian Safety Indicator Thresholds.

| Magnitude of Change | Change in traffic flow |
|---|---|
| No Change | No Change |
| Negligible | < 30% |
| Low | 30% - 60% |
| Medium | 60% - 90% |
| High | > 90% |

## Significance Criteria

10.30. The sensitivity of affected receptors will be considered on a scale of high, medium, low or negligible. Table 10-8 sets out the criteria used to assess the sensitivity of receptors on each link in the study area.

Table 10-8: 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.<br><br>Defined as road links and junctions with school, nursery or playground; retirement/care homes; lack of adequate footways, lack of crossings, network congested and over capacity; collision cluster zones |
| Medium | The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.<br><br>Defined as road links and junctions with hospitals, surgeries, clinics, shopping areas, parks/recreation grounds; narrow footways. |
| Low | The receptor/resource is tolerant of change without detriment to its character, is of low or no local importance.<br><br>Defined as road links and junctions with few residential properties with direct frontage to the highway link being used as a construction traffic route - Workplaces with direct frontage to highway link being used as construction route. |

10.31. If a link is identified as having receptors which are of high sensitivity the impacts are assessed in more detail if there is a change in AADT of 10% or more (Rule 2 of the IEMA Guidelines).

10.32. All other links in the study area will have impacts assessed in more detail if there is a change in AADT or HDV of 30% of more (Rule 1 of the IEMA Guidelines).

10.33. The significance of an environmental impact is determined by the interaction of magnitude and sensitivity, whereby the impacts can be positive or negative. The impact Significance Matrix is set out Table 10-9.

Table 10-9: Impact Significance Matrix.

| 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. |

10.34. Where appropriate, the significance of effect will be classified as being direct/indirect effects, secondary, cumulative, short/medium/long term, permanent/temporary and beneficial/adverse effects arising from The Proposed Development.

10.35. Effects which are major or moderate will be considered significant in this assessment. Effects which are minor or negligible will not be considered significant.

Table 10-10: Sensitivity definitions.

| 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 |

**Effects Not Requiring Further Assessment**

10.36. Large/hazardous loads are not generally associated with the construction of PBSA developments, as movements are primarily by HGV and Light Good Vehicles (LGVs) / Medium Good Vehicles (MGVs). The requirements for any such loads requiring access during construction will therefore be limited. A methodology statement will be included within the Construction Environmental Management Plan (CEMP to be presented and agreed with the Local Highway Authority and HSE, where appropriate. This CEMP will be conditioned. Such a statement would include the details of trained operators, provision of appropriate audio / visual aids and / or proximity devices where operator visibility is restricted and the designation of dedicated loading / unloading areas.

10.37. For operation of the Proposed Scheme, due to the uses proposed, the Proposed Development would not require the transportation of large or hazardous loads.

10.38. Therefore, effects related to large/hazardous loads are not considered significant and are not considered further.

**Traffic Impact on Holcroft Moss**

10.39. Policy JP-C8 of Places for Everyone states that Transport Assessments and EIAs for new developments must consider air quality impacts on Holcroft Moss, within the Manchester Mosses Special Area of Conservation. Any proposals that would result in increased traffic flows on the M62 past Holcroft Moss of more than 100 vehicles per day or 20 Heavy Goods Vehicles (HGVs) per day must devise a scheme-specific range of measures to reduce reliance on cars, reduce trip generation and promote ultra-low emission vehicles and provide a contribution towards restoration measures in accordance with the Holcroft Moss Habitat Mitigation Plan.

10.40. Construction traffic has been distributed to/ from the site using origin-destination data from the Census. The distribution indicates that 66 AADT (including 12 HGVs) per day would arrive/depart from the west of the city centre via the Mancunian Way, which represents the edge of the study area that is of relevance to traffic travelling to/from the direction of Holcroft Moss. Given that the proposed development is an approximate 21km driving distance from Holcroft Moss, it is considered that these vehicles would further distribute across the highway network before passing Holcroft Moss. It is therefore anticipated that significantly fewer than 100 construction vehicles and/or 20 HGVs from the proposed development would pass Holcroft Moss per day during the construction phase. No further assessment or mitigation is therefore required.

10.41. The anticipated traffic and transport impacts on Holcroft Moss associated with the proposed development are outlined in Section 5.7 of the Transport Assessment (See Appendix 10.7). This concludes that the proposed development would not result in increased traffic flows on the M62 past Holcroft Moss of more than 100 vehicles per day or 20 HGVs per day. No further assessment or mitigation is therefore required.

## Baseline Conditions

### Pedestrian Access

10.42. Pedestrian access directly to the Site is currently limited. Outside the pedestrian entrance from the car park there is a small area of paved footway. Beyond this one would cross to the south side of Charles Street to use the footway to walk to Charles Street or Princess Street, however there are no dropped kerbs or tactile paving to facilitate this. There is also an access to the north east of the site which would follow the alignment of the viaduct, however this access is gated. Footways on Charles Street and Princess Street and the vicinity are of reasonable quality, and adequate width (more than 2.0m).

### Cycle Access

10.43. The city centre cycle network surrounds the site with routes on Altrincham Street, Sackville Street, Charles Street (west of Princess Street) connecting to further routes, for example, the Oxford Road cycle corridor, which can be accessed within 2 minutes by bike.

### Public Transport Access

10.44. There is a bus stop on Charles Street directly opposite the site, with 2 services per hour to West Didsbury via Oxford Road. For the return journey, bus stops are located on Sackville Street, approximately 20m northeast of the site. Further stops with additional high-frequency services are located on Princess Street, London Road and Whitworth Street. The Oxford Road Corridor is located a 300m walk from the site, and provides over 30 buses per hour in both directions.

10.45. The Site is a 7-minute walk to Oxford Road Station to the west and a 10-minute walk to Manchester Piccadilly Station to the northeast.

10.46. The nearest tram stops to the site are St Peter's Square and Manchester Piccadilly, both of which are an 11-minute walk from the site. St Peter's Square is a key interchange stop, served by all nine tram lines, and providing tram services every 1-2 minutes.

## Identification and Evaluation of Likely Significant Effects

### Construction Phase

#### Scenario 2: Existing Baseline + Plot H

10.47. To understand the impact of the Proposed Development during its Construction Phase, the AADT and HDV movements in the study area in Scenario 2 (Existing Baseline + Phase H) have been assessed and compared against movements in Scenario 1 (Existing Baseline Conditions). This is presented at Appendix 10.2.

10.48. As shown in Appendix 10.2, there are no links that will experience an AADT or HDV increase of 30% or more during the Construction Phase (Rule 1) or an AADT increase of 10% or more, which is the threshold for links of high sensitivity, during the Construction Phase (Rule 2).

10.49. Therefore, effects will be **Negligible** and therefore **Not significant**, and do not require further assessment.

### Operational Phase

#### Scenario 2: Existing Baseline + Plot H

10.50. To understand the impact of the Proposed Development during its Operational Phase, the AADT and HDV movements in the study area in Scenario 2 (Existing Baseline + Phase H) have been assessed and compared against movements in Scenario 1 (Existing Baseline Conditions). This is presented at Appendix 10.3.

10.51. As shown in Appendix 10.3, no links experience either an AADT or HDV increase of 30% or more during the Operational Phase (Rule 1) or an AADT increase of 10% or more, which is the threshold for links of high sensitivity, during the Operational Phase (Rule 2).

10.52. Therefore, effects will be **Negligible** and therefore **Not significant**, and do not require further assessment.

## Cumulative Effects

10.53. The table at Appendix 10.6 sets out which cumulative schemes have been scoped in and out of the assessment.

## Operational

### Scenario 3: Existing Baseline + Plot H + Cumulative

10.54. To understand the impact of the cumulative schemes, including Proposed Development during the Operational Phase, the AADT and HDV movements in the study area in Scenario 4 (Existing Baseline + Plot H + Cumulative) have been assessed and compared against movements in Scenario 1 (Existing Baseline Conditions). This is presented at Appendix 10.4.

10.55. As shown in Appendix 10.4, no links experience either an AADT or HDV increase of 30% or more during the Operational Phase (Rule 1) or an AADT increase of 10% or more, which is the threshold for links of high sensitivity, during the Operational Phase (Rule 2).

10.56. Therefore, effects will be **Negligible** and therefore **Not significant**, and do not require further assessment.

### Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan

10.57. To understand the cumulative impact of Plot H, the wider IDM Masterplan and Cumulative Schemes during the Operational Phase, the AADT and HDV movements in the study area in Scenario 4 (Existing Baseline + Plot H + Cumulative + IDM Masterplan (future surrounds/future phases)) have been assessed and compared against movements in Scenario 1 (Baseline Conditions). This is presented at Appendix 10.5.

10.58. As shown in Appendix 10.5, no links experience either an AADT or HDV increase of 30% or more during the Operational Phase (Rule 1) or an AADT increase of 10% or more, which is the threshold for links of high sensitivity, during the Operational Phase (Rule 2).

10.59. Therefore, effects will be **Negligible** and therefore **Not significant**, and do not require further assessment.

# Mitigation Measures

## Construction Phase

10.60. A Construction Environment Management Plan (CEMP) will be secured through a planning condition, and which will include / set out the following:

- A construction logistics / traffic management plan; and
- Construction travel plans, to encourage construction workers to use sustainable modes of travel.

10.61. As part of the CEMP and the above plans, the following specific measures will be implemented:

- Off-Site roads to remain clean and clear of debris at all times during the works;
- Signage will be provided for all construction work traffic such that the traffic impacts of the development do not compromise the safety and operation of the local highway network or pedestrians or other road users' safety;
- Appropriate signing of the delivery routes to ensure vehicles use the approved routes to / from the Site;
- Installation of temporary warning signs, where appropriate, in the vicinity of the accesses both for vehicles and other road users;
- Set up of the temporary accesses to ensure that vehicles have appropriate visibility;
- Implementation of segregated routes to separate construction workers / traffic and future Site users;
- Creation of delivery vehicle holding areas on-Site;
- Temporary traffic management for short periods when the delivery of abnormal / oversized loads may cause an obstruction to the public highway;
- Use of traffic marshals, where appropriate;
- Wheel washing facilities for departing vehicles; and

- Where possible, hoarding during the construction phase will not entirely cover footways / cycle routes. However, if this is necessary then alternative safe routes will be provided. Clear advertising will also be provided for any routes that are closed, and signposting will be provided for suitable alternative routes. If any temporary diversions for pedestrian / cyclist routes are required on the adjacent roads, these will be discussed and agreed upon with MCC.

### Operational Phase

10.62. A Framework Travel Plan (to be secured through a planning condition) will be produced to inform and incentivise occupiers of the Proposed Development to use sustainable transport options to and from Plot H. It will also enable the operator to monitor residents' travel behaviour against travel plan targets.

10.63. Measures within the Proposed Development will enhance active travel links by making new and enhanced active travel connections via Altrincham Street and Charles Street.

## Residual Effects

### Construction Phase

10.64. No significant effects have been identified on Traffic and Transport in the Demolition and Construction Phase of the Proposed Development, nor when committed developments or the wider IDM masterplan are taken into consideration.

Table 10-12: Construction 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 | | | | |
| Negligible | Severance of Communities, Non-motorised User Delay, Non-motorised User Amenity, Fear and Intimidation on and by Road Users, Road User and Pedestrian Safety | Conditioned CEMP | N/A | Negligible, Not Significant |

### Operational Phase

10.65. No significant effects have been identified on Traffic and Transport in the Operational Phase of the Proposed Development, nor when committed developments or the wider IDM masterplan are taken into consideration.

Table 10-13: Operational Residual Effects

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Negligible | Severance of Communities, Non-motorised User Delay, | Framework Travel Plan | N/A | Negligible, Not Significant |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| | Non-motorised User Amenity, Fear and Intimidation on and by Road Users, Road User and Pedestrian Safety | | | |

## Reference List

10.66. This ES Chapter has been prepared in reference to the following:

- The DfT's Traffic Appraisal Manual (1991)
- Manual for Environmental Appraisal. Department of Transport (1983)
- IEMA Guidelines: Environmental Assessment of Traffic Movement (2023)

# 11. Daylight, Sunlight and Overshadowing

## Introduction

11.1. This Chapter of the ES has been prepared by GIA and assesses the likely significant effects of the Proposed Development with respect to daylight, sunlight and overshadowing. This chapter also describes the methods used to assess the effects; the baseline conditions against which the assessments have been undertaken; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.

11.2. The authors of this Chapter have the following qualifications and experience:

| | Lead Author | Reviewer |
|---|---|---|
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| Company | GIA | GIA |
| Qualifications/Accreditations relevant to technical area incl. IEMA | LLB (Hons) | BEng (Hons) MArch |
| Years technical experience (in technical area) | 17 | 11 |
| Number of EIA's delivered to date | 35+ | 10+ |

## Assumptions and Limitations

11.3. Best estimates were made in determining building uses (residential or commercial). Generally, these were made from external observations and recourse to the Valuation Office Agency's (VOA) council tax records.

11.4. Where publicly available, room layouts have been included within the modelling of the sensitive receptors. Reasonable assumptions as to the floor levels within these modelled rooms, which dictate the level of the working plane relevant for the NSL assessments, have been based on external observations.

## Relevant Legislation, Policy and Guidance

### Legislation

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

### Policy

**National Planning Policy**

National Planning Policy Framework (NPPF) (2025)

11.6. The NPPF highlights the Government's recognition that increased flexibility is required on daylight and sunlight in response to the requirement for higher density development by stating that *"when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight,*

*where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)"*

Planning Practice Guidance (PPG) (2019 and regularly updated as a 'live' resource)

11.7. Paragraph: 006 Reference ID: 66-006-20190722 – Effective use of land within the PPG states that *"All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings."*

**Local Planning Policy**

Manchester Core Strategy (2012-2027)

11.8. Policy DM1 – Development Management – States that all developments should have regard to the effects on amenity including privacy, light, noise, vibration, air quality and odours.

11.9. Policy EN2 – Tall Buildings – States that, by their very size, tall buildings can have a significant impact on the local environment and its micro-climate. It is therefore expected that this impact be modelled and that submissions for tall buildings also include appropriate measures to create an attractive, pedestrian friendly local environment.

### Guidance

**Building Research Establishment (BRE) 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice', Third Edition, 2022 (the BRE guidelines)**

11.10. The BRE guidelines provides advice on site layout planning to achieve good sunlighting and daylighting within buildings, and in the open spaces between them. It is intended for use by building designers, developers, consultants and Local Planning Authorities (LPAs). The advice it gives is not mandatory and should not be used as an instrument of planning policy. On page 4 (Summary) it states that *"It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location."*

11.11. It also states at paragraph 1.6 that "*… the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. In special circumstances the developer or planning authority may wish to use different target values… in an area with modern high-rise buildings, a higher degree of obstruction maybe unavoidable if new developments are to match the height and proportions of existing building*"

## Assessment Methodology and Significance Criteria

### Scenarios Tested

11.12. The following scenarios have been assessed and are reported within this Chapter:

- Scenario 1 - Baseline (existing Site as of October 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
- Scenario 1a - Alternative Baseline (demolition of existing structures and buildings on the Site 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
- Scenario 2 - Baseline + Proposed Development;
- Scenario 2a - Alternative Baseline + Proposed Development;
- Scenario 3 - Existing Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel); and
- Scenario 3(a) - Alternative Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel).

11.13. No other committed developments have been included in Scenarios 3 and 3a as they are not of sufficient massing and proximity to the Site to have an in combination effect with the Proposed Development.

## The Study Area

11.14. The BRE Guidelines suggest that residential properties have the highest requirement for daylight and sunlight and states that *"the guidelines are intended for use for rooms in adjoining dwellings where light is required, including living rooms, kitchens and bedrooms."*

11.15. The scope of residential properties that have been assessed has been determined through professional judgement, considering their orientation and proximity to the Proposed Development.

11.16. The following properties and areas of amenity space are defined as sensitive receptors and will be considered due to their proximity to the Site, and their use:

### Daylight & Sunlight Sensitive Receptors

- Salisbury House
- Orient House
- Granby House
- Stanlo House
- Weston Hall
- 121 Princess Street
- Victoria House
- Granby Village
- 4-6 Nobel Way
- 36 Charles Street
- Sackville Place
- Whitworth House
- Montana House
- 88-92 Princess Street
- Asia House

### Overshadowing Sensitive Receptors

- Vimto Park

11.17. The above properties and areas of amenity space are identified in the drawings contained at Appendix 11.1.

11.18. The assessment has considered other residential properties which may have a view of the completed Proposed Development but, due to the distance and orientation from the Proposed Development, their daylight and sunlight amenity levels are unlikely to be adversely affected. They have not, therefore, been assessed in detail.

## Surveys and Data Sources

11.19. This Chapter is accompanied by the following appendices:

- Appendix 11.1 – Drawings of the following assessment scenarios:
    - Scenario 1 - Baseline (existing Site as of October 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
    - Scenario 1a – Alternative Baseline (demolition of existing structures and buildings on the Site 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
    - Scenario 2 – Baseline + Proposed Development;
    - Scenario 2a – Alternative Baseline + Proposed Development;
    - Scenario 3 - Existing Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel); and
    - Scenario 3(a) - Alternative Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel).
- Appendix 11.2 – Daylight and Sunlight Results for the following assessment scenarios:
    - Scenario 1 - Baseline (existing Site as of October 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors) v Scenario 2 – Baseline + Proposed Development;
    - Scenario 1a – Alternative Baseline (demolition of existing structures and buildings on the Site 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors) v Scenario 2a – Alternative Baseline + Proposed Development;
    - Scenario 1 - Baseline (existing Site as of October 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors) v Scenario 3 - Existing Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel); and
    - Scenario 1a – Alternative Baseline (demolition of existing structures and buildings on the Site 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors) v Scenario 3(a) - Alternative Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel).
- Appendix 11.3 – Overshadowing Results for the following assessment scenarios:
    - Scenario 1 - Baseline (existing Site as of October 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
    - Scenario 1a – Alternative Baseline (demolition of existing structures and buildings on the Site 2025 including developments within the committed development schedule in Appendix 2.3 that are under construction and sufficiently proximate to the Site to potentially affect the baseline levels of light within the surrounding sensitive receptors);
    - Scenario 2 – Baseline + Proposed Development;
    - Scenario 2a – Alternative Baseline + Proposed Development;
    - Scenario 3 - Existing Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel); and

- Scenario 3(a) - Alternative Baseline + Proposed Development + Cumulative (Weston Halls and Pendulum Hotel).

## Source of Effect

11.20. The assessment of daylight, sunlight and overshadowing effects is based principally on the amount of visible sky before and after the construction of a new development.

11.21. The Building Research Establishment (BRE) recommends the following assessment methodologies:

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

11.22. The technical analyses carried out to inform the daylight, sunlight and overshadowing assessments have been undertaken by creating a digital three-dimensional (3D) model of the existing Site and Proposed Development.

11.23. The 3D model uses Waldram Diagrams to establish the VSC and 3D geometric calculations for daylight distribution. This model (which is orientated to north by the use of Ordnance Survey (OS) information) enables the path of the sun to be tracked throughout the year to establish the shadow cast by the existing and proposed buildings and thus calculate the sun hours on ground in each scenario.

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

11.25. Only outdoor amenity spaces which are proximate enough to the Proposed Development for any shadow cast by it to reach them have been included in the assessments.

## Daylight

**Vertical Sky Component (VSC) Method**

11.26. The VSC method of assessment is defined in the BRE Guidelines as the *"ratio of that part of illuminance at a point on a given vertical plane that is received directly from a CIE standard overcast sky, to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky".*

11.27. This ratio is the percentage of the total unobstructed view that is available, once obstructions (e.g. the Proposed Development), are placed in front of the point of view.

11.28. The assessment is calculated from the centre of a window on the outward face and measures the amount of light available on a vertical wall or window following the introduction of visible barriers, such as buildings. The VSC has been calculated using a 'Waldram Diagram'.

11.29. The Waldram Diagram is effectively a snapshot taken from that point of the sky in front of the window, together with all relevant obstructions to it, i.e. the buildings. For calculation purposes, trees may be ignored unless they form dense continuous belts.

11.30. Due to the limitations of peripheral vision, the maximum VSC value is almost 40% for a completely unobstructed vertical wall or window. In terms of assessment criteria, the BRE Guidelines state that *"if the VSC, with the development in place, is both less than 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight".*

**No Sky Line (NSL) Method**

11.31. The BRE Guidelines provide that where room layouts are known, the effect on the daylight distribution can be calculated by plotting the NSL.

11.32. The NSL method is a measure of the distribution of daylight at the 'working plane' within a room. The 'working plane' means a horizontal 'desktop' plane 0.85m in height for residential properties. The NSL divides those areas of the working plane which can receive direct sky light from those which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light), then the distribution of daylight in the room will be poor and supplementary electric lighting may be required.

11.33. The potential effects of daylighting distribution in an existing building can be found by plotting the NSL in each of the main rooms. For houses, this will include living rooms, dining rooms and kitchens. Bedrooms should also be analysed, although the BRE state that they are less important. The BRE Guidelines identify that if the area of a room that does receive direct sky light is reduced to less than 0.8 times its baseline value, then this would be noticeable to its occupants. It is, therefore, implied that an NSL of at least 80% would be considered satisfactory.

11.34. In regard to deep rooms which are lit by windows on one side, the BRE Guidelines states *"If an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable"* (paragraph 2.2.10).

**Diffuse Daylight**

11.35. Paragraph 2.2.23 of the BRE Guidelines states that "…*the diffuse daylighting of the existing building may be adversely affected…if either*:

- the VSC measured at the centre of an existing main window is less than 27%, and less than 0.80 times its former value
- the area of the working plane in a room which can receive direct skylight is reduced to less than 0.80 times its former value."

11.36. This assessment process is summarised in Figure 20 of the BRE Guidelines, Decision Chart: diffuse daylight in existing buildings, which can be seen in Figure 11.1.

## Sunlight

**Annual Probable Sunlight Hours (APSH) Method**

11.37. Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of APSH. Therefore, where no obstruction exists the total annual probable sunlight hours for Manchester would to 1392, and each spot equates to 13.92 hours of the total annual sunlight hours.

11.38. The number of spots is calculated for the Baseline and Proposed Development scenarios during the year and also during the winter period, and a comparison made between the two. This provides a percentage of APSH for each of the time periods for each window assessed.

11.39. Paragraph 3.2.3 of the BRE Guidelines states "*To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south…Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space, for example a bed sitting room in an old people's home*"

11.40. Regarding existing surrounding receptors, the BRE Guidelines provide that a window may be adversely affected if a point at the centre of the window receives less than 25% of the APSH, including at least 5% of the APSH during the winter months (21 September to 21 March), or less than 0.8 times its baseline sunlight hours during either period, or if there is a reduction in total APSH which is greater than 4%.

11.41. As is often the case, it is not possible to determine the room uses within each of the neighbouring properties, nor is it clear which window should be considered as the 'main windows'. Therefore, unless the rooms use is known through

plans, all the rooms with windows facing the Site and within 90 degrees of due south have been considered in the assessment. Windows that do not face within 90 degrees of due south do not have a realistic expectation of direct sunlight, due to their orientation and the sunlight path in the northern hemisphere.

## Overshadowing

**Sun Hours on Ground (SHOG) Method**

11.42. The method for assessing hours in sun is the 'sun-on-ground indicator'. The assessment applies to both to new and existing gardens/amenity areas, which are affected by new developments. The BRE Guidelines suggest that the Spring Equinox (21st March) is a suitable date for the assessment. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

11.43. The BRE Guidelines recommend that at least half of a garden or amenity area should receive at least 2 hours of sunlight on March 21st or the area which receives 2 hours of direct sunlight should not be reduced to less than 0.8 times its former value (i.e. there should be no more than a 20% reduction).

## Summary of Criteria for Daylight, Sunlight and Overshadowing

11.44. The daylight, sunlight and overshadowing assessment criteria are summarised in Table 11.1.

Table 11.1 Summary of Daylight, Sunlight and Overshadowing Assessment Criteria

| Assessment Method | BRE Criteria |
|---|---|
| VSC | A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times is former value. |
| NSL | A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area. |
| APSH | A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%. |
| SHOG | An area of outdoor amenity space may be adversely affected if less than 50% of its total area is unable to benefit from at least 2 hours of sunlight on 21st March and if the reduction in sunlight is greater than 20% of the baseline level. |

## Significance Criteria

**Sensitivity of Identified Daylight & Sunlight Receptors**

11.45. It is important that the location and nature of the Site and surroundings are considered when determining the significance of any impacts identified. The BRE Guide is very clear that the targets provided are not mandatory. The location of the development could be deemed to be special circumstances in which the planning authority may wish to use different target values. This scope and view should also be followed through to the sensitivity of the surrounding receptors. There should be an expectation that a higher degree of obstruction is inevitable in an area with modern high-rise buildings. This point is also made in the NPPF and NPPG.

11.46. For these reasons, the surrounding receptors may have a lower sensitivity to change in an urban location than those located in suburban, less dense areas. Sensitivity classification is assigned on how the proposed receptor is able to accommodate or adapt to the effect of the development. These are summarised in Table 11.2

Table 11.2 Summary of Receptor Sensitivity levels

| 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. |

11.47. The existing residential receptors and outdoor amenity spaces surrounding the Site are in a developing city centre location where there is an expectation for a higher density of development. All of the daylight, sunlight and overshadowing sensitive receptors are, therefore, considered to be of medium sensitivity.

**Magnitude of Change**

11.48. The initial numerical criteria for determining the magnitude of change is based on the percentage alterations shown in Table 11.3.

Table 11.3 Daylight, Sunlight and Overshadowing Magnitude of Change

| Magnitude of Change | Percentage Alteration from Baseline |
|---|---|
| Negligible | 0-20% |
| Minor | 20-30% |
| Moderate | 30-40% |
| Major | 40%+ |

**Significance of Effect**

11.49. The significance of any identified environmental effects is determined by the assessment of the magnitude of change against their sensitivity of the receptor. Table 11.4 illustrates how the sensitivity of the receptors and the magnitude of any change combine to indicate potential significance.

Table 11.4 Daylight, Sunlight and Overshadowing Significance of Effect

| Magnitude of Change | Sensitivity of Receptor | | |
|---|---|---|---|
| | High | Medium | Low |
| Major | Major Adverse / Beneficial* | Major Adverse / Beneficial* | Moderate-Minor Adverse / Beneficial |
| Moderate | Moderate Adverse / Beneficial* | Moderate Adverse / Beneficial* | Minor Adverse / Beneficial |
| Minor | Moderate-Minor Adverse / Beneficial | Minor Adverse / Beneficial | Minor-Negligible |
| Negligible | Negligible | Negligible | Negligible |
| * Significant in terms of EIA regulations | | | |

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

**Significance of Effects in Context to the Locality**

11.51. The context of the Site and surrounding area is key to understanding the sensitivity of the surrounding receptors and significance of daylight and sunlight effects.

11.52. It is well established that the published targets within the BRE Guide are based on low rise, suburban development. The PPG – Making Effective Use of Land, updated 22 July 2019, Paragraph 007 Reference ID: 66-007-20190722 states:

*"All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings."*

11.53. This is a key point to consider in respect of the Proposed Development and its impact on surrounding properties, particularly as it is situated in Manchester City Centre. The Manchester Core Strategy 2012-2027 sets out development principles for the city centre in Policy CC 6 (p60), which states the following:

*"City Centre development will generally be high-density. It is a location where land should be used to its maximum efficiency. The appropriate scale, massing and height of development in the City Centre will significantly exceed what is appropriate elsewhere in the City."*

11.54. Policy DM1 of the Manchester Core Strategy also states:

*"Development should have regard to the character of the surrounding area".*

11.55. In other words, when considering acceptability of matters such as daylight and sunlight, the height, proximity and levels of light already established in should be taken into account.

11.56. This approach is also acknowledged in the BRE Guide, which states:

*"in special circumstances the developer or planning authority may wish to use different target values… in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".*

11.57. Additionally, the National Planning Policy Framework ("NPPF") states the following at paragraph 130 (c):

*"…when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight…(as long as the resulting scheme would provide acceptable living standards)."*

11.58. The Planning Practice Guidance ("PPG") also supports this approach, stating:

Paragraph 007 Reference ID: 66-007-20190722

*"All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development [emphasis added] as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable…"*

Paragraph: 004 Reference ID: 66-004-20190722

*"A range of considerations should be taken into account in establishing appropriate densities on a site or in a particular area. Tools that can assist with this include…characterisation studies [emphasis added] and design strategies, dealing with issues such as urban form, historic character, building typologies, prevailing sunlight and daylight levels [emphasis added], green infrastructure and amenity space…"*

11.59. It would therefore be unrealistic for the surrounding residential properties to expect to maintain similar levels of daylight as those currently experienced, as the Site is underutilised with only very low structures. Furthermore, as the Site has been identified as a regeneration priority in the North Campus SRF for several years, there is an expectation of high-density development coming forward, and an understanding since that time that the current daylight conditions would not be permanent. The ID Manchester SRF, endorsed in late 2023, identifies the site as an opportunity for tall landmark buildings with three towers envisaged within the illustrative masterplan.

**Manchester City Centre Benchmarking**

11.60. Considering the contextual discussion above, in order to fully understand the results in context, it is appropriate to consider what are deemed to be appropriate daylight levels in Manchester city centre. A detailed characterisation study as recommended by the Manchester Core Strategy, the NPPF & PPG has, therefore, been produced.

11.61. The retained VSC daylight levels in established, successful residential areas in the city centre of Manchester have been reviewed and are set out below. The areas reviewed all include residential buildings and are recognised as positive urban environments that people choose to live in. The locations give practical, recognisable examples of living conditions around the city centre. This is an evidential method of benchmarking daylight levels in a dense, urban area, which allows a better understanding of the application of the BRE guide in such locations.

11.62. The VSC assessment has been used to inform the study on the basis that the BRE guidelines state at paragraph F7:

*"In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC depends only on obstruction, and is therefore a measure of the daylit environment as a whole."*

11.63. The characterisation study provides a benchmark as to what is acceptable/sufficient daylight in context and, indeed, what residents living within Manchester city centre, in which a successful residential market operates and where properties are in high demand, experience when exercising choice in where they live.

11.64. The range of visible sky levels from each window of the relevant façade of each relevant building is then summarised. In order to provide an overall understanding of the amount of visible sky each building can see, an average level of visible sky has also been provided.

Table 11.5 – Retained VSC Daylight Levels in Manchester City Centre

| Address | Average level of VSC from the development facing elevation | Minimum VSC Level |
|---|---|---|
| Deansgate Quay | 3.0% | 0% |
| The Astley | 5.5% | 1.4% |
| Hill Quays | 6.2% | 0% |
| Millbank Street Apartments | 6.3% | 5.6% |
| 53-55 Great Ancoats Street | 9.1% | 2.1% |
| 12 Thomas Street | 10.2% | 1.5% |
| Princess House | 10.76% | 0% |
| Carding Building, Manchester New Square | 13.4% | 4.2% |
| The Birchin | 14.2% | 3.2% |
| Jefferson Place | 15.3% | 4.3% |
| Linter Building, Manchester New Square | 18.2% | 2.8% |

7.1 The above table demonstrates that several of the most successful and desirable residential locations in Manchester City Centre do not meet the BRE target criteria. In some cases, the levels of retained daylight are substantially below the written BRE targets. The city centre context is such that deviations from the BRE target criteria are to be anticipated, and this sets the benchmark of what is acceptable in terms of daylight giving due consideration to the specific site characteristics, history and location. It is an inevitable consequence of living in a city centre that compromises are made on certain aspects, such as daylight amenity, in order to avail of other benefits that living in such a location provides.

7.2 The impacts discussed to the surrounding sensitive receptors below have therefore been considered in context to the BRE guidance, but also against what is considered acceptable in other residential locations in Manchester City Centre.

## Baseline Conditions

11.65. In accordance with the Committed Developments included at Appendix 2.3, the Baseline and Alternate Baseline assumes the completion of the following currently under construction buildings:

- 1 - IQ Echo Street

11.66. Drawings of these assessment scenarios can be found in Appendix 11.1.

### Daylight & Sunlight

11.67. 1,448 Site facing windows were assessed for VSC (daylight). 477 rooms for which floor plans were publicly available were assessed for NSL (daylight). 823 windows were assessed for APSH (sunlight) within those buildings which are material for consideration in sunlight terms ie their windows are orientated to within 90 degrees of due south.

11.68. The full Baseline and Alternate Baseline daylight and sunlight results can be found in Appendix 11.2 and are summarised in Table 11.6 and Table 11.7 below.

**Table 11.6 – Baseline levels of VSC, NSL & APSH within the surrounding sensitive receptors**

| Address | Total No. Windows That Meet VSC Criteria | | Total No. Rooms That Meet NSL Criteria | | Total No. Windows That Meet APSH Criteria | |
|---|---|---|---|---|---|---|
| | Total | Pass | Total | Pass | Total | Pass |
| Salisbury House | 72 | 47 | 48 | 37 | 58 | 50 |
| Orient House* | 150 | 124 | 0 | 0 | 150 | 142 |
| Granby House* | 103 | 71 | 0 | 0 | 58 | 50 |
| Stanlo House* | 60 | 26 | 0 | 0 | 34 | 33 |
| Weston Hall | 358 | 135 | 302 | 141 | 4 | 0 |
| 121 Princess Street | 39 | 17 | 39 | 11 | 33 | 27 |
| Victoria House* | 30 | 10 | 0 | 0 | 10 | 5 |
| Granby Village* | 282 | 70 | 0 | 0 | 267 | 138 |
| 4-6 Nobel Way | 40 | 40 | 36 | 36 | 0 | 0 |
| 36 Charles Street* | 3 | 2 | 0 | 0 | 1 | 1 |
| Sackville Place* | 113 | 14 | 0 | 0 | 107 | 68 |
| Whitworth House* | 9 | 1 | 0 | 0 | 9 | 2 |
| Montana House* | 31 | 29 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 46 | 30 | 24 | 24 | 1 | 1 |
| Asia House | 112 | 3 | 28 | 15 | 91 | 15 |
| **Totals** | **1448** | **619** | **477** | **264** | **823** | **532** |

* No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.

Table 11.7 – Alternate Baseline levels of VSC, NSL & APSH within the surrounding sensitive receptors

| Address | Total No. Windows That Meet VSC Criteria | | Total No. Rooms That Meet NSL Criteria | | Total No. Windows That Meet APSH Criteria | |
|---|---|---|---|---|---|---|
| | Total | Pass | Total | Pass | Total | Pass |
| Salisbury House | 72 | 47 | 48 | 37 | 58 | 50 |
| Orient House | 150 | 124 | 0 | 0 | 150 | 142 |
| Granby House | 103 | 71 | 0 | 0 | 58 | 50 |
| Stanlo House | 60 | 26 | 0 | 0 | 34 | 33 |
| Weston Hall | 358 | 144 | 302 | 143 | 4 | 0 |
| 121 Princess Street | 39 | 17 | 39 | 11 | 33 | 27 |
| Victoria House | 30 | 10 | 0 | 0 | 10 | 5 |
| Granby Village | 282 | 70 | 0 | 0 | 267 | 138 |
| 4-6 Nobel Way | 40 | 40 | 36 | 36 | 0 | 0 |
| 36 Charles Street | 3 | 2 | 0 | 0 | 1 | 1 |
| Sackville Place | 113 | 14 | 0 | 0 | 107 | 68 |
| Whitworth House | 9 | 1 | 0 | 0 | 9 | 2 |
| Montana House | 31 | 29 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 46 | 30 | 24 | 24 | 1 | 1 |
| Asia House | 112 | 3 | 28 | 15 | 91 | 15 |
| **Totals** | **1448** | **628** | **477** | **266** | **823** | **532** |

**Baseline**

11.69. Out of the 1448 windows assessed for VSC daylight, 619 (43%) meet or exceed the BRE recommended criteria. For NSL, 264 (55%) of the 447 rooms assessed as floor plans were publicly available meet the BRE recommended criteria. For sunlight, 532 (65%) of the 823 windows assessed meet the BRE criteria for both Winter and Annual APSH.

**Alternate Baseline**

11.70. Out of the 1448 windows assessed for VSC daylight, 628 (43%) meet or exceed the BRE recommended criteria. For NSL, 266 (55%) of the 447 rooms assessed as floor plans were publicly available meet the BRE recommended criteria. For sunlight, 532 (65%) of the 823 windows assessed meet the BRE criteria for both Winter and Annual APSH.

**Summary**

11.71. Overall, there is a reasonable level of Baseline and Alternate Baseline daylight and sunlight compliance considering the city centre context of the Site. This is due to the presence of the vacant 5-storey car park presenting a low linear form on the Site.

11.72. There is no material difference between the Baseline and Alternate Baseline levels of daylight and sunlight within the surrounding sensitive receptors. The reason for the very slightly higher Alternate Baseline levels of compliance is due to the demolition of the existing structures on the Site increasing the baseline levels of sky visibility to a few windows and rooms within Weston Hall.

## Overshadowing

11.73. The full Baseline and Alternate Baseline overshadowing results can be found in Appendix 11.3 and are summarised in Table 11.8 and Table 11.9 below.

**Table 11.8 - Baseline levels of SHOG within the surrounding sensitive receptors**

| Area Name | Area benefitting from 2 hours of SHOG on 21st March | Meets SHOG Criteria? |
|---|---|---|
| Vimto Park | 97.43% | Yes |

**Table 11.9 – Alternate Baseline levels of SHOG within the surrounding sensitive receptors**

| Area Name | Area benefitting from 2 hours of SHOG on 21st March | Meets SHOG Criteria? |
|---|---|---|
| Vimto Park | 97.43% | Yes |

**Baseline**

11.74. All sufficiently proximate areas of outdoor amenity space will benefit from BRE compliant levels of SHOG in the Baseline scenario.

**Alternate Baseline**

11.75. All sufficiently proximate areas of outdoor amenity space will benefit from BRE compliant levels of SHOG in the Alternate Baseline scenario.

**Summary**

11.76. There is no difference between the Baseline and Alternate Baseline levels of overshadowing upon the surrounding sensitive receptors.

11.77. If the Proposed Development was not constructed, the Baseline and Alternate Baseline daylight, sunlight and overshadowing levels would remain the same as there are no 'natural' factors that would influence baseline conditions, only human induced changes (i.e., development). The Site is, however, seen as a redevelopment opportunity and so, in reality, it would be unlikely for the Baseline and Alternate Baseline to remain as they are indefinitely. With respect to human induced changes, any development could influence the Baseline and Alternate Baseline conditions of varying degrees, as any drivers for change in these conditions would be linked to massing and layout of the surrounding context.

# Identification and Evaluation of Likely Significant Effects

## Construction Phase

11.78. Owing to the evolving and changing nature of construction activities, the assessment of potential effects during construction of the Proposed Development on daylight, sunlight and overshadowing to surrounding properties and areas of amenity space have not been modelled.

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

11.80. During the construction phase, the daylight, sunlight and overshadowing effects will gradually change from negligible in the baseline position to that described below in the Operational Phase with the Proposed Development in place. For these reasons, the Construction Phase will not be discussed further in this report.

## Operational Phase

**Daylight & Sunlight**

11.81. 1,448 Site facing windows were assessed for VSC (daylight). 477 rooms for which floor plans were publicly available were assessed for NSL (daylight). 823 windows were assessed for APSH (sunlight) within those buildings which are material for consideration in sunlight terms i.e. their windows are orientated to within 90 degrees of due south.

**Scenario 1 v Scenario 2 (Baseline v Proposed)**

11.82. The outputs of the computer modelling for both daylight and sunlight is provided in full within Appendix 11.2, with the key metrics provided in Tables 11.10 to 11.13 below.

Table 11.10 - Summary of Baseline v Proposed VSC Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 72 | 67 | 5 | 0 | 0 |
| Orient House | 150 | 104 | 18 | 19 | 9 |
| Granby House | 103 | 40 | 6 | 5 | 52 |
| Stanlo House | 60 | 59 | 1 | 0 | 0 |
| Weston Hall | 358 | 112 | 87 | 44 | 115 |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House | 30 | 30 | 0 | 0 | 0 |
| Granby Village | 282 | 254 | 18 | 7 | 3 |
| 4-6 Nobel Way | 40 | 40 | 0 | 0 | 0 |
| 36 Charles Street | 3 | 3 | 0 | 0 | 0 |
| Sackville Place | 113 | 113 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 31 | 31 | 0 | 0 | 0 |
| 88-92 Princess Street | 46 | 46 | 0 | 0 | 0 |
| Asia House | 112 | 112 | 0 | 0 | 0 |
| **Totals** | **1448** | **1059** | **135** | **75** | **179** |

Table 11.11 - Summary of Baseline v Proposed NSL Results

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 48 | 43 | 3 | 1 | 1 |
| Orient House* | 0 | 0 | 0 | 0 | 0 |
| Granby House* | 0 | 0 | 0 | 0 | 0 |
| Stanlo House* | 0 | 0 | 0 | 0 | 0 |
| Weston Hall | 302 | 182 | 21 | 26 | 73 |

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House* | 0 | 0 | 0 | 0 | 0 |
| Granby Village* | 0 | 0 | 0 | 0 | 0 |
| 4-6 Nobel Way | 36 | 36 | 0 | 0 | 0 |
| 36 Charles Street* | 0 | 0 | 0 | 0 | 0 |
| Sackville Place* | 0 | 0 | 0 | 0 | 0 |
| Whitworth House* | 0 | 0 | 0 | 0 | 0 |
| Montana House* | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 24 | 24 | 0 | 0 | 0 |
| Asia House | 28 | 28 | 0 | 0 | 0 |
| **Totals** | **477** | **352** | **24** | **27** | **74** |

***** No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.

Table 11.12 - Summary of Baseline v Proposed Annual Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 58 | 0 | 0 | 0 |
| Orient House | 150 | 149 | 1 | 0 | 0 |
| Granby House | 58 | 29 | 0 | 2 | 27 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| Weston Hall | 4 | 4 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 0 | 0 | 0 |
| Granby Village | 267 | 248 | 4 | 5 | 10 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **823** | **774** | **5** | **7** | **37** |

Table 11.13 - Summary of Baseline v Proposed Winter Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 58 | 0 | 0 | 0 |
| Orient House | 150 | 150 | 0 | 0 | 0 |
| Granby House | 58 | 49 | 0 | 2 | 7 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| Weston Hall | 4 | 4 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 0 | 0 | 0 |
| Granby Village | 267 | 237 | 3 | 2 | 25 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **823** | **784** | **3** | **4** | **32** |

**Scenario 1a v Scenario 2a (Alternative Baseline v Proposed)**

11.83. The outputs of the computer modelling for both daylight and sunlight is provided in full within Appendix 11.2, with the key metrics provided in Tables 11.14 to 11.17 below.

Table 11.14 - Summary of Alternate Baseline v Proposed VSC Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 72 | 65 | 7 | 0 | 0 |
| Orient House | 150 | 103 | 18 | 19 | 10 |
| Granby House | 103 | 40 | 6 | 5 | 52 |
| Stanlo House | 60 | 59 | 1 | 0 | 0 |
| Weston Hall | 358 | 111 | 80 | 47 | 120 |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House | 30 | 30 | 0 | 0 | 0 |
| Granby Village | 282 | 254 | 18 | 7 | 3 |
| 4-6 Nobel Way | 40 | 40 | 0 | 0 | 0 |
| 36 Charles Street | 3 | 3 | 0 | 0 | 0 |
| Sackville Place | 113 | 113 | 0 | 0 | 0 |

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 31 | 31 | 0 | 0 | 0 |
| 88-92 Princess Street | 46 | 46 | 0 | 0 | 0 |
| Asia House | 112 | 112 | 0 | 0 | 0 |
| **Totals** | 1448 | 1055 | 130 | 78 | 185 |

Table 11.15 - Summary of Alternate Baseline v Proposed NSL Results

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 48 | 43 | 3 | 1 | 1 |
| Orient House* | 0 | 0 | 0 | 0 | 0 |
| Granby House* | 0 | 0 | 0 | 0 | 0 |
| Stanlo House* | 0 | 0 | 0 | 0 | 0 |
| Weston Hall | 302 | 177 | 26 | 21 | 78 |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House* | 0 | 0 | 0 | 0 | 0 |
| Granby Village* | 0 | 0 | 0 | 0 | 0 |
| 4-6 Nobel Way | 36 | 36 | 0 | 0 | 0 |
| 36 Charles Street* | 0 | 0 | 0 | 0 | 0 |
| Sackville Place* | 0 | 0 | 0 | 0 | 0 |
| Whitworth House* | 0 | 0 | 0 | 0 | 0 |
| Montana House* | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 24 | 24 | 0 | 0 | 0 |
| Asia House | 28 | 28 | 0 | 0 | 0 |
| **Totals** | 477 | 347 | 29 | 22 | 79 |

***** No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.

Table 11.16 - Summary of Alternate Baseline v Proposed Annual Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 58 | 0 | 0 | 0 |
| Orient House | 150 | 149 | 1 | 0 | 0 |

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Granby House | 58 | 29 | 0 | 2 | 27 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| Weston Hall | 4 | 4 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 0 | 0 | 0 |
| Granby Village | 267 | 248 | 4 | 5 | 10 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **823** | **774** | **5** | **7** | **37** |

Table 11.17 - Summary of Alternate Baseline v Proposed Winter Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 58 | 0 | 0 | 0 |
| Orient House | 150 | 150 | 0 | 0 | 0 |
| Granby House | 58 | 49 | 0 | 2 | 7 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| Weston Hall | 4 | 4 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 0 | 0 | 0 |
| Granby Village | 267 | 237 | 3 | 2 | 25 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **823** | **784** | **3** | **4** | **32** |

**Baseline v Proposed**

11.84. Out of the 1,448 windows assessed for VSC daylight, the changes to 1059 (73%) are BRE compliant. For NSL, the changes to 352 (79%) of the 447 rooms assessed are BRE complaint. For sunlight, the changes to 762 (93%) of the 823 windows assessed are BRE compliant for both Winter and Annual APSH.

**Alternate Baseline v Proposed**

11.85. Out of the 1,448 windows assessed for VSC daylight, the changes to 1,055 (73%) are BRE compliant. For NSL, the changes to 347 (78%) of the 447 rooms assessed are BRE complaint. For sunlight, the changes to 762 (93%) of the 823 windows assessed are BRE compliant for both Winter and Annual APSH.

**Summary**

11.86. There is no material difference between the Baseline v Proposed and Alternate Baseline v Proposed levels of daylight and sunlight compliance. The reason for the very slightly lower Alternate Baseline v Proposed daylight compliance levels is due to the Proposed Development reducing the levels of sky visibility to a few windows and rooms within Weston Hall and Salisbury House that was previously 'blocked' by the existing buildings on the Site.

11.87. As there is no material difference between the results of the two assessment scenarios, the rest of this chapter will be based on the Baseline v Proposed assessment result as the levels of daylight and sunlight from which the surrounding sensitive receptors are used to benefit are those with the existing buildings on the Site in place.

11.88. In situations where the construction of the Proposed Development would result in VSC, NSL and APSH alterations to the windows and rooms within a property which are all within the BRE guidelines, the effect of the Proposed Development upon the daylight and sunlight amenity to that property is considered to be negligible.

11.89. Of the 15 properties assessed, the effect of the Proposed Development upon the daylight and sunlight amenity within the nine properties listed within Table 11.18 would be negligible (not significant).

Table 11.18 - Properties with a Negligible Daylight and Sunlight effect

| Properties with a Negligible Daylight and Sunlight effect | |
|---|---|
| 121 Princess Street | Whitworth House |
| Victoria House | Montana House |
| 4-6 Nobel Way | 88-92 Princess Street |
| 36 Charles Street | Asia House |
| Sackville Place | |

11.90. The remaining six properties are discussed in detail below:

Salisbury House

11.91. A total of 72 windows serving 48 rooms were assessed for daylight within this building. The 58 windows with Site facing windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.92. 67 (93%) of the 72 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.93. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of VSC change to all five (7%) of the affected windows is minor.

NSL Daylight

11.94. 43 (90%) of the 48 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

11.95. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of NSL change to three (6%) of the five affected rooms is minor. The magnitude of NSL change to one (2%) of the remaining affected rooms is moderate and the magnitude of NSL change to the remaining one (2%) room is major.

Diffuse Daylight

11.96. 39 (81%) of the 48 rooms assessed would meet the BRE's criteria shown in Figure 11.1 and so experience a negligible magnitude of diffuse daylight change.

11.97. In accordance with the significance criteria described above, seven (15%) of the remaining nine rooms will experience changes in VSC and/or NSL which amount to a minor magnitude of diffuse daylight change.

11.98. The windows serving the remaining two (4%) rooms will experience BRE compliant levels of VSC change and, due to their low baseline levels, disproportionate moderate and major magnitudes of NSL change. Paragraph F7 of the BRE guidelines states that *"In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC depends only on obstruction and is therefore a measure of the daylit environment as a whole."* The magnitude of diffuse daylight change to these two rooms is, therefore, considered to be minor.

11.99. The overall magnitude of daylight change is considered to be minor.

Daylight Effect

11.100. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be minor. The effect of the Proposed Development upon the daylight within this property is, therefore, considered to be minor adverse (not significant).

APSH Sunlight

11.101. Any changes to the sunlight amenity to the 58 windows material for assessment will be fully BRE compliant. The magnitude of APSH change is, therefore, negligible.

Sunlight Effect

11.102. The sensitivity of this receptor is considered to be medium. The magnitude of APSH change is negligible. The effect upon sunlight amenity within this property is therefore considered to be negligible (not significant).

Orient House

11.103. A total of 150 windows were assessed for daylight within this building. As there were no publicly available floorplans, NSL within the rooms served by these windows has not been assessed. The 150 windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.104. 104 (69%) of the 150 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.105. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of VSC change to 19 (13%) of the 46 affected windows is minor.

11.106. The magnitude of VSC change to the remaining 27 (18%) windows is moderate to major. However, due to the uncharacteristically high baseline values for a property in an urban location, ranging between 21.7% and 37% (with, for context, an average of 32.8%), the VSC levels with the Proposed Development in place, remain very reasonable in an urban context, ranging from13.8% to 25.5% (with, for context, an average of 20.5%) and commensurate with/better than the levels in other successful residential buildings in Manchester, as shown in Table 11.5 above.

11.107. The overall magnitude of daylight change is considered to be moderate.

Daylight Effect

11.108. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be moderate. The effect of the Proposed Development upon the daylight within this property is, however, considered to be minor adverse (not significant). This is due to the retained daylight levels being very reasonable in context, with the Proposed Development in place and commensurate with/better than the levels in other successful residential buildings in Manchester, as shown in Table 11.5 above. This accords with paragraph H6 of the BRE guidelines which states *"…Factors tending towards a minor adverse impact include...there are particular reasons why an alternative, less stringent, guideline should be applied…".*

APSH Sunlight

11.109. 149 (99%) of the 150 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of APSH change.

11.110. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of APSH change to the one affected window is minor.

Sunlight Effect

11.111. The sensitivity of this receptor is considered to be medium. The overall magnitude of APSH change is minor. The effect upon sunlight amenity within this property is therefore considered to be minor adverse (not significant).

Granby House

11.112. A total of 103 windows were assessed for daylight within this building. As there were no publicly available floorplans, NSL within the rooms served by these windows has not been assessed. The 58 windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.113. 40 (39%) of the 103 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.114. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of VSC change to six (6%) of the 63 affected windows is minor.

11.115. The magnitude of VSC change to 51 (49%) of the remaining 57 windows is moderate to major. However, due to the uncharacteristically high baseline values for a property in an urban location, ranging between 31.3% and 38.5% (with, for context, an average of 36.7%), the VSC levels with the Proposed Development in place, remain very reasonable in an urban context, ranging from 13.4% to 25.2% (with, for context, an average of 18.5%) and commensurate with/better than the levels in other successful residential buildings in Manchester, as shown in Table 11.5 above.

11.116. The magnitude of VSC change to the remaining six (6%) of low level windows is also moderate to major.

11.117. The overall magnitude of daylight change is considered to be moderate.

Daylight Effect

11.118. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be moderate. The effect of the Proposed Development upon the daylight within this property is, however, considered to be minor adverse (not significant). This is due to the retained daylight levels being very reasonable in context, with the Proposed Development in place and commensurate with/better than the levels in other successful residential buildings in Manchester, as shown in Table 11.5 above. This accords with paragraph H6 of the BRE guidelines which states *"…Factors tending towards a minor adverse impact include...there are particular reasons why an alternative, less stringent, guideline should be applied…"*

APSH Sunlight

11.119. 29 (50%) of the 58 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of APSH change.

11.120. The magnitude of APSH change to the remaining 29 (50%) windows is moderate to major. However, due to the uncharacteristically high total APSH baseline values for a property in an urban location, ranging between 17% and 62% (with, for context, an average of 46%) and winter APSH baseline values of between 3% and 26% (with, for context, an average of 17%), with the Proposed Development in place, these levels remain very reasonable in an urban context with total APSH levels ranging between 10% to 24% (with, for context, an average of 19%) and winter APSH levels of between 1% and 11% (with, for context, an average of 6%).

11.121. The overall magnitude of daylight change is considered to be moderate.

Sunlight Effect

11.122. The sensitivity of this receptor is considered to be medium. The overall magnitude of sunlight change is considered to be moderate. The effect of the Proposed Development upon the sunlight within this property is, however, considered to be minor adverse (not significant). This is due to the retained sunlight levels being very reasonable in context, with the Proposed Development in place, which accords with paragraph H6 of the BRE guidelines which states *"…Factors tending towards a minor adverse impact include...there are particular reasons why an alternative, less stringent, guideline should be applied…"*

<u>Stanlo House</u>

11.123. A total of 60 windows were assessed for daylight within this building. As there were no publicly available floorplans, NSL within the rooms served by these windows has not been assessed. The 34 windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.124. 59 (98%) of the 60 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.125. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of VSC change to the remaining one (2%) window is minor.

11.126. The overall magnitude of daylight change is considered to be minor.

Daylight Effect

11.127. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be minor. The effect of the Proposed Development upon the daylight within this property is, therefore, considered to be minor adverse (not significant).

APSH Sunlight

11.128. Any changes to the sunlight amenity to the 34 windows material for assessment will be fully BRE compliant. The magnitude of APSH change is, therefore, negligible.

Sunlight Effect

11.129. The sensitivity of this receptor is considered to be medium. The magnitude of APSH change is negligible. The effect upon sunlight amenity within this property is therefore considered to be **negligible (not significant).**

Weston Hall

11.130. A total of 358 windows serving the 302 student bedroom (for which floor plans were publicly available) were assessed for daylight within this building. The four windows with Site facing windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.131. 112 (32%) of the 358 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.132. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3 the magnitude of VSC change to 87 (24%) of the 246 affected windows is minor. The magnitude of VSC change to 44 (12%) of the 159 remaining affected windows is moderate and the magnitude of VSC change to the remaining 115 (32%) windows is major.

NSL Daylight

11.133. 182 (60%) of the 302 student bedrooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

11.134. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3, the magnitude of NSL change to 21 (7%) of the 120 affected student bedrooms is minor. The magnitude of NSL change to 26 (9%) of the 99 affected student bedrooms is moderate and the magnitude of NSL change to the remaining 73 (24%) student bedroom is major.

Diffuse Daylight

11.135. 85 (28%) of the 302 student bedrooms assessed would meet the BRE's criteria shown in Figure 11.1 and so experience a negligible magnitude of diffuse daylight change.

11.136. In accordance with the significance criteria described above, 71 (24%) of the remaining 220 rooms will experience changes in VSC and/or NSL which amount to a minor magnitude of diffuse daylight change.

11.137. 18 (6%) of the remaining 146 student bedrooms are served by 2 windows of which 1 will experience either a BRE compliant or minor magnitude of VSC change. The magnitude of VSC change to the other windows will be moderate to major. Notwithstanding, the magnitude of NSL change to all 18 rooms will be BRE compliant with retained NSL values of between 61.6% and 93.8% (with, for context an average of 81.2%). The overall magnitude of diffuse daylight change to these rooms is considered to be minor.

11.138. The remaining 128 (42%) rooms will experience negligible to major magnitudes of VSC and or NSL change. The overall magnitude of diffuse daylight change to these rooms is considered to be moderate.

11.139. The overall magnitude of daylight change is considered to be moderate.

Daylight Effect

11.140. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be moderate. The effect of the Proposed Development upon the daylight within this property is, however, considered to be **minor adverse (not significant).** This is due to the transient (student) use of the building rather than it being

occupied on permanent residential basis where there is the potential for the changes in daylight to be noticeable to the occupants. This is in accordance with paragraph H6 of the BRE guidelines which states *"…Factors tending towards a minor adverse impact include...there are particular reasons why an alternative, less stringent, guideline should be applied…"*

APSH Sunlight

11.141. Any changes to the sunlight amenity to the 4 windows material for assessment will be fully BRE compliant. The magnitude of APSH change is, therefore, negligible.

Sunlight Effect

11.142. The sensitivity of this receptor is considered to be medium. The magnitude of APSH change is negligible. The effect upon sunlight amenity within this property is therefore considered to be **negligible (not significant).**

11.143. It is understood that a planning application is due to be imminently submitted for the site upon which this property is currently located. Based on the current publicly available information in respect to the scheme proposal for this site, whilst the proposed increase in massing will likely increase the number of windows and rooms affected by the Proposed Development, the overall daylight and sunlight effect conclusion is likely to remain the same.

<u>Granby Village</u>

11.144. A total of 282 windows were assessed for daylight within this building. As there were no publicly available floorplans, NSL within the rooms served by these windows has not been assessed. The 267 windows orientated to within $90^0$ of due south were assessed for sunlight.

VSC Daylight

11.145. 254 (90%) of the 282 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

11.146. Based on the initial numerical criteria for determining the magnitude of change detailed in Table 11.3, the magnitude of VSC change to 18 (6%) of the 28 affected windows is minor.

11.147. The magnitude of VSC change to the remaining ten (4%) windows is moderate to major. All of these windows do, however, have low baseline values and so the small (0.3% to 6.3% with, for context, the average being 4.89%) absolute VSC changes, disproportionately present themselves when expressed in percentage of baseline terms. The overall magnitude of VSC change is, therefore, considered to be minor.

11.148. The overall magnitude of daylight change is considered to be minor.

Daylight Effect

11.149. The sensitivity of this receptor is considered to be medium. The overall magnitude of daylight change is considered to be minor. The effect of the Proposed Development upon the daylight within this property is, therefore, considered to be **minor adverse (not significant).**

APSH Sunlight

11.150. 236 (88%) of the 267 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of APSH change.

11.151. The magnitude of total and/or winter APSH change to the remaining 31 (12%) windows is negligible to major. However, with the exception of a few low level windows which, by virtue of their location (low level facing viaduct or in recessed locations on the façade) will have low baseline APSH levels, the rest of the windows have uncharacteristically high total APSH baseline values, for a property in an urban location, ranging between 21% and 54% (with, for context, an average of 37%). With the Proposed Development in place, these levels are reduced to very reasonable total APSH levels for an urban context, ranging between 11% to 39% (with, for context, an average of)

27%. Winter APSH levels are low in both the baseline and proposed situations and so the small absolute changes disproportionately present themselves when expressed in percentage of baseline terms. The overall magnitude of sunlight change to these windows is considered to be minor to moderate.

11.152. In view of the small number of windows experiencing potentially noticeable changes in sunlight amenity, the overall magnitude of sunlight change is considered to be minor.

Sunlight Effect

11.153. The sensitivity of this receptor is considered to be medium. The overall magnitude of sunlight change is considered to be minor. The effect of the Proposed Development upon the sunlight within this property is, therefore, considered to be **minor adverse (not significant).**

**Overshadowing**

11.154. The outputs of the computer modelling for overshadowing is provided in full within Appendix 11.3, with the key metrics provided in Table 11.19 below.

Table 11.19: Summary of March SHOG Assessment Results

| Area Name | Area benefitting from 2 hours of SHOG on 21st March (Scenario 1: Baseline) | Area benefitting from 2 hours of SHOG on 21st March (Scenario 2: Proposed) | Change in SHOG | Meets SHOG Criteria? |
|---|---|---|---|---|
| Vimto Park | 97.43% | 96.59% | 0.86% | Yes |

11.155. Any changes to the level of shadow falling upon Vimto Park will be fully BRE compliant and so it will experience a negligible magnitude of March SHOG change.

11.156. Given that Vimto Park will continue to exceed the BRE target of 50% with the Proposed Development in place, with 97% of its area receiving two or more hours of direct sunlight on 21 March, no further assessment has been undertaken for the alternative baseline.

Overshadowing Effect

11.157. The sensitivity of the overshadowing receptors is considered to be medium.

11.158. The magnitude of SHOG change to Vimto Park is considered to be negligible. The effect of the Proposed Development upon the level of SHOG on this area is, therefore, considered to be **negligible (not significant).**

## Cumulative Effects

11.159. This section reports upon the effects of the Proposed Development in combination with the following neighbouring development, which is subject to a live planning application:

- Weston Halls and Pendulum Hotel (144791/FO/2025)

11.160. In total, 1,090 Site facing windows were assessed for VSC (daylight). 175 rooms for which floor plans were publicly available were assessed for NSL (daylight). 819 windows were assessed for APSH (sunlight) within those buildings which are material for consideration in sunlight terms i.e. their windows are orientated to within 90 degrees of due south.

**Scenario 1 v Scenario 3 (Baseline v Cumulative)**

11.161. The outputs of the computer modelling for both daylight and sunlight is provided in full within Appendix 11.2, with the key metrics for the effects upon the non-cumulative developments being assessed provided in Tables 11.20 to 11.23 below.

Table 11.20 - Summary of Baseline v Cumulative VSC Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 72 | 11 | 18 | 37 | 6 |
| Orient House | 150 | 19 | 5 | 29 | 97 |
| Granby House | 103 | 40 | 6 | 3 | 54 |
| Stanlo House | 60 | 57 | 0 | 0 | 3 |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House | 30 | 30 | 0 | 0 | 0 |
| Granby Village | 282 | 248 | 23 | 7 | 4 |
| 4-6 Nobel Way | 40 | 40 | 0 | 0 | 0 |
| 36 Charles Street | 3 | 3 | 0 | 0 | 0 |
| Sackville Place | 113 | 113 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 31 | 3 | 7 | 19 | 2 |
| 88-92 Princess Street | 46 | 44 | 2 | 0 | 0 |
| Asia House | 112 | 106 | 6 | 0 | 0 |
| **Totals** | **1090** | **762** | **67** | **95** | **166** |

Table 11.21 - Summary of Baseline v Cumulative NSL Results

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 48 | 41 | 4 | 2 | 1 |
| Orient House* | 0 | 0 | 0 | 0 | 0 |
| Granby House* | 0 | 0 | 0 | 0 | 0 |
| Stanlo House* | 0 | 0 | 0 | 0 | 0 |
| 121 Princess Street | 39 | 35 | 2 | 2 | 0 |
| Victoria House* | 0 | 0 | 0 | 0 | 0 |
| Granby Village* | 0 | 0 | 0 | 0 | 0 |
| 4-6 Nobel Way | 36 | 36 | 0 | 0 | 0 |
| 36 Charles Street* | 0 | 0 | 0 | 0 | 0 |
| Sackville Place* | 0 | 0 | 0 | 0 | 0 |
| Whitworth House* | 0 | 0 | 0 | 0 | 0 |
| Montana House* | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 24 | 24 | 0 | 0 | 0 |
| Asia House | 28 | 26 | 0 | 2 | 0 |
| **Totals** | **175** | **162** | **6** | **6** | **1** |

* No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.

Table 11.22 - Summary of Baseline v Cumulative Annual Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 48 | 6 | 2 | 2 |
| Orient House | 150 | 143 | 0 | 2 | 5 |
| Granby House | 58 | 11 | 0 | 2 | 45 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 0 | 0 | 0 |
| Granby Village | 267 | 241 | 11 | 5 | 10 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **819** | **70729** | **17** | **11** | **62** |

Table 11.23 - Summary of Baseline v Cumulative Winter Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 57 | 0 | 0 | 1 |
| Orient House | 150 | 149 | 0 | 0 | 1 |
| Granby House | 58 | 21 | 0 | 2 | 35 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 8 | 0 | 1 | 1 |
| Granby Village | 267 | 215 | 1 | 6 | 45 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **819** | **726** | **1** | **9** | **83** |

**Scenario 1a v Scenario 3a (Alternative Baseline v Cumulative)**

11.162. The outputs of the computer modelling for both daylight and sunlight is provided in full within Appendix 11.2, with the key metrics provided in Tables 11.24 to 11.27 below.

Table 11.24 - Summary of Alternate Baseline v Cumulative VSC Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 72 | 11 | 18 | 35 | 8 |
| Orient House | 150 | 19 | 5 | 28 | 98 |
| Granby House | 103 | 40 | 6 | 3 | 54 |
| Stanlo House | 60 | 57 | 0 | 0 | 3 |
| 121 Princess Street | 39 | 39 | 0 | 0 | 0 |
| Victoria House | 30 | 30 | 0 | 0 | 0 |
| Granby Village | 282 | 248 | 23 | 7 | 4 |
| 4-6 Nobel Way | 40 | 40 | 0 | 0 | 0 |
| 36 Charles Street | 3 | 3 | 0 | 0 | 0 |
| Sackville Place | 113 | 113 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 31 | 3 | 7 | 19 | 2 |
| 88-92 Princess Street | 46 | 44 | 2 | 0 | 0 |
| Asia House | 112 | 106 | 6 | 0 | 0 |
| **Totals** | **1090** | **762** | **67** | **92** | **169** |

Table 11.25 - Summary of Alternate Baseline v Cumulative NSL Results

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 48 | 41 | 4 | 2 | 1 |
| Orient House* | 0 | 0 | 0 | 0 | 0 |
| Granby House* | 0 | 0 | 0 | 0 | 0 |
| Stanlo House* | 0 | 0 | 0 | 0 | 0 |

| Address | Total No. of rooms | No. of rooms that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| 121 Princess Street | 39 | 35 | 2 | 2 | 0 |
| Victoria House* | 0 | 0 | 0 | 0 | 0 |
| Granby Village* | 0 | 0 | 0 | 0 | 0 |
| 4-6 Nobel Way | 36 | 36 | 0 | 0 | 0 |
| 36 Charles Street* | 0 | 0 | 0 | 0 | 0 |
| Sackville Place* | 0 | 0 | 0 | 0 | 0 |
| Whitworth House* | 0 | 0 | 0 | 0 | 0 |
| Montana House* | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 24 | 24 | 0 | 0 | 0 |
| Asia House | 28 | 26 | 0 | 2 | 0 |
| **Totals** | **175** | **162** | **6** | **6** | **1** |

***** No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.

Table 11.26 - Summary of Alternate Baseline v Cumulative Annual Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 48 | 6 | 2 | 2 |
| Orient House | 150 | 143 | 0 | 2 | 5 |
| Granby House | 58 | 10 | 0 | 2 | 45 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 8 | 0 | 0 | 0 |
| Granby Village | 267 | 215 | 11 | 5 | 10 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **819** | **700** | **17** | **11** | **62** |

Table 11.27 - Summary of Alternate Baseline v Cumulative Winter Sunlight Results

| Address | Total No. of windows | No. of windows that meet BRE Guidelines Negligible | Below BRE Guidelines - Magnitude of Change | | |
|---|---|---|---|---|---|
| | | | Minor | Moderate | Major |
| Salisbury House | 58 | 57 | 0 | 0 | 1 |
| Orient House | 150 | 149 | 0 | 0 | 1 |
| Granby House | 58 | 21 | 0 | 2 | 35 |
| Stanlo House | 34 | 34 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 0 | 0 | 0 |
| Victoria House | 10 | 8 | 0 | 1 | 1 |
| Granby Village | 267 | 215 | 1 | 6 | 45 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess Street | 1 | 1 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 0 | 0 | 0 |
| **Totals** | **819** | **726** | **1** | **9** | **83** |

11.163. There is no material difference between the Baseline v Cumulative (Scenario 1 v Scenario 3) and Alternate Baseline v Cumulative (Scenario 1a v Scenario 3a) levels of daylight and sunlight compliance, therefore, the rest of this section will be based on the Baseline v Cumulative (Scenario 1 v Scenario 3) assessment result as the levels of daylight and sunlight from which the surrounding sensitive receptors are used to benefit are those with the existing buildings on the Site in place.

Table 11.28 – Comparison of (Scenario 1 v Scenario 2) and (Scenario 1 v Scenario 3) VSC Results

| Address | Total No. of windows | | Baseline v Cumulative Negligible | | Baseline v Cumulative Minor | | Baseline v Cumulative Moderate | | Baseline v Cumulative Major |
|---|---|---|---|---|---|---|---|---|---|
| Salisbury House | 72 | **67** | 11 | **5** | 18 | **0** | 37 | **0** | 6 |
| Orient House | 150 | **104** | 19 | **18** | 5 | **19** | 29 | **9** | 97 |
| Granby House | 103 | **40** | 40 | **6** | 6 | **5** | 3 | **52** | 54 |
| Stanlo House | 60 | **59** | 57 | **1** | 0 | **0** | 0 | **0** | 3 |
| 121 Princess Street | 39 | **39** | 39 | **0** | 0 | **0** | 0 | **0** | 0 |
| Victoria House | 30 | **30** | 30 | **0** | 0 | **0** | 0 | **0** | 0 |
| Granby Village | 282 | **254** | 248 | **18** | 23 | **7** | 7 | **3** | 4 |
| 4-6 Nobel Way | 40 | **40** | 40 | **0** | 0 | **0** | 0 | **0** | 0 |
| 36 Charles Street | 3 | **3** | 3 | **0** | 0 | **0** | 0 | **0** | 0 |
| Sackville Place | 113 | **113** | 113 | **0** | 0 | **0** | 0 | **0** | 0 |
| Whitworth House | 9 | **9** | 9 | **0** | 0 | **0** | 0 | **0** | 0 |
| Montana House | 31 | **31** | 3 | **0** | 7 | **0** | 19 | **0** | 2 |

| Address | Total No. of windows | | Baseline v Cumulative Negligible | | Baseline v Cumulative Minor | | Baseline v Cumulative Moderate | | Baseline v Cumulative Major |
|---|---|---|---|---|---|---|---|---|---|
| 88-92 Princess St | 46 | 46 | 44 | 0 | 2 | 0 | 0 | 0 | 0 |
| Asia House | 112 | 112 | 106 | 0 | 6 | 0 | 0 | 0 | 0 |
| **Totals** | **1090** | **947** | **762** | **48** | **67** | **31** | **95** | **64** | **166** |

VSC Daylight

11.164. If the Proposed Development and the committed developments listed at paragraph 11.159 were constructed simultaneously then, compared to the Proposed Development in isolation:-

- 185 fewer windows would experience negligible magnitudes of VSC change.
- 19 more windows would experience minor magnitudes of VSC change
- 64 more windows would experience moderate magnitudes of VSC change
- 102 more windows would experience major magnitudes of VSC change

Table 11.29 - Comparison of (Scenario 1 v Scenario 2) and (Scenario 1 v Scenario 3) NSL Results

| Address | Total No. of rooms | Baseline v Proposed Negligible | | Baseline v Proposed Minor | | Baseline v Proposed Moderate | | | Baseline v Cumulative Major |
|---|---|---|---|---|---|---|---|---|---|
| Salisbury House | 48 | 43 | 41 | 3 | 4 | 1 | 2 | 1 | 1 |
| Orient House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Granby House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Stanlo House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 121 Princess Street | 39 | 39 | 35 | 0 | 2 | 0 | 2 | 0 | 0 |
| Victoria House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Granby Village* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4-6 Nobel Way | 36 | 36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sackville Place* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Whitworth House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montana House* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess St | 24 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asia House | 28 | 28 | 26 | 0 | 0 | 0 | 2 | 0 | 0 |
| **Totals** | **175** | **170** | **162** | **3** | **6** | **1** | **6** | **1** | **1** |

*** No publicly available rooms layouts. The BRE Guidelines provide that the effect on the daylight distribution (NSL) should only be assessed where room layouts are known.**

NSL Daylight

11.165. If the Proposed Development and the committed developments listed at paragraph 11.159 were constructed simultaneously then, compared to the Proposed Development in isolation:-

- 8 fewer rooms would experience negligible magnitudes of NSL change.
- 3 more rooms would experience minor magnitudes of NSL change
- 5 more rooms would experience moderate magnitudes of NSL change

- The same number rooms would experience major magnitudes of NSL change

Daylight Effect

11.166. If the Proposed Development and the committed developments listed at paragraph 11.159 were constructed simultaneously:-

- The daylight effect on the following properties would be negligible
  - Victoria House
  - 4-6 Nobel Way
  - 36 Charles Street
  - Sackville Place
  - Whitworth House
- Despite the increased magnitudes of VSC and/or, where relevant, NSL change, the daylight effect on the following properties would be minor either as a result of the percentage of baseline level changes, that only a small number of windows/rooms are affected, the absolute changes are relatively small or the VSC levels with the Proposed Development and the committed developments listed at paragraph 11.159 in place remain very reasonable in an urban context and commensurate with/better than the levels in other successful residential buildings in Manchester, as shown in Table 11.5 above.
  - Salisbury House
  - Orient House
  - Granby House
  - Stanlo House
  - 121 Princess Street (negligible with the Proposed Development in isolation)
  - Granby Village
  - Montana House (negligible with the Proposed Development in isolation)
  - 88-92 Princess Street (negligible with the Proposed Development in isolation)
  - Asia House (negligible with the Proposed Development in isolation)

Table 11.30 - Comparison of (Scenario 1 v Scenario 2) and (Scenario 1 v Scenario 3) Annual Sunlight Results

| Address | Total No. of windows | | Baseline v Cumulative Negligible | | Baseline v Cumulative Minor | | Baseline v Cumulative Moderate | | Baseline v Cumulative Major |
|---|---|---|---|---|---|---|---|---|---|
| Salisbury House | 58 | 58 | 48 | 0 | 6 | 0 | 2 | 0 | 2 |
| Orient House | 150 | 149 | 143 | 1 | 0 | 0 | 2 | 0 | 5 |
| Granby House | 58 | 29 | 11 | 0 | 0 | 2 | 2 | 27 | 45 |
| Stanlo House | 34 | 34 | 34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| Granby Village | 267 | 248 | 241 | 4 | 11 | 5 | 5 | 10 | 10 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 107 | 0 | 0 | 0 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess St | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 91 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **819** | **770** | 729 | **5** | 17 | **7** | 11 | **37** | 62 |

Annual APSH Sunlight

11.167. If the Proposed Development and the committed developments listed at paragraph 11.159 were to be constructed simultaneously then, compared to the Proposed Development in isolation:-

- 41 fewer windows would experience negligible magnitudes of annual APSH change.
- 12 more windows would experience minor magnitudes of annual APSH change.
- 4 more windows would experience moderate magnitudes of annual APSH change.
- 25 more windows would experience major magnitudes of annual APSH change.

Table 11.31 - Comparison of (Scenario 1 v Scenario 2) and (Scenario 1 v Scenario 3) Winter Sunlight Results

| Address | Total No. of windows | | Baseline v Cumulative Negligible | | Baseline v Cumulative Minor | | Baseline v Cumulative Moderate | | Baseline v Cumulative Major |
|---|---|---|---|---|---|---|---|---|---|
| Salisbury House | 58 | 58 | 57 | 0 | 0 | 0 | 0 | 0 | 1 |
| Orient House | 150 | 150 | 149 | 0 | 0 | 0 | 0 | 0 | 1 |
| Granby House | 58 | 49 | 21 | 0 | 0 | 2 | 2 | 7 | 35 |
| Stanlo House | 34 | 34 | 34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 121 Princess Street | 33 | 33 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Victoria House | 10 | 10 | 8 | 0 | 0 | 0 | 1 | 0 | 1 |
| Granby Village | 267 | 237 | 215 | 3 | 1 | 2 | 6 | 25 | 45 |
| 4-6 Nobel Way | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 Charles Street | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sackville Place | 107 | 107 | 107 | 0 | 0 | 0 | 0 | 0 | 0 |
| Whitworth House | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montana House | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88-92 Princess St | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asia House | 91 | 91 | 91 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **819** | **780** | **726** | **3** | **1** | **4** | **9** | **32** | **83** |

Winter APSH Sunlight

11.168. If the Proposed Development and the committed developments listed at paragraph 11.159 were to be constructed simultaneously then, compared to the Proposed Development in isolation:-

- 54 fewer windows would experience negligible magnitudes of winter APSH change.
- 2 fewer windows would experience minor magnitudes of winter APSH change.
- 5 more windows would experience moderate magnitudes of winter APSH change.
- 51 more windows would experience major magnitudes of winter APSH change.

Sunlight Effect

11.169. If the Proposed Development and the committed developments listed at paragraph 11.159 were constructed simultaneously:-

- The sunlight effect on the following properties would be negligible
  - Stanlo House
  - 121 Princess Street
  - 4-6 Nobel Way

- 36 Charles Street
- Sackville Place
- Whitworth House
- Montana House
- 88-92 Princess Street
- Asia House

- Despite the increased magnitudes of APSH change, the sunlight effect on the following properties would be minor on the basis that the APSH levels with the Proposed Development and the committed developments listed at paragraph 11.159 in place remain very reasonable in an urban context.
  - Salisbury House (negligible with the Proposed Development in isolation)
  - Orient House
  - Granby House
  - Granby Village
  - Victoria House (negligible with the Proposed Development in isolation)

**Effect on Overshadowing for Existing Area of Amenity Space**

11.170. The outputs of the computer modelling for overshadowing is provided in full within Appendix 11.3, with the key metrics provided in Table 11.32 below.

Table 11.32: Summary of March SHOG Assessment Results – Baseline v Cumulative (Scenario 1 v Scenario 3)

| Area Name | Area benefitting from 2 hours of SHOG on 21st March (Scenario 1: Baseline) | Area benefitting from 2 hours of SHOG on 21st March (Scenario 2: Proposed) | Change in SHOG | Meets SHOG Criteria? |
|---|---|---|---|---|
| Vimto Park | 97.43% | 96.45% | 1% | Yes |

11.171. Any changes to the level of shadow falling upon Vimto Park will continue to be fully BRE compliant in the Cumulative scenario and so it will experience a negligible magnitude of March SHOG change.

## Mitigation Measures

### Operational Phase

**Daylight & Sunlight**

11.172. Daylight impacts to the surrounding properties are negligible to minor adverse. Sunlight impacts to the surrounding properties are negligible to minor adverse. Overall, the Proposed Development is considered to result in non-significant effects. No mitigation measures are, therefore, considered necessary.

**Overshadowing**

11.173. SHOG impacts to the surrounding areas of amenity space are negligible and considered to result in non-significant effects. No mitigation measures are, therefore, considered necessary.

## Residual Effects

### Operational Phase

Table 11.28: Summary of Residual Effects

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Scenario 2: Baseline + Phase A + Phase C - Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Scenario 2: Baseline + Phase A + Phase C - Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Reduction in daylight | Salisbury House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Orient House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Granby House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Stanlo House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Weston Hall | None | n/a | Minor Adverse – Permanent (not significant) |
| | 121 Princess Street | None | n/a | Negligible – Permanent |
| | Victoria House | None | n/a | Negligible – Permanent |
| | Granby Village | None | n/a | Minor Adverse – Permanent (not significant) |
| | 4-6 Nobel Way | None | n/a | Negligible – Permanent |
| | 36 Charles Street | None | n/a | Negligible – Permanent |
| | Sackville Place | None | n/a | Negligible – Permanent |
| | Whitworth House | None | n/a | Negligible – Permanent |
| | Montana House | None | n/a | Negligible – Permanent |
| | 88-92 Princess Street | None | n/a | Negligible – Permanent |
| | Asia House | None | n/a | Negligible – Permanent |
| Reduction in sunlight | Salisbury House | None | n/a | Negligible – Permanent |
| | Orient House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Granby House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Stanlo House | None | n/a | Negligible – Permanent |
| | Weston Hall | None | n/a | Negligible – Permanent |
| | 121 Princess Street | None | n/a | Negligible – Permanent |
| | Victoria House | None | n/a | Negligible – Permanent |
| | Granby Village | None | n/a | Minor Adverse – Permanent (not significant) |
| | 36 Charles Street | None | n/a | Negligible – Permanent |
| | Sackville Place | None | n/a | Negligible – Permanent |
| | Whitworth House | None | n/a | Negligible – Permanent |
| | 88-92 Princess Street | None | n/a | Negligible – Permanent |
| | Asia House | None | n/a | Negligible – Permanent |
| Increase in shadow | Vimto Park | None | n/a | Negligible – Permanent |

## Monitoring

11.174. None required.

## Reference List

11.175. This ES Chapter has been prepared in reference to the following:

- Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. 2024.
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021). Planning Practice Guidance. 2019 (regularly updated).
- Manchester City Council (2012). Manchester Core Strategy (2012 – 2027).
- Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition.

**Figure 8.1**

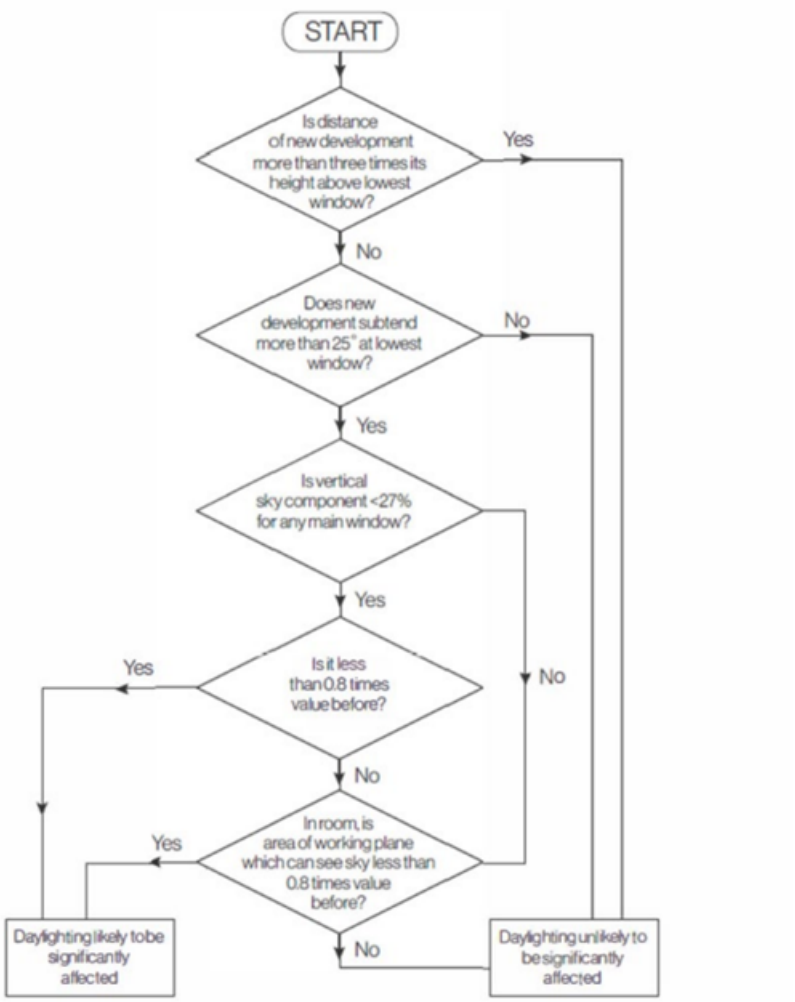



**Figure 20 of the BRE Guidelines, Decision Chart: diffuse daylight**

| | |
|---|---|
| **Not to Scale** | Date: 03 November 2025 |

# 12. Solar Glare

## Introduction

12.1. This Chapter of the ES has been prepared by GIA Surveyors Ltd and assesses the likely solar glare impacts of the Proposed Development 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.

12.2. This Chapter assesses the potential solar glare impact to road users and train drivers only, for sensitive locations within 500m of the Site. Potential solar glare impacts on neighbouring residential amenity are not expected to be significant and an assessment of solar glare to neighbouring buildings is not considered proportionate or necessary. Solar glare effects to occupants of neighbouring buildings are scoped out of the EIA and are not reported upon further within this Chapter.

12.3. The author of this Chapter has a Masters in Building Engineering/Architecture from University of Bologna, Italy, and 10 years of UK experience in preparing solar glare for EIA developments. GIA are the largest specialist daylight and sunlight advisor in the UK, with over 30 years of specialisation and expertise, having advised on some of the largest developments within Greater Manchester and the United Kingdom.

| | Lead Author | Reviewer |
|---|---|---|
| Name | Paolo Cappellacci | |
| Company | GIA | |
| Qualifications/Accreditations relevant to technical area incl. IEMA | Architects Registration Board (ARB) | |
| Years technical experience (in technical area) | 10 | |
| Number of EIA's delivered to date | 15+ | |

## Assumptions and Limitations

12.4. Although great care is taken in identifying typical viewpoints, this does not guarantee that there are no additional sensitive locations where reflected solar glare could present a particular risk. This assessment is based on the assumption that in an urban environment moving traffic represents the biggest risk factor and so viewpoints and focus points are selected accordingly. For practical reasons the area of the assessment is limited to the area surrounding the Proposed Development. The occurrence of reflected solar glare at greater distances is not the subject of this assessment.

12.5. It is also to be noted that the hours presented reflect solar time and therefore do not take Daylight Saving Hours into account. Where times are reported between the last Sunday in March and the last Sunday in October, they would need to be adjusted forward an hour to reflect British Summer Time (BST). For example, where a reflection is recorded at 09:00-10:00 GMT in April, this would correlate to 10:00-11:00 BST.

## Relevant Legislation, Policy and Guidance

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

## Guidance

**Building Research Establishment (BRE) – Site Layout Planning for Daylight and Sunlight: A guide to good practice (2022)**

12.7. The BRE Guidelines includes the following statement with regard to the potential for reflected solar glare from a new development:

*"Glare or solar dazzle can occur when sunlight is reflected from a glazed façade. This can affect road users outside and the occupants of adjoining buildings. The problem can occur either when there are large areas of reflective glass or cladding on the façade, or when there are areas of glass or cladding which slope back so that high altitude sunlight can be reflected along the ground. Thus solar dazzle is only a long term problem only for some heavily glazed (or mirror clad) buildings…"*

**Commission Internationale de L'Eclairage (CIE) 146:2002 & CIE 147:2002 Collection on glare (2002)**

12.8. The CIE 146:2002 Collection on glare states:

*"Disability glare is glare that impairs vision (CIE, 1987). It is caused by scattering of light inside the eye [...]. The veiling luminance of scattered light will have a significant effect on visibility when intense light sources are present in the peripheral visual field and the contrast of objects to be seen is low."*

*"Disability glare is most often of importance at night when contrast sensitivity is low and there may well be one or more bright light sources near to the line of sight, such as car headlights, streetlights or floodlights. But even in daylight conditions disability glare may be of practical significance: think of traffic lights when the sun is close to them, or the difficulty viewing paintings hanging next to windows."*

# Assessment Methodology and Significance Criteria

## Scenarios Tested

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

12.10. As construction progresses, and the facades of the Proposed Development are installed, the potential solar glare effects would be similar to those once the Proposed Development is complete and operational. It is therefore considered that the completed Proposed Development represents the worst-case assessment in terms of likely solar glare effects. The construction scenario has been assessed qualitatively, based on professional judgement.

12.11. For Solar Glare, the worst-case scenario is portrayed by the Proposed Development in isolation. The cumulative effects have not been considered as neighbouring Committed Developments (i.e. those with an extant/valid planning permission) or Future Developments that are not yet submitted and are understood to be imminently submitted (the IQ scheme to the south of the Site) can block sunlight reaching the facades of the Proposed Development and/or obscure the Proposed Development from the viewpoints to be assessed and as a result, lessen the effects. This approach is common practice.

12.12. Baseline Developments (i.e. those with an extant/valid planning permission where construction works have started) that are visible from a sensitive receptor and would in all likelihood be fully built out before commencement of the Works, are included within the surrounding context as their completed form. The following Baseline Developments have been included within the assessment:

- London Road (125712/FO/2019);
- No. 3 Circle Square (134288/FO/2022); and
- IQ Echo Street (136874/FO/2023)

## The Study Area

12.13. Sensitive receptors are considered road users at junctions and train/or tram drivers on tracks within the surrounding area. Viewpoints at road junctions and on train/or tram lines within 500 metres of the Site where the Proposed

Development is visible within the driver's field of view have been identified and assessed. At distances greater than 500m from the Proposed Development, instances of solar glare would be unlikely to occur.

12.14. At each of the identified sensitive road locations, viewpoints are located at the minimum stopping distance for road users and at the driver's eye level with the focal point being a relevant traffic element, such as signals or incoming traffic. For train/or tram drivers, viewpoints are assessed where signals are visible or at representative intervals where the Proposed Development would be visible close to the direct line of sight for a substantial stretch of track. No tram lines have been identified that require assessment within the study area.

12.15. The identified road junctions and rail viewpoints assessed are considered most sensitive in relation to solar glare due to a combination of the nature of the use and proximity to the site, and therefore consideration has been given to several viewpoints at traffic junctions and train lines from which the Proposed Development will be visible. The locations assessed are shown in Appendix 12.2, Figure 01:

- PS_01 Princess St (Northbound) junction with Charles St;
- PS_02 Princess St (Southbound) junction with Whitworth St;
- SS_01 – Sackville St (Northbound) merging of two lanes;
- SS_02 – Sackville St (Southbound) junction with Whitworth St;
- CS_01 – Charles St (Eastbound) junction with Princess St;
- HS_01 – Hulme St (Eastbound) junction with Oxford Rd;
- E_50-500 – Railway line from Oxford Rd station to Piccadilly station (Eastbound);
- W_50-700 - Railway line from Piccadilly station to Oxford Rd station (Westbound).

## Surveys and Data Sources

12.16. This Chapter is accompanied by the following appendices:

- Appendix 12.1 – Solar Glare Methodology. This appendix contains a detailed summary of the assessment methodology used for the solar glare assessment.
- Appendix 12.2 – Solar Glare Assessment. This appendix contains the technical analysis for all relevant viewpoints prepared to support the solar glare assessment.

## Source of Effect

12.17. The façade treatment for the Proposed Development is understood to include areas of glazing which could reflect sunlight within a driver's field of view at sensitive locations, resulting in potential effects in terms of solar glare.

12.18. The assessment of solar glare identifies the time of the day and year that solar reflections will be visible from the assessed viewpoints, as well as their relationship to a driver's line of sight. The assessment does not however, measure the intensity of the reflection but merely the occurrence and duration.

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

## Significance Criteria

12.20. A detailed summary of the assessment methodology can be found in Appendix 12.1, Solar Glare Methodology. Appendix 12.1 includes the methodology for determining demolition and construction effects as well as methodology for determining the operational effects.

12.21. The key terminology used to describe the magnitude of impact is as follows and is further described in the below sections of this chapter:

- Major;
- Moderate;
- Minor; and
- Negligible.

12.22. There are no quantitative criteria within the BRE Guidelines or elsewhere regarding acceptable levels of solar glare.

12.23. Professional judgement has therefore been applied to assign the magnitude of impact for solar glare arising from the Proposed Development and to determine the criteria for assessing the significance of solar glare set out in Table 12.1.

12.24. The following guide is used to ascertain the possible initial magnitude of impact for each viewpoint assessed. Where reflections occur from multiple façades and from multiple buildings, an initial magnitude of impact is given for each instance of potential solar glare.

Table 12.1 - Criteria Used for Determining the Effect of Solar Glare

| Significance Guidance | Possible Factors |
|---|---|
| Major | Solar reflections are visible within 5° of a driver's line of sight. |
| Moderate | Solar reflections are visible within 10° and 5° of the driver's line of sight occurring for a long period of time. |
| Minor | Solar reflections are visible within 30° to 10° or between 10° to 5° of the driver's line of sight for a short period of time. |
| Negligible | No reflections are visible or if visible all occur at angles greater than 30° from the driver's line of sight and so, as stated by the CIE, will be of "little significance".. |
| Note - mitigating factors such as alternative and unaffected signals/traffic lights and car visor angle may result in the assignment of significance which differs from the above. | |

12.25. Consideration is then given to mitigating factors that could influence the likelihood of solar reflections resulting in an instance of solar glare, these may include:

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

12.26. Effects in terms of solar glare can only be adverse (negative) in nature due to this not being a comparative assessment.

12.27. All road junctions and train tracks assessed have been identified as being of high sensitivity as an action is required by a driver that is a safety concern if their visibility is impaired by solar glare. In determining the overall effect at a junction, whilst consideration is given to both controlled and uncontrolled junctions, the later, those where a driver does not have a fixed viewpoint such as a traffic light or where no specific manoeuvres are required by a driver, are less likely to be impacted by solar glare this is a safety concern but are still considered high risk.

12.28. Effects classified as Moderate or Major in scale are considered to be 'significant'. Effects classified as Minor or Negligible in scale are considered to be 'not significant'.

## Baseline Conditions

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

12.30. Solar glare from surrounding buildings is not assessed.

## Identification and Evaluation of Likely Significant Effects

### Construction Phase

12.31. The likely effects in relation to solar glare for the surrounding road users and train/tram drivers would vary throughout the demolition and construction works, starting from installation of the first glazed façade panels and gradually increasing as all reflective cladding is installed.

12.32. The effects during the demolition works are considered negligible. As construction works progress, and the facades of the Proposed Development are installed, the potential solar glare effects would be similar to those once the Proposed Development is complete and operational, as presented below. It is therefore considered that the completed Proposed Development represents the worst-case assessment in terms of likely solar glare effects.

12.33. As such, the overall effect in terms of solar glare would range from being **temporary negligible** effects during demolition, then gradually changing to post mitigation residual effects of negligible to **permanent, moderate adverse** and **significant**, once the Proposed Development is complete, as set out in the assessment of the Proposed Development scenario below.

### Operational Phase

12.34. The full solar glare assessment is provided in Technical Appendix 12.2.

12.35. The assessment has been undertaken from nearby road and rail locations which are considered sensitive in terms of solar glare. For road locations, these include traffic junctions, pedestrian crossings and motorway locations. At locations where there is more than one traffic signal from which the Proposed Development is visible, several viewpoints may be tested (noted by the reference a, b, c etc.) in order to have a better understanding of the likely impact that the Proposed Development might have upon road users' responsiveness. This is specified in the discussion below, where appropriate.

12.36. Following a review of an extended area of investigation (approximately 500m radius from the Proposed Development), a total of six road locations and two train lines were assessed. The assessment considers the potential occurrence of solar reflections from the Proposed Development owing to its size and areas of glazing on the façade at these locations. The duration of solar reflections as well as their proximity to a driver's line of sight have been considered within the discussion below.

12.37. The assessment has been undertaken in a worst-case scenario considering there is no cloud cover, so assuming the sun is shining for all days of the year for the full duration of daylight hours.

12.38. Of the total six road locations and two train lines assessed, the Proposed Development would not be visible, or reflections would be at angles greater than 30° from the driver's line of sight at the following viewpoints:

- PS_01 Princess St (Northbound) junction with Charles St;
- PS_02 Princess St (Southbound) junction with Whitworth St;
- SS_02 – Sackville St (Southbound) junction with Whitworth St;

12.39. At these locations, the effect is considered to be **permanent, Negligible** and **not significant**. These locations are not discussed further within the Chapter.

12.40. At the following location, there is potential for solar reflections within 30° of a drivers' line of sight but greater than 10°:

- SS_01 – Sackville St (Northbound) merging of two lanes;

12.41. The effect at viewpoint SS_01 is considered to be **permanent, Minor Adverse** and **not significant**, and is not discussed further within the Chapter:

12.42. At the remaining two road locations and two train lines, reflections occur within 10° of a drivers' line of sight which require further consideration.

- CS_01 – Charles St (Eastbound) junction with Princess St;
- HS_01 – Hulme St (Eastbound) junction with Oxford Rd;
- E_50-500 – Railway line from Oxford Rd station to Piccadilly station (Eastbound);
- W_50-700 - Railway line from Piccadilly station to Oxford Rd station (Westbound).

**CS_01 – Charles St (Eastbound) junction with Princess St**

12.43. One viewpoint has been assessed at this junction. Viewpoint CS_01 shows the view of drivers looking straight ahead as they approach the junction, which is regulated by a traffic light.

12.44. Table 12.2 provides a summary of the duration of potential reflections that could occur within a 10° driver's field of view, where they would occur within the field of view of drivers, from which element of the Proposed Development the reflections could occur and finally, an initial significance of effect is given for each instance of reflection, prior to consideration being given to factors such as those outlined in paragraph 12.25.

Table 12.2 - Summary of Potential Reflections within 10° for drivers on Charles Street (Eastbound) junction with Sackville St

| Viewpoint | Elevation | Location within 10° of driver's line of sight | Times of day that reflections occur | Times of year that reflections occur | Initial Magnitude of Effect* |
|---|---|---|---|---|---|
| CS_01 | Western elevation of all blocks | Mostly from 3°, one small instance within 2° | Between 16:00 – 18:00 GMT | Mid-February to mid-April and mid-August to mid-October | Major* |
| | All other reflections occur outside 10° so are considered Minor Adverse. | | | | |
| *Prior to consideration of any mitigating factors outlined below. | | | | | |

12.45. At this location, for the viewpoints assessed:

- The traffic light is located on the left hand side, away from the reflective elements of the facades and so it would remain visible.
- The probability of the sun shining at the times of day and year when reflections occur within 10° of a driver's line of sight is 0% - 29%.
- Solid façade elements would break up reflections and lower the intensity of any reflections that do occur.
- The reflections occur in the late-afternoon during the mid-seasons when the solar intensity is low, therefore any reflections generated would be low intensity.
- Most potential reflections occur above the driver's visor line, which could mitigate the effects when deployed.
- The view of the facades of the Proposed Development from which reflections could occur would be partially sheltered by trees

12.46. Based on professional judgement, in consideration of the initial magnitude of potential effects (Table 12.2) and the factors outlined above (para 12.45), the overall effect in terms of solar glare to drivers at the Charles Street (Eastbound) junction with Sackville Street is considered to be **permanent**, **Minor to Moderate Adverse** and **significant.**

**HS_01 – Hulme St (Eastbound) junction with Oxford Rd**

12.47. One viewpoint has been assessed at this junction. Viewpoint HS_01 shows the view of drivers looking straight ahead as they approach the junction, which is regulated by a traffic light.

12.48. Table 12.3 provides a summary of the duration of potential reflections that could occur within a 10° driver's field of view, where they would occur within the field of view of drivers, from which element of the Proposed Development the reflections could occur and finally, an initial significance of effect is given for each instance of reflection, prior to consideration being given to factors such as those outlined in paragraph 12.25.

Table 12.3 - Summary of Potential Reflections within 10° for drivers on Charles Street (Eastbound) junction with Sackville St

| Viewpoint | Elevation | Location within 10° of driver's line of sight | Times of day that reflections occur | Times of year that reflections occur | Initial Magnitude of Effect* |
|---|---|---|---|---|---|
| HS_01 | Western elevation of all blocks | From 2° | Between 16:00 – 18:00 GMT | Mid-February to mid-April and mid-August to mid-October | Major* |
| | All other reflections occur outside 10° so are considered Minor Adverse. | | | | |
| *Prior to consideration of any mitigating factors outlined below. | | | | | |

12.49. At this location, for the viewpoints assessed:

- The traffic light is located on the left hand side, away from the reflective elements of the facades and so it would remain visible.
- The probability of the sun shining at the times of day and year when reflections occur within 10° of a driver's line of sight is 0% - 29%.
- Solid façade elements would break up reflections and lower the intensity of any reflections that do occur.
- The reflections occur in the late-afternoon during the mid-seasons when the solar intensity is low, therefore any reflections generated would be low intensity.
- Most potential reflections occur above the driver's visor line, which could mitigate the effects when deployed.
- The view of the facades of the Proposed Development from which reflections could occur would be partially sheltered by trees

12.50. Based on professional judgement, in consideration of the initial magnitude of potential effects (Table 12.3) and the factors outlined above (para 12.49), the overall effect in terms of solar glare to drivers at the Charles Street (Eastbound) junction with Sackville Street is considered to be **permanent**, **Minor to Moderate Adverse** and **significant.**

**E_50-500 – Railway line from Oxford Rd station to Piccadilly station (Eastbound);**

12.51. Ten viewpoints have been assessed along the eastbound trainline. At viewpoint E_50 a very small portion of the Proposed Development would be visible, with reflections beyond 10° of the driver's field of view. At viewpoint E_100 the Proposed Development would not be visible. At viewpoint E_150, where the track bends, and until viewpoint E_350 the Proposed Development would be directly in front of drivers, with reflections within 10°. Along these viewpoints the Proposed Development moves gradually outside the driver's field of view. From viewpoint E_400 reflections would be beyond 10°. At viewpoint E_500 the Proposed Development would not be visible.

12.52. Table 12.4 provides a summary of the duration of potential reflections that could occur within a 10° drivers field of view, where they would occur within the field of view of drivers, from which element of the Proposed Development

the reflections could occur and finally, an initial significance of effect is given for each instance of reflection, prior to consideration being given to factors such as those outlined in paragraph 12.25.

12.53. The Proposed Development would not be visible at viewpoints E_100 and E_500, and reflections would be outside of 30° of the driver's field of view at viewpoint E_450, and so the significance of effects for these viewpoints is Negligible.

12.54. Reflections at viewpoints E_50 and E_400 are outside 10° of a driver's field of view and so these viewpoints have an initial significance of effect of Minor.

Table 12.4 - Summary of Potential Reflections within 10° for train drivers on Eastbound track towards Manchester Piccadilly

| Viewpoint | Elevation | Location within 10° of driver's line of sight | Times of day that reflections occur | Times of year that reflections occur | Initial Magnitude of Effect* |
|---|---|---|---|---|---|
| E_150 | South-western | From 3° | 15:00 – 17:00 GMT | Mid-January to mid-March, and mid-September to Mid-November | Major* |
| E_200-E_350 | South-western | From 5° | 15:00 – 17:00 GMT | Mid-January to mid-April, and mid-August to Mid-November | Moderate* |
| *Prior to consideration of any mitigating factors outlined below. | | | | | |

12.55. For this railway line, for the viewpoints assessed:

- A train signal is located circa 450m from viewpoint E_150, which gradually moves out of the line of sight until viewpoint E_400, where reflections would be outside 10°. There would be no reflections within 10° in the 150m final approach to this signal.
- The probability of the sun shining at the times of day and year when reflections occur within 10° of a driver's line of sight is 0-36%.
- The reflections are broken up by solid façade elements and so the full solar disc would not be reflected in full, resulting in lower intensity.
- Circa half of the potential reflections occur above the driver's visor line, which would mitigate the effects when deployed.

12.56. Based on professional judgement, in consideration of the initial magnitude of potential effects (Table 12.4) and the factors outlined above (para 12.55), the overall effect in terms of solar glare to train drivers on the Railway line from Oxford Rd station to Piccadilly station (Eastbound) is considered to be permanent, Minor to Moderate Adverse and significant. Given the dynamic nature of train movement travelling along a set of tracks, the potential effects as reported would only occur momentarily when at each of the precise viewpoints assessed and between just two hours of the day, on sunny days for just two months of the year.

**W_50-700 - Railway line from Piccadilly station to Oxford Rd station (Westbound);**

12.57. 14 viewpoints have been assessed along the westbound trainline. At viewpoints W_50-150 the Proposed Development would be visible with reflections beyond 10° of the driver's field of view. At viewpoints W_200-550 reflections would be within 10° of the driver's field of view, except for viewpoint W_300 where the track bends just before train signals where reflections would be outside 10°. Reflection would move out of 10° at viewpoints W_600-650. No reflections would be visible at viewpoint W_700.

12.58. Table 12.5 provides a summary of the duration of potential reflections that could occur within a 10° drivers field of view, where they would occur within the field of view of drivers, from which element of the Proposed Development

the reflections could occur and finally, an initial significance of effect is given for each instance of reflection, prior to consideration being given to factors such as those outlined in paragraph 12.25.

12.59. Reflections would be outside of 30° of the driver's field of view at viewpoint W_700, and so the significance of effects is Negligible.

12.60. Reflections at viewpoints W_50-150, W_300 and W_600-650 are outside 10° of a driver's field of view and so these viewpoints have an initial significance of effect of Minor.

Table 12.5 - Summary of Potential Reflections within 10° for train drivers on Eastbound track towards Manchester Piccadilly

| Viewpoint | Elevation | Location within 10° of driver's line of sight | Times of day that reflections occur | Times of year that reflections occur | Initial Magnitude of Effect* |
|---|---|---|---|---|---|
| W_200-250 | North-Eastern | From 8° | Sunrise to 6:00 GMT | Mid-March to mid-May, and mid-July to Mid-September | Moderate* |
| W_350-550 | North-Eastern | From 3° | 15:00 – 17:00 GMT | Mid-January to mid-April, and mid-August to Mid-November | Major* |
| *Prior to consideration of any mitigating factors outlined below. | | | | | |

12.61. For this railway line, for the viewpoints assessed:

- A train signal is located at the end of the platform at Piccadilly Station. Reflections would be outside of 10° of the driver's field of view on approach to the station (viewpoints W_50-150) and upon departure (viewpoint W_300). A second train signal is located circa 400m from viewpoint W_350, which gradually moves out of the line of sight until viewpoint W_600, where reflections would be outside 10°. There would be no reflections within 10° in the 150m final approach to this signal.
- The probability of the sun shining at the times of day and year when reflections occur within 10° of a driver's line of sight is 0-39%.
- The reflections are broken up by solid façade elements and so the full solar disc would not be reflected in full, resulting in lower intensity.
- The majority of reflections occur above the driver's visor line, which would mitigate the effects when deployed.

12.62. Based on professional judgement, in consideration of the initial magnitude of potential effects (Table 12.5) and the factors outlined above (para 12.61), the overall effect in terms of solar glare to train drivers on the Railway line from Piccadilly station to Oxford Rd station (Westbound) is considered to be **permanent**, **Minor to Moderate Adverse** and **significant**. Given the dynamic nature of train movement travelling along a set of tracks, the potential effects as reported would only occur momentarily when at each of the precise viewpoints assessed and between just two hours of the day, on sunny days for just two months of the year.

**Summary**

12.63. Table 12.6 provides a summary of the overall solar glare effects ascribed to each assessed location following the assessment outlined above.

Table 12.6 - Summary of Overall Solar Glare Effects at Assessed Locations

| Assessed Location | Assessed Location Description | Overall Solar Glare Effect | Significance |
|---|---|---|---|
| Road Locations | | | |
| PS_01 | Princess St (Northbound) junction with Charles St | Negligible | Not Significant |

| | | | |
|---|---|---|---|
| PS_02 | Princess St (Southbound) junction with Whitworth St | Negligible | Not Significant |
| SS_02 | Sackville St (Southbound) junction with Whitworth St | Negligible | Not Significant |
| SS_01 | Sackville St (Northbound) merging of two lanes | Minor Adverse | Not Significant |
| CS_01 | Charles St (Eastbound) junction with Princess St | Minor to Moderate Adverse | Significant |
| HS_01 | Hulme St (Eastbound) junction with Oxford Rd | Minor to Moderate Adverse | Significant |
| Train Locations | | | |
| E_50-500 | Railway line from Oxford Rd station to Piccadilly station (Eastbound) | Minor to Moderate Adverse | Significant |
| W_50-700 | Railway line from Piccadilly station to Oxford Rd station (Westbound) | Minor to Moderate Adverse | Significant |

## Mitigation Measures

### Construction Phase

12.1. It is not necessary to include temporary mitigation measures during the construction phase. All mitigation embedded within the design of the facades and mitigation measures recommended for the Operational Phase would apply to the construction phase also.

### Operational Phase

12.2. Permanent, significant adverse (minor to moderate) effects are predicted to occur for road drivers and train drivers. Given the location of the Site and scale of the development, potential for reflections from the Proposed Development are unavoidable and the effects are at the lowest end of significance. It should be noted that the assessment considers a scenario whereby the sun shines on every day of the year to consider all potential circumstances in which reflections will occur (i.e. 'worst case'). According to the sunlight availability protractor, based on UK weather data, the sunshine probability will be significantly reduced and therefore the likelihood of the instances of reflections are reduced accordingly. The probability of the sun shining during the times of the year when significant potential reflections are expected to occur ranges from 0% to 39%.

12.3. Furthermore, the assessment does not include the sun itself within any viewpoints which would also cause very intense glare to drivers at many of the affected viewpoints. For the majority of viewpoints, the sun would be directly visible at other times of the day if the Proposed Development were not present as seen in the solar glare assessment in Appendix 12.2. In comparison, the reflections from the Proposed Development would appear less intense and would not cause significantly worse effects when compared with a direct view of the sun.

12.4. The assessment has been based on a worst-case scenario that assumes highly reflective glazing, and perforated panels on elements of the facades which would help break up reflections have not been modelled. It is recommended that the Visible Light Reflectance (VLR) is restricted for glazing on the south-western and north-eastern elevations of all blocks, which will be resolved within further detailed design stages subject to detailed testing post-planning to ensure the intensity of the reflections that may occur are within the intensity tolerances. Appropriate glazing specification in the areas identified would minimise the potential for glare and the significant effects that have been reported. It is recommended that suitability of the glazing selection should be confirmed via detailed solar glare intensity testing and should be secured via a condition. The residual effects would be reduced to Minor Adverse and not significant through the use of appropriately specified glazing.

## Residual Effects

### Construction Phase

12.1. The likely effects in relation to solar glare for the surrounding road users and train drivers would vary throughout the demolition and construction works, starting from installation of the first glazed façade panels and gradually increasing as all reflective cladding is installed. Once the glazed façade elements have been installed, the potential solar glare effects would be similar to those once the Proposed Development is complete and operational therefore the overall effect in terms of solar glare would range from being temporary negligible effects during demolition, then gradually changing to post mitigation residual effects of negligible to permanent, minor to moderate adverse and significant, once the Proposed Development is complete.

### Operational Phase

12.1. The likely significant effects of solar glare from the Proposed Development described above are considered a worst-case scenario. All solar glare effects are considered moderate to high sensitivity depending on the whether it is a controlled junction or not, and the effects are permanent and long term.

Table 12.7 - Summary of Residual Effects for Solar Glare

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Ranging from Negligible not significant, Minor adverse not significant, and Minor to Moderate Adverse significant effects on Solar Glare | Road users at nearby road junctions | Proposed Glazing VLR Specification for south-western and north-eastern elevations may need to be restricted subject to further detailed testing post-planning. | Mitigation to be designed and developed in detail, secured via planning condition. | Effects will be reduced to permanent, minor adverse (not significant) upon finalisation of additional mitigation proposed |
| Minor to Moderate adverse and significant effects on Solar Glare | Train Drivers travelling Eastbound and Westbound | Proposed Glazing VLR Specification for south-western and north-eastern elevations may need to be restricted subject to further detailed testing post-planning. | Mitigation to be designed and developed in detail, secured via planning condition. | Effects will be reduced to permanent, minor adverse (not significant) upon finalisation of additional mitigation proposed |

## Monitoring

12.1. None required.

## Reference List

12.2. This ES Chapter has been prepared in reference to the following:


- Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition.
- Commission Internationale De L'Eclairage (CIE), CIE 146:2002 & CIE 147:2002 - Collection on Glare, CIE, 2002.

# 13. Wind Microclimate

## Introduction

13.1. This Chapter of the ES has been prepared by GIA and assesses the likely Wind Microclimate impacts of the Proposed Development 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. This Chapter is accompanied by two technical appendices, a Detailed Wind Microclimate Methodology (Appendix 13.1) and an appendix which contains the Wind Microclimate CFD Results (Appendix 13.2).

13.2. It should be noted that, wherever figures are referenced in this chapter (Figures 13.1 to Figure 13.10) these can be found in Appendix 13.2.

13.3. The authors of this chapter are:

| | Lead Author | Reviewer |
|---|---|---|
| Name | Jon Winchester | Chris Harley |
| Company | GIA | GIA |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | BSc (Hons), MSc, PhD | MEng, PhD |
| Years technical experience (in technical area) | 13 | 12 |
| Number of EIA's delivered to date | 42 | 24 |

## Assumptions and Limitations

13.4. The accuracy of the results is dependent upon the accuracy of the architectural CAD used to construct the model.

- The Proposed Development has been modelled based on the CAD 0667-HOD-PH-XX-M3-A-0001.dwg, supplied by Hodder & Partners on 01/10/25.

13.5. Faraday Building, Sackville Street (143769/FO/2025) has been included in Scenario 3 as an empty site. While marked for demolition, plans have not yet been made available in the public domain. This, however, does not necessarily represent a realistic long-term picture as it is reasonable to expect that a meaningful development will come forward on the site in due course.

13.6. There is an inherent assumption that on-Site wind speeds will scale linearly with the measured wind speeds at the airport (Manchester International).

13.7. It is assumed that, during the construction process, wind conditions will gradually change from the Baseline Conditions to the conditions for the Completed Proposed Development.

13.8. It is assumed that on-Site activity during construction will be able to withstand a higher category of pedestrian comfort level that for the Completed Proposed Development.

13.9. It is assumed that Site hoardings would be in place throughout the demolition and construction phase and would not be removed until the Proposed Development is operational and any necessary mitigation measures are installed.

13.10. The CFD testing has been undertaken using steady state analysis, with gust effects modelled indirectly based on empirical data. The empirical relationship used is chosen to give a conservative estimate of gust effects, so may mean

that gust wind speeds are over-estimated (i.e. windier than reality), especially at lower mean wind speeds where gust effects tend to be dominant.

## Relevant Legislation, Policy and Guidance

### Legislation

13.11. There are no legislative policies relating to the assessment of environmental wind flows in the built environment.

### Policy

**National**

**National Planning Policy Framework (2025)**

13.12. The National Planning Policy Framework (NPFF) was revised February 2025 by the Ministry of Housing, Communities and Local Government (MHCLG). The relevant paragraphs are as follows:

Paragraph 135 of the National Planning Policy Framework states that:

"Planning policies and decisions should ensure that developments:

- will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;
- are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;
- are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);
- establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;
- optimise the potential of the Site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and
- create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."

13.13. There is no specific planning policy guidance dealing with microclimate in terms of pedestrian comfort set out in the revised NPPF.

**Regional**

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

13.14. Places for Everyone (2024) Policy JP-P-1 "Sustainable Places" states that "all development […] should be consistent with: […] comfortable and inviting, with indoor and outdoor environments: […] addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter".

**Local**

**Manchester Core Strategy (2012 – 2027)**

13.15. Manchester's Local Development Framework, Core Strategy Policy EN 2 relates to Tall Buildings. Policy EN2 – Tall Buildings, which states that, by their very size, tall buildings can have a significant impact on the local environment and its micro-climate. It is therefore expected that this impact be modelled and that submissions for tall buildings also include appropriate measures to create an attractive, pedestrian friendly local environment. This policy is still part of the Manchester Core Strategy following the adoption of the 2024 Addendum to the Manchester Core Strategy 2024.

13.16. Paragraph 12.4 supports this stating "Tall buildings by their very nature can dominate the street scene and be highly visible over long distances. They can also have an impact on the local micro-climatic conditions, for example, by

creating wind tunnels. It is for these reasons that it is considered particularly important that they are designed to the highest quality, both in terms of appearance and their impact on the functioning of surrounding space."

### Guidance

**National Planning Practice Guidance (2021)**

13.17. The NPPG identifies the potential for tall and large buildings to affect the wind microclimate, as part of the National Design Guide as set out below.

13.18. The National Design Guide (2021) states in Paragraph 41 that good design "enhances positive qualities and improves negative ones. Some features are physical, including:…environment – including landscape and visual impact, microclimate, orientation, flood risk, noise, air and water quality."

13.19. The National Design Guide (2021) also states in Paragraph 71 that: "Proposals for tall buildings (and other buildings with a significantly larger scale or bulk than their surroundings) require special consideration. This includes their […] environmental impacts, such as […] wind. These need to be resolved satisfactorily"

**Historic England Advice Note 4: Tall Buildings, 2022**

13.20. The Historic England Advice Note 4: Tall Buildings (2022) states in Section 3.3 that:

*"The following factors need to be considered to determine the impacts a tall building could have upon the historic environment[ …] the influence on local micro-climates such as creation of wind tunnels, canyon effect, over-shadowing, glare, and air quality and effect on heritage assets in terms of the impact these micro-climatic changes could have upon their fabric, and how they are experienced." A*

**Building Aerodynamics, T. Lawson, 2001**

13.21. Building Aerodynamics by Tom Lawson sets out the Lawson Comfort Criteria for defining the suitability of wind conditions, as well as guidance on how to apply the criteria. The Lawson Comfort Criteria has been used to assess pedestrian comfort within the application Site and surrounding area, in line with industry standards.

## Assessment Methodology and Significance Criteria

### Scenarios Tested

13.22. Testing was undertaken using high-resolution Computational Fluid Dynamics (CFD), using a full-scale digital model of the Site and surrounding area.

13.23. The following EIA scenarios were assessed for wind microclimate:

- Scenario 1: Existing Baseline (existing Site as of December 2025 including any developments that are currently on site as per the committed development schedule)
- Scenario 2: Existing Baseline + Proposed Development.
- Scenario 3: Existing Baseline + Proposed Development + Cumulative.
- Scenario 4: Existing Baseline + Proposed Development + IDM Masterplan (future surrounds/ future phases) + Cumulative

13.24. The above scenarios 1 to 3 were assessed directly in CFD, in the absence of hard or soft landscaping, to ensure conservative results.

13.25. Scenario 4 was assessed qualitatively, as the precise form of the future phases of the IDM Masterplan are subject to future planning applications.

13.26. All committed developments within 400m of the Site were considered. Those which were considered to be sufficiently advanced (i.e. with a status of "under construction" "or "complete" in the appended Committed Developments table) to be considered part of the existing baseline, were included within all scenarios. Those which were not considered sufficiently advanced (i.e. with a status of "consented" in the appended Committed Developments table) were only included as part of the cumulative surrounds for Scenario 3.

13.27. All committed developments over 400m from the Site were scoped out of the assessment on grounds of distance from the Site.

## The Study Area

13.28. The study area for this assessment comprises 400 m radius from the centre of the Site. This is the industry standard value for the UK. This distance is considered sufficient to capture all wind effects on Site, as well as those effects on the surrounding area.

## Surveys and Data Sources

13.29. No surveys were undertaken with regards to wind microclimate.

13.30. 30 years-worth of historical climate data were obtained from the UK Met Office for Manchester International Airport measurement station to create the underlying wind statistics for the assessment.

## Source of Effect

13.31. The Proposed Development would have the potential to cause effects on sensitive receptors by creating unsuitable wind conditions due to a combination of downdrafts, corner accelerations and channelling between buildings.

13.32. In order to measure wind effects, 3D models of the Proposed Development, existing surroundings and nearby cumulative schemes, as appropriate, were created and tested in CFD.

13.33. CFD has been chosen as a method for this study as physical limitations on the number of probes associated with wind tunnel testing would restrict the potential coverage of the Site and surrounding area and could cause significant wind effects to be missed. GIA's High resolution CFD is used to ensure that accurate and conservative results were obtained.

13.34. GIA's CFD methods have been extensively correlated to physical data to ensure accuracy and also allows for a greater level of detail (such as terrain undulations and fine building details) to be captured by the model, as well as allowing the ability to test at full scale.

13.35. The testing was performed from 18 wind angles, representing all wind directions and spaced so that no individual wind angle is representative of more than 10% of annual winds. Mean wind speeds and turbulence levels (to allow the calculation of gust speeds) were measured at 1.5m above ground level and any raised areas which are accessible to pedestrians, for all wind directions.

13.36. The measured mean and gust-equivalent-mean wind speeds were combined with wind statistics, based upon 30 years of wind climate data from Manchester Airport and used to undertake a statistical analysis of the wind climate prevailing across the area.

**Lawson Comfort Criteria**

13.37. The CFD results were "graded" against the Lawson Comfort Criteria and the Lawson Safety Criteria. The commonly used London Docklands Development Corporation (LDDC) method of the Lawson Criteria is set out in Table 13.1 and Table 13.2 below.

Table 13.1: Lawson Comfort Criteria (LDDC Variant)

| Comfort Category | Mean Wind Speed (5% exceedance) | Description |
|---|---|---|
| Sitting | 4m/s | Acceptable for outdoor sitting use (e.g. cafes, benches, balconies) |
| Standing | 6m/s | Acceptable for main building entrances, pick-up / drop-off points and bus stops |
| Walking (Leisure) | 8m/s | Acceptable for strolling |
| Walking (Business) | 10m/s | Acceptable for external pavements, walking purposefully without lingering |
| Uncomfortable | >10m/s | Not comfortable for regular pedestrian access |

Table 13.2: Lawson Safety Criteria (LDDC Variant)

| Safety Category | Mean Wind Speed (0.025% exceedance) | Description |
|---|---|---|
| No Safety Exceedance | <15m/s | No significant wind safety risks |
| S15 (Distress) | >15m/s | Unsafe for frail individuals or cyclists |
| S20 (Safety) | >20m/s | Wind conditions considered unsafe for all users |

**Target Conditions**

13.38. The wind assessment takes into account seasonal variations in wind conditions and also seasonal variations of pedestrian activities. Amenity spaces (such as parks, terraces or balconies) would experience maximum usage during the summer (June, July and August), so the suitability of these spaces are based on the results in these months. For other receptors (such as thoroughfares, waiting areas such as bus stops, or building entrances) they can be expected to be used throughout the year, so the suitability of these spaces are based on the results for the windiest season (typically winter, consisting of December, January and February).

13.39. For a typical mixed-use urban area within which the Site is located, the desired wind microclimate would typically need to have areas acceptable for sitting, standing (including at entrances of buildings) and walking use.

13.40. The target conditions, in terms of pedestrian comfort and safety risks due to strong winds, for each type of receptor are set out below.

**Pedestrian Comfort**

13.41. The target is for the majority of thoroughfares to be suitable for leisure walking. Localised regions of business walking can be tolerated as a transitory pedestrian will pass through them relatively quickly, but an extensive region of business walking is not acceptable.

13.42. Within roadways, business walking is acceptable as these areas will only be used by people undertaking high energy activities such as cycling or brisk walking to cross the road. Uncomfortable conditions are not acceptable in pedestrianised areas.

13.43. The areas immediately outside any building entrances should be suitable for standing use during the windiest season to provide a “buffer” between the still conditions in interior spaces and the general thoroughfare.

13.44. Bus stops, tram stops or railway platforms would be targeted to be suitable for standing, as pedestrians would be expected to dwell in these spaces for a longer duration than a general thoroughfare. This applies to the bus stop on Charles Street to the south of the Site and to the bus stops on Sackville Street to the northeast of the Site.

13.45. Amenity areas such as parks and gardens are targeted to be suitable for a mixture of standing and sitting in summer conditions. This applies to Vimto Park, which is located to the northeast of the Site, to the residential garden located to the east of 50 Granby Row, as well as the proposed mixed amenity space that will be introduced across the west of the Site, and future amenity within the cumulative Weston Halls & Pendulum Hotel scheme (144791/FO/2025).

13.46. Specific seating areas are targeted to be suitable for sitting in summer conditions. This applies to spill-out bar/café/restaurant seating within the Pendulum Hotel to the south of the Site.

**Strong Winds**

13.47. Wind safety risk due to strong winds is based on the level of wind speed recorded for a “single instance” annually (defined as 0.025% of the year).

13.48. Any location which is accessible to pedestrians and cyclists would be considered to have an unacceptable level of wind safety risk due to strong winds if it falls within the S15 (distress) category or the S20 (safety) category as set out in Table 13.2.

13.49. For locations where access is restricted so that the only likely usage would be able bodied construction or maintenance workers (such as within the site hoardings during construction), an unacceptable wind risk would only be should conditions fall within the S20 (safety) category, as set out in Table 13.2.

13.50. Any areas which show up as subject to strong winds will require mitigation, unless they are in locations where pedestrian access can be controlled in the event of strong winds. This applies to all thoroughfares (for pedestrians) and roads (for cyclists) around the Proposed Development.

**Identification of Sensitive Receptors**

13.51. The following sensitive receptors have been identified and are shown in Figure 13.1:

- Throughfares on and around the Site (targeted to be suitable for leisure walking in winter);
- Roadways around the Site (targeted to be suitable for business walking in winter);
- Entrances to the Proposed Development (marked E, targeted to be suitable for standing in winter);
- Existing off-Site entrances (marked O, targeted to be suitable for standing in winter);
- Bus stop on Charles Street to the south of the Site and on Sackville Street to the northeast of the Site (marked B, targeted to be suitable for standing in winter);
- Existing amenity in the form of Vimto Park directly south of the Site and the residential garden located to the east of 50 Granby Row (marked PG1 and PG2 respectively, targeted to be suitable for a mix of sitting and standing in summer); and
- Existing spill-out seating within the Pendulum Hotel to the south of the Site (marked S1, targeted to be suitable for sitting in summer).
- Introduced mixed use amenity space across the west of the Proposed Development (marked A1, targeted to be suitable for a mix of sitting and standing in summer).
- For the cumulative scenario, future mixed amenity spaces within the neighbouring Weston Halls & Pendulum Hotel scheme (144791/FO/2025) is also included (marked A2, targeted to be suitable for a mix of sitting and standing in summer).

## Significance Criteria

13.52. A significant effect is defined as any effect where:

- Conditions at an existing receptor which were suitable for the intended use (in accordance with the Lawson Comfort Criteria) in the baseline are made unsuitable by the inclusion of the Proposed Development;
- Conditions at an introduced receptor are not suitable for the intended use (in accordance with the Lawson Comfort Criteria); or
- The inclusion of the Proposed Development causes the introduction of a wind safety risk due to strong winds (in accordance with the Lawson Safety Criteria).

13.53. An increase in windiness relative to the baseline will be considered not significant if the wind speed is not expected to exceed the limit for the pedestrian activity being undertaken in that area.

13.54. Any significant adverse effects would require mitigation. Should mitigation measures be required to provide wind conditions within a particular area / space to be suitable for their intended use, or are required to mitigate against predicted strong winds, the areas identified requiring suitable mitigation measures will be developed in consultation with the Applicant and the Design Team. Where necessary, mitigation measures will be tested through additional rounds of CFD studies. Following mitigation, the scale of any residual effects will be identified.

13.55. The significance of effects are determined by the sensitivity of the receptors and the magnitude of the impacts. These are set out in Tables 13.3 and 13.4.

Table 13.3: Criteria for Sensitivity of Wind Receptors

| Sensitivity | Examples of Receptor |
|---|---|
| High | All locations which are accessible to pedestrians or cyclists on and around the Site, plus any introduced private external amenity spaces. |
| Medium | Locations for which access is restricted to construction or maintenance workers (such as those within the site hoardings during construction). |
| Low | Locations which are not accessible at any time. |

Table 13.4: Criteria for Magnitude of Wind Impacts

| Magnitude of Impact | Criteria for Assessing Effect |
|---|---|
| Major | Wind conditions which are three categories windier/calmer than the target conditions (unless consistent with the baseline conditions) |
| Moderate | Wind conditions which are two categories windier/calmer than the target conditions (unless consistent with the baseline conditions) |
| Minor | Wind conditions which are one category windier/calmer than the target conditions (unless consistent with the baseline conditions) |
| Negligible | Wind conditions which are consistent with the target conditions or consistent with the baseline conditions. |

13.56. Effect magnitude is defined by the severity of the deviation from the standards set out by the Lawson criteria. Exceedances of the safety criteria are deemed to be the most critical, given their potential effect on pedestrians' wellbeing, i.e. they may be unduly exposed to the potential for harm. Such effects are thus deemed to have a major impact magnitude. Where the comfort criteria are not met, i.e. where the conditions are too windy for a particular receptor to be sufficiently comfortable for existing or planned pedestrian uses and thus inconvenient but not unsafe, the magnitude of such effects is determined by the number of categories by which the target condition is exceeded (minor for one category up to major for three categories over the target). Effects where the comfort conditions are consistent with the target conditions are considered negligible.

13.57. Any adverse effects which make conditions one, two or three categories windier than the target, or introduce wind safety risks (i.e. minor, moderate of major adverse effects in Table 13.5 are considered to be significant in EIA terms and would require mitigation. Negligible or beneficial effects (of any magnitude) are not considered significant in EIA terms as they would not require mitigation.

13.58. All construction wind effects are temporary, and all operational effects are permanent.

Table 13.5: Criteria for Significance of Wind Effects

| Significance of Impact | Criteria for Assessing Impact |
|---|---|
| Major Adverse | Wind conditions which are three categories windier than the target conditions (unless consistent with the baseline conditions)<br>OR<br>Wind safety risks due to strong winds are introduced by the inclusion of the Proposed Development |
| Moderate Adverse | Wind conditions which are two categories windier than the target conditions (unless consistent with the baseline conditions) |
| Minor Adverse | Wind conditions which are one category windier than the target conditions (unless consistent with the baseline conditions) |
| Negligible | Wind conditions which are consistent with the target conditions<br>OR<br>Wind conditions which are consistent with the baseline conditions |
| Minor Beneficial | Wind conditions which are one category calmer than the target conditions (unless consistent with the baseline conditions) |
| Moderate Beneficial | Wind conditions which are two categories calmer than the target conditions (unless consistent with the baseline conditions) |
| Major Beneficial | Wind conditions which are three categories calmer than the target conditions (unless consistent with the baseline conditions) |

| | |
|---|---|
| | OR<br>Wind safety risks due to strong winds are eradicated by the inclusion of the Proposed Development |

## Baseline Conditions

### Scenario 1: Baseline Conditions

13.59. To ascertain baseline conditions, a CFD scenario was tested incorporating the existing buildings on Site within the existing surrounds.

13.60. The existing surrounds incorporated the following committed developments which were considered sufficiently advanced (and in close enough proximity to the Site) to be included within the baseline:

- IQ Echo Street (136874/FO/2023)
- Princess House (131733/LO/2021 and 131732/FO/2021)
- London Road (125712/FO/201 (Refreshed scheme of 116099/FO/2017)

13.61. The status of the above developments is as described in the list of committed developments which was submitted to, and agreed with, MCC in advance of the application submission.

13.62. The results for the existing baseline (Scenario 1) are presented graphically in Figures 13.2 to 13.4.

- Wind safety at ground level for Scenario 1 is shown in Figure 13.2
- Winter Comfort at ground level for Scenario 1 is shown in Figure 13.3
- Summer Comfort at ground level for Scenario 1 is shown in Figure 13.4

**Strong Winds**

13.63. All locations within the Site and immediate surrounds meet the safety criteria and there are not considered to be wind safety risks in these areas.

**Pedestrian Comfort**

13.64. Comfort conditions range between suitable for sitting and standing across the study area, in all seasons.

13.65. Conditions are windier to the west of the Site, and calmer to the east.

13.66. The comfort criteria are entirely met at the following receptors:

- Conditions for thoroughfares are suitable for a mix of sitting and standing. This is suitable for the intended use.
- Conditions for roadways are suitable for a mix of sitting and standing. This is suitable for the intended use.
- Conditions for all existing off-Site entrances (marked O in results figures) are suitable for sitting in winter. This is one category calmer than the target condition.
- Conditions for the bus stops on Charles Street and Sackville Street (marked B in results figures) are suitable for sitting in winter. This is one category calmer than the target condition.
- Conditions for the amenity within Vimto Park (marked PG1 in results figures) and the residential gardens located east of 50 Granby Row (marked PG2 in results figures) are suitable for sitting in summer. This ranges between one category calmer than the target condition and suitable for the intended use.
- Conditions for the spill out seating within the Pendulum Hotel to the south of the Site (marked S1 in results figures) are suitable for sitting in summer. This is suitable for the intended use.

13.67. For the baseline scenario, pedestrian comfort conditions are suitable for existing pedestrian uses, including the use of thoroughfares, roadways, building entrances, bus stops, amenity spaces and spill-out seating areas.

## Identification and Evaluation of Likely Significant Effects

### Construction Phase

13.68. For introduced receptors (proposed entrances) construction phase effects are not relevant as the receptors will only become operational once the relevant phases of the Proposed Development are operational.

13.69. During construction, conditions will gradually change from the baseline conditions to conditions for the completed and operational development. Therefore, construction effects can be inferred from the effects due to the completed and operational development.

13.70. Operational wind comfort effects (as described in the results of Scenario 2 in the next section) on thoroughfares, roadways, off-Site entrances, bus stops, off-site amenity and off-site spill out seating for the completed and operational development are negligible (not significant), so all demolition and construction wind effects will also be negligible (not significant).

### Operational Phase

13.71. To ascertain operational effects, one scenario was assessed (as outlined below). Operational effects are set out for this scenario.

**Scenario 2: Existing Baseline + Proposed Development**

13.72. A scenario consisting of the Proposed Development, within the existing surrounds (baseline), was tested in CFD. The results for Scenario 2 are presented graphically within figures 13.5 - 13.7:

- Wind safety at ground level for Scenario 2 is shown in Figure 13.5.
- Winter Comfort at ground level for Scenario 2 is shown in Figure 13.6.
- Summer Comfort at ground level for Scenario 2 is shown in Figure 13.7.

**Strong Winds (Scenario 2) mahjong**

13.73. All locations within the Site and immediate surrounds meet the safety criteria and there are not considered to be wind safety risks in these areas. This is a negligible wind effect (not significant).

**Pedestrian Comfort (Scenario 2)**

13.74. Winter comfort conditions range between suitable for sitting, standing and leisure walking. Summer conditions range between suitable for sitting and standing.

13.75. Scenario 2 shows windier conditions in some locations, especially to the east of the Site compared to the baseline.

13.76. Conditions for thoroughfares are suitable for a mix of sitting, standing and leisure walking. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.77. Conditions for roadways are suitable for a mix of sitting, standing and leisure walking. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.78. Conditions for the principal proposed entrances (marked E in results figures) are suitable for sitting and standing in winter. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.79. Conditions for all existing off-Site entrances (marked O in results figures) are suitable for sitting or standing in winter. This ranges between one category calmer than the target condition and suitable for the intended use and is consistent with the baseline so represents a negligible wind effect (not significant).

13.80. Conditions for the bus stops on Charles Street and Sackville Street (marked B in results figures) are suitable for sitting and standing in winter. This ranges between one category calmer than the target condition and suitable for the intended use so represents a negligible wind effect (not significant).

13.81. Conditions for the amenity spaces within Vimto Park (marked PG1 in results figures) and the residential gardens located east of 50 Granby Row (marked PG2 in results figures) are suitable for sitting in summer. This ranges between one category calmer than the target condition and suitable for the intended use and is consistent with the baseline so represents a negligible wind effect (not significant).

13.82. Conditions for the spill out seating within the Pendulum hotel to the south of the Site (marked S1 in results figures) are suitable for sitting in summer. This is suitable for the intended use and is consistent with the baseline so represents a negligible wind effect (not significant).

13.83. Conditions for the introduced mixed amenity space across the west of the Proposed Development (marked A1 in results figures) are suitable for a mix of sitting and standing in summer. This is suitable for the intended use so represents a negligible wind effect (not significant).

13.84. For the scenario for the Proposed Development within existing surrounds (Scenario 2), pedestrian comfort conditions are suitable for existing and intended pedestrian uses, including the use of thoroughfares, roadways, building entrances (existing and proposed), bus stops, amenity spaces and spill-out seating areas.

## Cumulative Effects

13.85. The following committed developments have been considered in the assessment as cumulative developments that have been granted planning consent to assess cumulative effects:

- Faraday Building, Sackville Street (143769/FO/2025)
- Energy Centre (141496/FO/2024)
- Sister Plot C (143024/FO/2025)
- Student Castle Hulme Street (121252/FO/2018, 139489/NMC/2024)
- Weston Halls & Pendulum Hotel (144791/FO/2025)

13.86. Faraday Building, Sackville Street (143769/FO/2025) has been included in Scenario 3 as an empty site. While marked for demolition, plans have not yet been made available in the public domain.

13.87. All other committed developments (as listed in the appended committed developments table) have been scoped out of the assessment on grounds of distance from the Site.

### Construction

13.88. For introduced receptors (proposed entrances) construction phase effects are not relevant as the receptors will only become operational once the relevant phases of the Proposed Development are operational.

13.89. Operational wind comfort effects (as described in the results of Scenario 3 in the next section) on thoroughfares, roadways, off-Site entrances, bus stops, off-site amenity and off-site spill out seating for the completed and operational development are negligible (not significant), so all demolition and construction wind effects will also be negligible (not significant).

### Operation

13.90. The following scenario was assessed to determine cumulative effects. Cumulative operational effects are set out for this scenario.

**Scenario 3: Existing Baseline + Proposed Development + Cumulative Schemes**

13.91. A scenario consisting of the Proposed Development, within the cumulative surrounds, was tested in CFD. The results for Scenario 3 are presented graphically within figures 13.8 - 13.10:

- Wind safety at ground level for Scenario 3 is shown in Figure 13.8
- Winter Comfort at ground level for Scenario 3 is shown in Figure 13.9
- Summer Comfort at ground level for Scenario 3 is shown in Figure 13.10

**Strong Winds (Scenario 3)**

13.92. All locations within the Site and immediate surrounds meet the safety criteria and there are not considered to be wind safety risks in these areas. This is a negligible wind effect (not significant).

**Pedestrian Comfort (Scenario 3)**

13.93. Winter comfort conditions range between suitable for sitting, standing and leisure walking. There is a highly localised region of business walking on Sackville Road at the south east corner of the cumulative Weston Halls & Pendulum Hotel scheme (144791/FO/2025), but this is of negligible extent so would not adversely impact the pedestrian experience in this location. Summer conditions range between suitable for sitting and standing.

13.94. Conditions for Scenario 3 show a similar overall level of wind conditions to Scenario 2, albeit calmer to the north of the study area and windier to the south of the study area

13.95. Conditions for thoroughfares are suitable for a mix of sitting, standing and leisure walking. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.96. Conditions for roadways are suitable for a mix of sitting, standing and leisure walking. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.97. Conditions for the principal proposed entrances (marked E in results figures) are suitable for sitting and standing in winter. This is suitable for the intended use and represents a negligible wind effect (not significant).

13.98. Conditions for all existing off-Site entrances (marked O in results figures) are suitable for sitting or standing in winter. This ranges between one category calmer than the target condition and suitable for the intended use and is consistent with the baseline so represents a negligible wind effect (not significant).

13.99. Conditions for the bus stops on Charles Street and Sackville Street (marked B in results figures) are suitable for sitting and standing in winter. This ranges between one category calmer than the target condition and suitable for the intended use so represents a negligible wind effect (not significant).

13.100. Conditions for the amenity spaces within Vimto Park (marked PG1 in results figures) and the residential gardens located east of 50 Granby Row (marked PG2 in results figures) are suitable for sitting in summer. This ranges between one category calmer than the target condition and suitable for the intended use and is consistent with the baseline so represents a negligible wind effect (not significant).

13.101. Conditions for the introduced mixed amenity space across the west of the Proposed Development (marked A1 in results figures) are suitable for sittingin summer. This is suitable for the intended use so represents a negligible wind effect (not significant).

13.102. Conditions for the future mixed amenity space (marked A2 in results figures) within the cumulative Weston Halls & Pendulum Hotel scheme (144791/FO/2025) are suitable for a mix of sitting and standing in summer. This is suitable for the intended use so represents a negligible wind effect (not significant).

13.103. For the scenario for the Proposed Development within cumulative surrounds (Scenario 3), pedestrian comfort conditions are suitable for existing and intended pedestrian uses, including the use of thoroughfares, roadways, building entrances (existing and proposed), bus stops, amenity spaces and spill-out seating areas.

**Scenario 4: Existing Baseline + Proposed Development + IDM Masterplan (future surrounds/ future phases) + Cumulative**

13.104. A scenario consisting of the Proposed Development, within the cumulative surrounds and also considering the future phases of the IDM Masterplan was considered qualitatively.

13.105. The future phases of the ID Manchester Masterplan would result in a substantial increase of the scale and massing of buildings to the east the site. This would provide more shelter for the Proposed Development upwind from the north easterly wind direction and provide downwind blockage from the westerly and south westerly wind directions, both of these would result in calmer wind conditions on and around the site. As such, any effects associated with Scenario 4 would be less severe than those associated with Scenario 3 and Scenario 3 would represent the worst case scenario for the completed Proposed Development in future surrounds.

## Mitigation Measures

### Construction Phase

13.1. No additional mitigation measures are proposed for the construction phase of the Proposed Development.

### Operational Phase

13.2. No additional mitigation measures are proposed for the operational phase of the Proposed Development.

## Residual Effects

### Construction Phase

13.1. All residual construction effects would be negligible (not significant).

### Operational Phase

13.1. Residual operational effects would range from minor beneficial (not significant) at proposed entrances, to negligible (not significant) at all other receptors.

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Demolition and Construction Phase | | | | |
| Negligible effect | All | None | N/A | Negligible temporary effects (not significant) |
| Operational Phase | | | | |
| Minor Beneficial effect on wind comfort | Introduced entrances at all locations around the eastern block and also the northern and southwestern entrances of the western block. | None | N/A | Minor Beneficial permanent effects on wind comfort (not significant) |
| Negligible effect | All thoroughfares, roadways, existing off-site entrances, the proposed eastern entrance of the western block, bus stops, amenity and spill out seating | None | N/A | Negligible permanent effects (not significant) |

## Monitoring

13.2. No monitoring of the wind microclimate is recommended.

## Reference List

13.3. This ES Chapter has been prepared in reference to the following:


- Ministry of Housing, Communities and Local Government (MHCLG), National Planning Policy Framework (NPFF). 2024
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government. Planning Practice Guidance. 2021.
- Greater Manchester Combined Authority Joint Development Plan “Places for Everyone”. 2024
- Manchester City Council, Manchester Core Strategy (2012 – 2027)
- Historic England Advice Note 4: Tall Buildings, 2022
- Lawson, T.V. Building Aerodynamics. Imperial College Press, 2001.

# 14. Climate Change

## Introduction

14.1. This Chapter of the ES has been prepared by Buro Happold and assesses the likely effects of the Proposed Development with respect to climate change. 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 effects and the likely residual effects after these methods have been adopted.

14.2. Climate change resilience has been assessed in the form of a Climate Change Risk Assessment (CCRA), which is reported in full in Appendix 14.1. The results of the assessment are summarised in Part 1 of this chapter. The assessment of the likely effects of the Proposed Development on greenhouse gas emissions have been reported in Part 2 of this chapter.

14.3. This Chapter is accompanied by five technical appendices:

- Appendix 14.1: Climate Change Resilience Risk Assessment;
- Appendix 14.2: Greenhouse Gas Calculation Inputs;
- Appendix 14.3: Scope 3 Emissions Considerations; and
- Appendix 14.4: Legislation, Policy and Guidance.
- Appendix 14.5: Whole Life Carbon Assessment

| | Lead Author | Reviewer |
|---|---|---|
| Name | Rachael Harrison | Patrick Little |
| Company | Buro Happold | Buro Happold |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | BSc Geography | BSc Environmental Geoscience<br>MSc Water Resources Management<br>Practitioner IEMA Membership |
| Years technical experience (in technical area) | EIA & Climate: 8 years | EIA practitioner: 14 years<br>Climate Change assessments in EIA: 7 years |
| Number of EIA's delivered to date | Climate Change assessments in EIA: 5 | Climate Change assessments in EIA: 20+ |

## Assumptions and Limitations

14.4. In undertaking this assessment, there are a number of assumptions and limitations affecting the outputs. These comprise:

- In line with the principles set out in BS EN 15978, a Reference Study Period (RSP) of 60 years after opening (the fully operational opening year) has been used. The assessment reported in this chapter is also based on various other assumptions, set out in the Methodology section of this chapter;
- A Whole life carbon assessment (WLCA) has been prepared by Buro Happold based on detailed scheme information for operational energy and embodied carbon. These are the results used in the calculation of GHG emissions for the Proposed Development, based on expected floor areas and building uses. Where information has been unavailable, appropriate benchmarks have been utilised. Whilst these benchmarks have given an estimate of the scale of GHG emissions associated with the Proposed Development, they will not be completely accurate due to variations between buildings, including geography, construction processes and construction materials used. However, these are considered the best methods for estimating GHG emissions available to us at

the time the chapter was prepared. Additionally, where there is uncertainty, a conservative approach has been applied. The WLCA has been provided within Appendix.14.5 (ES Volume II).

- The embodied carbon from maintenance and replacement (lifecycle stage B1-B5) has been provided within the WLCA (Appendix 14.5) and has been determined using RICS 2nd edition assumption in lieu of detailed maintenance scenario;
- There is some inherent uncertainty in the Department for Energy Security and Net Zero (DESNZ) emissions factors. The emissions factors are in line with the UKs decarbonisation trajectory towards net zero in 2050, however this is an assumption, and the actual emissions trajectory is unknown.
- The main uncertainty regarding the CCRA relates to the climate change projections that the scheme is assessed against. Climate change projections (e.g. UKCP18) are presented in appendix 14.1 using a set of scenarios that capture the relationships between human choices, emissions, concentrations and temperature change. The UKCP18 climate change projections have been selected, as they are UK specific, and relatively conservative. Some scenarios are consistent with continued dependence on fossil fuels, while others are associated with deliberate actions to reduce GHG emissions. Therefore, these climate change projections contain inherent uncertainty, reflecting the uncertainty associated with quantifying human activities (including technological change) and their influence on climate. There are four Representative Concentration Pathway (RCP) scenarios available in the UKCP18 climate projections: RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5. In line with IEMA EIA Guide to Climate Change Resilience and Adaptation, 2020, RCP 8.5 has been used, which represents the most conservative, highest-impact scenario.

## Part 1: Climate Change Resilience

14.5. Climate change resilience has been assessed in the form of a Climate Change Risk Assessment (CCRA), which is reported in full in Appendix 14.1. The full risk assessment methodology is set out in the appendix, including the route to establishing the risk rating.

14.6. Climate hazards and hazards exacerbated by climate change of relevance to the Proposed Development have been identified and the associated risks have been assessed, based on the probability of an event occurring and the consequence, if it did occur. Mitigation measures have been identified for risks where required, and with the appropriate mitigation measures in place, the risk ratings have been reduced. The residual risk ratings are set out in Table 14.1.

Table 14.1 Summary of residual risks ratings based on probability and consequence taking into account mitigation measures

| Hazard | Risk rating pre-mitigation | Residual Risk | | |
|---|---|---|---|---|
| | | Probability rating (1-5) | Consequence rating (1-7) | Residual risk rating |
| **Rainstorm** | 5 | 5 | 1 | 5 |
| **Heavy snow** | 4 | 2 | 2 | 4 |
| **Fog** | 5 | 5 | 1 | 5 |
| **Hail** | 5 | 5 | 1 | 5 |
| **Severe wind** | 8 | 4 | 1 | 4 |
| **Extra tropical storm** | 12 | 3 | 3 | 9 |
| **Lightning** | 6 | 1 | 6 | 6 |
| **Extreme winter conditions** | 12 | 4 | 2 | 8 |

| Hazard | Risk rating pre-mitigation | Residual Risk | | |
|---|---|---|---|---|
| | | Probability rating (1-5) | Consequence rating (1-7) | Residual risk rating |
| **Cold wave** | 12 | 4 | 2 | 8 |
| **Extreme cold days** | 12 | 4 | 2 | 8 |
| **Heat waves** | 16 | 4 | 3 | 12 |
| **Extreme hot days** | 16 | 4 | 3 | 12 |
| **Drought** | 12 | 4 | 2 | 8 |
| **Wild fire** | 6 | 1 | 6 | 6 |
| **Flash/surface flood** | 4 | 1 | 4 | 4 |
| **River flood** | 4 | 1 | 4 | 4 |
| **Groundwater flood** | 4 | 1 | 4 | 4 |
| **Subsidence** | 4 | 1 | 4 | 4 |
| **Water-borne disease** | 6 | 2 | 3 | 6 |
| **Vector borne disease** | 3 | 1 | 3 | 3 |
| **Air-borne disease** | 6 | 2 | 3 | 6 |
| **Insect infestation** | 4 | 2 | 2 | 4 |
| **Key** | | | | |
| Low risk | Medium Risk | High Risk | | |

14.8. The assessment has concluded that, with the incorporation of the proposed mitigation, the residual risks related to climate change are in line with typical expectations for urban developments of this nature in the UK. Nevertheless, due to the nature of many hazards exacerbated by climate change, some level of residual risk remains.

## Part 2: Greenhouse Gas Emissions

## Relevant Legislation, Policy and Guidance

14.9. The following legislation, policy and guidance is of relevance to this assessment. Further information on these document is provided in Appendices 14.1 and 14.4 (ES Volume II).

## Legislation

- Paris Agreement (United Nations Framework Convention on Climate Change, 2015);
- The Special Report on Global Warming of 1.5oC, International Panel on Climate Change (IPPC) 2018;
- The Climate Change Act (2008) & The Climate Change Act 2008 (2050 Target Amendment) Order 2019;
- Planning and Energy Act (2008);
- Carbon Budgets Order (2021); and

- The Seventh Carbon Budget, (Climate Change Committee (CCC) 2025).

## Policy

**National**

- National Planning Policy Framework (NPPF) Ministry of Housing Communities & Local Government (MHCLG (formerly DLUHC), 2025);
- National Planning Practice Guidance (NPPG) (MHCLG (formerly DLUHC), 2025);
- The Building Regulations Part L 2021 Edition;
- The Carbon Plan: Delivering our Low Carbon Future (DESNZ (formerly DECC), 2011);
- British energy security strategy (DESNZ, 2022);
- Net Zero Strategy: Build Back Greener (HM Government, 2021);
- UK Climate Change Risk Assessment (HM Government, 2022); and
- The Third National Adaptation Programme and the Fourth Strategy for Climate Adaptation Reporting (Defra, 2023).

**Regional**

- Places for Everyone (PfE) Joint Development Plan for Boulton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan (2024).

**Local**

- Guide to Development in Manchester Supplementary Planning Document and Planning Guidance. Adopted April 2007;
- Manchester's Local Development Framework. Core Strategy Development Plan Document (MCC, 2012) (as amended, 2024);
- Manchester City Council Climate Change Action Plan 2020 – 2025;
- Manchester Climate Change Framework 2020 – 2025;
- Manchester City Council, Manchester Green and Blue Infrastructure Strategy (Implementation Plan Refresh 2021-2025); and
- Manchester City Council Climate Emergency Declaration (2019).

## Guidance

- IEMA EIA Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition (Institute of Environmental Management and Assessment (IEMA), 2022) (the 'IEMA GHG Guidance');
- RIBA 2030 Climate Challenge (Royal Institute of British Architects (RIBA), 2021);
- BS EN 15978 Sustainability of Construction Works – Assessment of Environmental Performance and Buildings – Calculation Method (British Standards Institution (BSI), 2011);
- Building Services Research and Information Association (BSRIA) (2024). Rules of Thumb Guidance for Building Services;
- Royal Institution of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment 2nd edition (RICS, 2023);
- UK Green Building Council (UKGBC) Embodied Carbon: Developing a Carbon Brief (UKGBC, 2017);
- Waste and Resource Action Programme (WRAP) Cutting Embodied Carbon in Construction Projects (WRAP, 2011a);
- WRAP Procurement Requirements for Carbon Efficiency (WRAP, 2011b);
- Greater London Authority Construction Scope 3 (Embodied) Guidance on Greenhouse Gas Accounting and Reporting (GLA, 2013);

- Mayor of London Whole Life-Cycle Carbon Assessments Guidance (GLA, 2022);
- Low Energy Transformation Initiative (LETI) Embodied Carbon Primer (LETI, 2020);
- LETI Climate Emergency Design Guide (2020);
- ISO 14090:2019 Adaptation to Climate Change – Principles, Requirements and Guidelines (BSI, 2019); and
- C40 Cities Climate Change Risk Assessment Guidance (C40 Cities 2018, Amended 2025).

## Assessment Methodology and Significance Criteria

14.10. The metric for assessing the climate change impacts of GHG emissions in this assessment is Global Warming Potential (GWP). This is expressed in units of $CO_2$ equivalent ($CO_2e$) over 100 years. This allows for the emissions of the seven key GHGs: carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride ($NF_3$) and sulphur hexafluoride ($SF_6$) expressed in terms of their equivalent global warming potential in mass of $CO_2e$.

14.11. There is currently no standard methodology for quantifying GHG emissions within the EIA process. The IEMA GHG Guidance instead advocates for flexibility and proportionality to suit the specific development being assessed.

14.12. A GHG emissions assessment typically covers the whole life of a development. This can be broken down into 'lifecycle stages' or 'modules' of the Proposed Development, as set out in BS EN 15978 Sustainability of Construction Works - Assessment of Environmental Performance of Buildings - Calculation Method, as shown in Figure 14.1.

14.13. With some minor exceptions, all activities within lifecycle stages A, B and C have been included in this assessment. Any activities that have been excluded are explained and justified in the 'Sources of GHG emissions excluded from the assessment' section, included later in the methodology section of the chapter. The assessment has taken into account the design detail currently available.

14.14. GHG emissions caused by an activity are often categorised into 'scope 1'. 'scope 2' or 'scope 3', following the guidance of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol suite of guidance documents (WRI and WBSCD, 2014).

14.15. The ES chapter does not refer to scope 1, 2 and 3 emissions throughout, instead referring to emissions by lifecycle stage. However, an overview of which scope the assessed emissions fall within is provided below.

14.16. Scope 1 emissions comprise direct emissions from owner or controlled sources. With respect to the proposed development, this may include emissions from vehicles owned by the Applicant or from fuel combustion on site during the construction stage. This would also generally include embodied carbon associated with use, maintenance, repair, refurbishment and replacement in the buildings during the operational stage.

14.17. Scope 2 emissions comprise indirect emissions from energy purchased by the Applicant. With respect to the proposed development, this may include electricity generated offsite, purchased and consumed by the Applicant. For example, electricity for lighting, heating, and cooling in the on-site construction site offices and in the building once complete and operational.

14.18. Scope 3 emissions comprise indirect value chain emissions, resulting from the activities of assets not controlled or owned by the Applicant occurring before or after they have control of an asset. With respect to the proposed development this may include:

- Upstream emissions related to the extraction, manufacture and transport of building materials to the site during construction and construction-related emissions from subcontractors.
- Downstream emissions related to the future leasing of the student accommodation, including purchased energy, water use, vehicle use and waste generated. This may also include downstream emissions associated with the demolition and management of waste from the development at the end of its life.

14.19. For the purpose of this assessment, in line with the principles set out in BS EN 15978, a Reference Study Period (RSP) of 60 years after opening (the fully operational opening year) has been used. For the purpose of the assessment, decommissioning has been assumed to take place in the final year of the RSP. However, it should be noted that the

Applicant does not necessarily propose to decommission the development at the end of this 60-year period. This is considered a conservative assumption.

## Scenarios Tested

14.20. This assessment has considered two scenarios. These are:

- Scenario 1: Existing Baseline (existing EIA Site, as of September 2025); and
- Scenario 2: Existing Baseline + Proposed Development

14.21. The remaining scenarios have not been assessed either because they do not represent a worst case scenario or because they include cumulative schemes. As set out in paragraph 14.62, Cumulative Effects, the atmospheric concentration of GHGs and the resulting effects on climate change are affected by all sources (anything emitting GHG) and sinks (anything absorbing GHG) globally, anthropogenic or otherwise. As GHG emission impacts and resulting effects are global rather than affecting one localised area, the approach to the assessment of cumulative effects for GHGs differs from that of many EIA topics where only projects within a geographically bounded study area would be included. As such, as stated in the IEMA Guidance, effects of GHG emissions from specific cumulative schemes should not be individually assessed, as there is no basis for selecting any particular cumulative project for assessment over any other. The Guidance goes on to advise that the contextualisation of GHG emissions should incorporate by its nature the cumulative contributions of other GHG sources which make up that context. An inter-development cumulative effects assessment has therefore not been undertaken on a specific cumulative scheme basis; however, the proposed development's GHG emissions have been considered in the context of both the UK national carbon budgets, the Tyndall Centre recommended energy only carbon budgets for Manchester City and Logika carbon budgets for Manchester City. As such, the cumulative contributions of other GHG sources that make up the national and Manchester City contexts have been considered within the assessment.

## The Study Area

14.22. GHG emissions impacts and resulting effects are global. As such, the spatial scope of the assessment is global.

14.23. In line with the advice provided in the IEMA GHG Guidance, the Proposed Development's GHG emissions have been considered in the context of both the UK national carbon budgets and Tyndall Centre recommended energy-only carbon budgets and Logika carbon budgets for Manchester City.

## Surveys and Data Sources

14.24. The assessment reported in this chapter is based on scheme information provided in the following documents:

- Energy and Carbon Statement (HCGE, 2025) (DN05 - Energy and Carbon Statement)
- Whole life Carbon Assessment (Buro Happold, 2025) (see Appendix 14.5)
- Circular Economy Statement (Buro Happold, 2025) (SISPH-BHE-ZZ-ZZ-RP-SU-00001 P02)
- Transport Assessment (Civic, 2025) (4026-CIV-XX-XX-R-H-40002 - Transport Assessment - v01)

## Source of Effect

**Construction Stage GHG Emissions**

14.25. Based on the criteria set out in Figure 14.1, the assessment of the construction stage takes into account the following sources of GHG emissions:

14.26. A1 – A3 Product Stage: GHG emissions associated with the material extraction, transportation and manufacturing of construction products; and

14.27. A4-A5 Construction process stage: GHG emissions associated with product delivery to the site and the installation process.

14.28. A Whole Life-Cycle Carbon Assessment (WLCA) has been prepared by Buro Happold, for the Proposed Development. The results from this assessment have been used to determine the GHG emissions relating to the construction stage of the Proposed Development. The WLCA has been appended within Appendix 14.5 (ES Volume II). Further

information on these results and how they have been applied in this assessment is provided in Appendix 14.2 (ES Volume II).

**Operational Stage GHG Emissions**

14.29. Based on the criteria set out in Figure 14.1, the assessment of the operational stage takes into account the following sources of GHG emissions:

- B1-B5 In-use stage: This stage captures embodied GHG emissions associated with the operation of the built asset over its period of use, from practical completion to end of its service life, including use, maintenance, repair, refurbishment and replacement. The results from The WLCA have been used to determine the GHG emissions relating to the in-use stage of the Proposed Development. The methodology that has been applied is set out in Appendix 14.5 (ES Volume II);
- B6 Operational energy: GHG emissions associated with the estimated total operational energy. Estimated GHG emissions associated with the estimated total operational energy have been obtained from the WLCA. Information on the methodology that has been applied is provided in Appendix 14.5 (ES Volume II).
- B7 Operational water: GHG emissions associated with operation water consumption and foul water. Estimated GHG emissions associated with these sources has been obtained from the WLCA. Information on the methodology that has been applied is provided in Appendix 14.5 (ES Volume II); and
- Operational transport emissions, which are not included in Figure 14.1 but have also been included in the assessment due to the substantial role they play in the UK's total GHG emissions. Surface transport is the largest source of GHG emissions in the UK, accounting for 24% of emissions in 2023, according to the Committee on Climate Change (2025). The GHG emissions associated with vehicles travelling to and from the Proposed Development during the operational stage have been estimated by applying a DESNZ emissions factor for average vehicle use, to trip numbers provided by the project transport consultant, Civic Engineers, and an indicative trip distance figure, estimated by the Department for Transport. These emissions factors include wheel to tank emissions, as well as tail pipe emissions. Additional information on the assumptions that have been made is provided in Appendix 14.2 (ES Volume II).

**Decommissioning phase GHG emissions**

14.30. Based on the criteria set out in Figure 14.1, the assessment of the decommissioning stage takes into account the following sources of GHG emissions:

- C1-C4 End of Life stage: GHG emissions associated with the demolition and disassembly of the Proposed Development at the end of its life. Estimated GHG emissions associated with these sources have been obtained from the WLCA. Information on the methodology that has been applied is provided in Appendix 14.5 (ES Volume II).

**Sources of GHG Emissions Excluded from the assessment**

14.31. The IEMA guidance states that 'certain life cycle modules (or stages) can be excluded if these exclusions are clearly highlighted and justified by the practitioner using professional judgement and in accordance with the materiality and cut-off guidance.' In line with this guidance, the following sources of GHG emissions have been excluded from the scope of the assessment, as agreed in the Scoping Opinion (December, 2025) (Planning Ref: EIASCO/25/013).

- Operational Waste: The opportunities for design and construction decisions to significantly influence the reduction of GHG emissions associated with operational waste are low, as it is highly dependent on occupant behaviour and waste processing at the city scale by the Local Authority. The emissions associated with operational waste are also not expected to be material in scale, such that they could influence the overall significance of effects, and have therefore been scoped out;
- Carbon sequestration from green infrastructure: GHG emissions associated with carbon sequestration from proposed green infrastructure would be low relative to the total GHG emissions over the life of the Proposed Development. Any new planting would also reduce the overall emissions from the Proposed Development, rather than increase them, and a 10% biodiversity net gain is targeted. On this basis, excluding carbon sequestration from the assessment is considered conservative and robust.; and
- Module D – Beyond Assets Life Cycle Stage: the 'Beyond Asset Life Cycle' stage, encompasses emissions associated with activities beyond the site boundary and life cycle of the Proposed Development. This module relates to the repurposing of discarded building elements or any energy recovered from beyond a project's

lifecycle. Reliable information about how the components of the scheme could potentially be repurposed following its demolition at the end of its life is not currently available. Given that Module D lies outside the Proposed Development's lifecycle and only covers GHG emissions that could potentially be avoided as a result of repurposing of discarded materials, it is considered that the proposed assessment of Modules A to C (only) comprises a conservative assessment. On this basis, consideration of Module D has not been included in the scope of the assessment.

**Programme Assumptions**

14.32. It is anticipated that the construction programme for the Proposed Development will commence in August 2027, and take place over a duration of approximately 37 months, until August 2030. It is assumed that the operational phase for the Proposed Development would start the month following the completed works, September 2030. The end of life stage is assumed to start 60 years after the beginning of operation for the Proposed Development and be completed within 1 year, in line with the 60 year RSP.

**Consideration of Scope 3 Emissions**

14.33. As previously stated, this Climate Change ES chapter has been undertaken in line with the IEMA GHG Guidance and other best practice industry guidance. With some minor exceptions set out in the section above, the assessment has included a consideration of all scope 1, 2 and 3 GHG emissions from all activities within lifecycle stages A, B, and C of relevance to the Proposed Development, as set out in the Whole Life Carbon Assessment for the Built Environment (RICS, 2023) (the "RICS 2023 Guidance") and BS EN 15978 Sustainability of Construction Works - Assessment of Environmental Performance of Buildings - Calculation Method ("BS EN 15978") guidance.

14.34. The Supreme Court judgement on the application of Finch (on behalf of the Weald Action Group) v Surrey County Council and others (judgement given on 20 June 2024) has raised implications for the assessment of scope 3 emissions from development projects in the EIA process, potentially requiring the consideration of additional indirect emissions that do not, to date, require consideration under the relevant industry good practice guidance, including the IEMA GHG Guidance, the RICS 2023 Guidance and BS EN 15978.

14.35. A consideration of the Finch case judgement and the alignment of the assessment of Scope 3 emissions within this assessment with the judgement is provided in Appendix 14.3 (ES Volume II). The methodology employed in this assessment is considered to align with the Finch case Supreme Court judgement.

## Methodology for Determining Impact Magnitude and Sensitivity of Receptors

14.36. The impacts and effects of GHG emissions are global, with the global atmosphere serving as the sensitive receptor. The IEMA GHG Guidance advises that '*the receptor has a high sensitivity, given the severe consequences of global climate change and the cumulative contributions of all GHG emission sources*.' The quantity of GHG emissions produced would inform the impact magnitude. However, in line with the methodology set out in the IEMA GHG Guidance, it is not considered necessary to explicitly determine the sensitivity of the receptor or the magnitude of the impact in order to assess the significance of GHG emissions effects. As such, this ES Chapter makes no further reference to receptor sensitivity or impact magnitude.

14.37. As stated in paragraph 14.38, the assessment of significance for GHG emissions is determined based on whether the project supports or undermines a trajectory towards net zero and is in line with national and local policy requirements. The assessment of effect significance is set out in Table 14.11 and Table 14.12.

## Significance Criteria

14.38. Three overarching principles are set out in the IEMA GHG Guidance, which IEMA advise should be considered when looking to establish the effect significance of GHG emissions. These comprise:

- *'The GHG emissions from all projects will contribute to climate change, the largest interrelated cumulative environmental effect;*
- *The consequences of a changing climate have the potential to lead to significant environmental effects on all topics in the EIA Directive (e.g. human health, biodiversity, water, land use, air quality); and*
- *GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit; as such any GHG emissions or reductions from a project might be considered to be significant.'*

14.39. IEMA has further built on these principles in the guidance, as follows:

- '*When evaluating significance, all new GHG emissions contribute to a negative environmental impact; however, some projects will replace existing development or baseline activity that has a higher GHG profile. The significance of a project's emissions should therefore be based on its net impact over its lifetime, which may be positive, negative or negligible;*
- *Where GHG emissions cannot be avoided, the goal of the EIA process should be to reduce the project's residual emissions at all stages; and*
- *Where GHG emissions remain significant, but cannot be further reduced, approaches to compensate the project's remaining emissions should be considered.'*

14.40. The goal of the Paris Agreement is to limit global temperature rise to well below 2°C, aiming for 1.5°C, compared with pre-industrial levels, in order to stand a greater chance of avoiding severe adverse effects from climate change. The UK has set a legally binding GHG reduction target for 2050 through the Climate Change Act, including interim five-yearly carbon budgets, which define a trajectory towards net zero. The Climate Change Committee (CCC) has confirmed that the 2050 target and interim budgets are compatible with the required magnitude and rate of GHG emissions reductions required in the UK to meet the goals of the Paris Agreement, thereby limiting severe adverse effects.

14.41. To meet the 2050 target and interim budgets, action is required to reduce GHG emissions from all sectors, including urban development projects. As stated in the IEMA GHG Guidance, *'EIA for any proposed project must therefore give proportionate consideration to whether and how that project will contribute to or jeopardise the achievement of these targets...the crux of significance therefore is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050'.*

14.42. Building on this, the IEMA GHG Guidance sets out an approach to the assessment of effect significance that comprises judgements on the Proposed Development's consistency with policy requirements (as these have been implemented to ensure the economy decarbonises in line with the UK's net zero target); and the extent to which the Proposed Development's GHG emissions have been mitigated.

14.43. Table 14.2 sets out the significance of effect criteria provided in the IEMA Guidance. The significance of effect scale is also shown in Figure 14.2 to illustrate how this relates to the 1.5°C compliance trajectory.

Table 14.2 - Criteria for determining significance of effect

| Significance of Effect | Criteria for assessing effect significance |
|---|---|
| Major | The Proposed Development's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero. |
| Moderate | The Proposed Development's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero. |
| Minor | The Proposed Development's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with neutral effects is fully in line with or exceeds measures necessary to achieve the UK's trajectory towards net zero. |
| Negligible | The Proposed Development's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions. |

| Significance of Effect | Criteria for assessing effect significance |
|---|---|
| Beneficial | The Proposed Development's net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared to the without-project baseline. A project with major beneficial effects substantially exceeds net zero requirements with a positive climate impact. |

14.44. In line with the IEMA GHG Guidance, major and moderate adverse and beneficial effects are considered significant. Effects can be described as:

- Beneficial or adverse;
- Permanent or temporary;
- Reversible or irreversible; and
- Short, medium or long term.

14.45. The IEMA GHG Guidance advises that the approach should be modified for the very largest-scale developments, which can in themselves have magnitudes of GHG emissions that materially affect the UK's or a devolved administration's total carbon budget. In the case of such developments, irrespective of the level of mitigation proposed, if net GHG emissions exceed 5% of the relevant UK or devolved administration carbon budget, the effects of the development are likely to be significant.

14.46. The guidance also advises that *'Practitioners should note that existing policy and regulation may in some cases lag behind the necessary levels of GHG emission reductions (or types of actions to achieve those) that are compatible with the UK's or devolved administrations' targets and with a science based 1.5°C compatible trajectory towards net zero. Meeting the minimum standards set through existing policy or regulation cannot necessarily be taken as evidence of avoiding a significant adverse effect, and it is recommended that practitioners consider and have reference also to emerging policy/standards and the guidance of expert bodies such as the CCC on necessary policy developments, particularly for multi-phased projects with long timescales. This must be evaluated by the practitioner as part of the evidence base used in the assessment of effects. References to 'existing' and 'emerging' policy in the principles of significance and example criteria above must be interpreted with this in mind.'*

**Contextualisation of GHG emissions**

14.47. The IEMA Guidance also recommends that the context of the project's carbon footprint is determined in order to establish whether the project supports or undermines the trajectory towards net zero. This can help decision makers in their evaluation of the effects of the proposals.

14.48. As noted in the previous section, the UK has a defined national carbon budget and budgets have also been set by devolved administrations, which the CCC has confirmed are compatible with net zero and international climate commitments. The IEMA GHG Guidance advises that the starting point for contextualising the project's GHG emissions should be the percentage contribution of the project to the relevant national or devolved administration carbon budget. However, it goes on to advise that the contribution of most individual projects to national-level budgets will be small and so this context will have limited value. In response, the guidance presents a good practice approach for contextualising a project's GHG emissions against pre-determined carbon budgets or against emerging policy and performance standards, where a budget is not available. This is shown in Figure 14.3.

14.49. Under the Manchester Climate Change Action Plan, Manchester City Council has a 'target for the Council to reduce its direct $CO_2$ emissions by 50% between 2020 and 2025'. This target is only applicable to the activities of the Council, and not for all emissions occurring within the council boundary. Whilst Manchester City Council has not yet formally adopted carbon budgets, the Tyndall Centre for Climate Change Research previously produced carbon budget reports (the "Tyndall Carbon Budget Reports") that provided recommended climate change commitments for UK Local Authority areas aligned with the commitments in the Paris Agreement, informed by recent science on climate change and defined by science based carbon budget setting. The Tyndall Carbon Budget Report for Manchester provided MCC with recommended budgets for $CO_2$ emissions from the energy system for 2018-2100. It was proposed in the EIA Scoping Report, and subsequently agreed in the EIA Scoping Opinion in December 2025 (Ref: XXX), that the net GHG emissions arising from Proposed Development would be considered in the context of the Tyndall Centre recommended carbon budgets in the ES chapter. However, in the interim, the Tyndall Centre data has been discontinued. A new carbon budget tool produced by Logika Group (the 'The Logika Local Authority Carbon Budget

Tool') aims to serve as a substitute for the discontinued Tyndall Centre data. Like the Tyndall Centre data, the carbon budgets provided by the Logika Carbon Budget Tool do not have any legislated status. However, because they are derived from the UK's legislated carbon budgets and the CCC Balanced Pathway, they are intended to be representative of Local Authority emissions as a sub-division of the legislated national budgets. Unlike the Tyndall Centre carbon budgets, which were energy-only carbon budgets, the Logika carbon budgets include all emission sources, and all greenhouse gases, that occur geographically within the local authority area.

14.50. The net GHG emissions arising from the Proposed Development have been considered in the context of both the UK national carbon budgets and the Logika recommended carbon budgets for Manchester City. To ensure alignment with the EIA Scoping Opinion, the net GHG emissions associated with operational energy arising from the Proposed Development have also been considered in the context of the now-discontinued Tyndall Centre recommended energy-only carbon budgets.

14.51. The UK national carbon budgets for the period over which the Proposed Development will be under construction and operational are presented in Table 14.3. The UK national carbon budgets cover the fourth, fifth, and sixth budget periods. The CCC has provided a recommendation for the seventh carbon budget period (2038 – 2042) which has been included in the table. However, the UK Government has not yet formally adopted a seventh carbon budget.

Table 14.3 - UK National Carbon Budgets

| Carbon budget | Period | Million tonnes of $CO_2e$ |
|---|---|---|
| **Fourth** | 2023 – 2027 | 1,950 |
| **Fifth** | 2028 – 2032 | 1,725 |
| **Sixth** | 2033 – 2037 | 965 |
| **Seventh** | 2038 – 2042 | 535 |

14.52. The construction period for the Proposed Development is expected to fall within the fourth and fifth carbon budget period, from 2027-2030. The operational stage is expected to commence a month after the construction period, with the Proposed Development becoming operational in 2030.

14.53. The Tyndall Centre energy-only carbon budgets for Manchester City for the same period (2023 to 2042) are presented in Table 14.4.

Table 14.4 - Tyndall Centre Energy-Only Carbon Budgets for Manchester

| Carbon budget period | Million tonnes of $CO_2e$ |
|---|---|
| **2023 – 2027** | 4.6 |
| **2028 – 2032** | 2.4 |
| **2033 – 2037** | 1.2 |
| **2038 – 2042** | 0.6 |

14.54. The Logika carbon budgets for Manchester City for the same period (2023 to 2042) are presented in Table 14.5.

Table 14.5 - Logika Carbon Budgets for Manchester

| Carbon budget period | Million tonnes of $CO_2e$ |
|---|---|
| **2023 – 2027** | 10.58 |
| **2028 – 2032** | 7.79 |
| **2033 – 2037** | 4.91 |
| **2038 – 2042** | 2.77 |

14.55. For the purpose of this assessment, the results of the emissions calculations have been presented in terms of their percentage contribution to the relevant carbon budget period, as set out above. Given that the Tyndall Centre carbon budgets are "energy-only", the comparison of the Proposed Development's GHG emissions with the Tyndall Centre carbon budgets has been limited to the scheme's GHG emissions arising from operational energy use to ensure consistency.

## Baseline Conditions

14.56. The baseline is a reference point against which the effects of the Proposed Development can be compared. The IEMA GHG Guidance states that 'the ultimate goal of establishing a baseline is being able to assess and report the net GHG impact of the proposed project.'

14.57. The Site is not currently in use and therefore it is assumed that there are currently no GHG emissions from the Site.

14.58. The future baseline scenario considers how the GHG emissions associated with the Site are likely to change in the future, should the Proposed Development not come forward, based on a time period comparable to the design life of the Proposed Development (i.e., 60 years). Should the Proposed Development not come forward, for the purposes of this assessment, it has been assumed that the Site would remain in its current state. As such, the future baseline GHG emissions from the EIA Site are also considered to be zero.

## Identification and Evaluation of Likely Significant Effects

14.59. As stated in paragraph 14.38, the assessment of the likely significance of effects from GHG emissions has been determined based on whether the project supports or undermines a trajectory towards net zero and is in line with national and local policy requirements. The assessment of effect significance is set out in Table 14.11 and 14.12.

### Construction and Operational Phases

14.60. Table 14.6 sets out the GHG emissions (tCO2e) produced by the Proposed Development across the 60-year RSP for a non-decarbonised and a decarbonised scenario. The non-decarbonised scenario assumes current carbon factors remain constant throughout the 60-year reference study period, meaning operational energy and lifecycle emissions reflect today's grid intensity and material supply chains. In contrast, the decarbonised scenario incorporates anticipated reductions in carbon intensity aligned with UK Net Zero targets and sectoral decarbonisation pathways. This results in lower emissions for operational energy (lifecycle stage B6) and some lifecycle stages such as operational water use (lifecycle stage B7) and End-of-life stage (lifecycle stage C1-C4). The calculations for both the non-decarbonised and a decarbonised scenario do not currently account for the all proposed embedded mitigation set out within section 14.63, however they do include for the provision of solar PV within operational energy emissions during the decarbonisation scenario, as set out in the WLCA (see Appendix 14.5). These measures are expected to further reduce the overall GHG emissions for the Proposed Development. However, this has not been quantified at this stage.

14.61. The WLCA (Buro Happold, 2025) does not include operational stage transport-related emissions within its scope. Operational transport emissions have been assessed using information provided by Civic Engineers, the project Transport Consultants, and benchmark assumptions derived from Department for Transport statistics (DESNZ, 2025). Carbon factors provided from the latest Department for Energy Security and Net Zero (DESNZ) 2025 have been applied consistently across the 60 year reference period and do not incorporate future decarbonisation of the energy grid or other technological improvements. As such this results in no variation in total carbon emission between the non-decarbonised and a decarbonised scenario for the aspect of the assessment.

Table 14.6 - Estimated total GHG emissions ($tCO_2e$)

| Lifecycle Stage/Module | Non-decarbonised Scenario Total GHG emissions ($tCO_2e$) | Decarbonised Scenarios Total GHG emissions ($tCO_2e$) |
|---|---|---|
| Produce stage (lifecycle stage A1-A3) | 21,530.00 | 21,530.00 |
| Construction process stage (lifecycle stage A4-A5) | 4,958.00 | 4,958.00 |
| In use stage embodied carbon (lifecycle stage B1-B5) | 31,589.00 | 15,821.00 |
| Use stage operational energy (lifecycle stage B6) | 57,877.00 | 12,751.00 |
| Use stage operational water use (lifecycle stage B7) | 1,189.00 | 238.00 |
| Use stage operational transport | 7,890.80 | 7,890.80 |
| End-of-life stage (lifecycle stage C1-C4) | 2,605.00 | 1,753.00 |
| **Total** | **127,638.80** | **64,941.80** |

## Cumulative Effects

14.62. The atmospheric concentration of GHGs and the resulting effects on climate change are affected by all sources (anything emitting GHG) and sinks (anything absorbing GHG) globally, anthropogenic and otherwise. As GHG emission impacts and resulting effects are global rather than affecting one localised area, the approach to cumulative effects assessment for GHGs differs from that for many EIA topics where only projects within a geographically bounded study area would be included. As such, as stated in the IEMA Guidance, effects of GHG emissions from specific cumulative schemes should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other. The Guidance goes on to advise that the contextualisation of GHG emissions should incorporate by its nature the cumulative contributions of other GHG sources which make up that context. As part of this assessment, an inter-development cumulative effects assessment has not been undertaken on a specific cumulative scheme basis; however, the Proposed Development's GHG emissions have been considered in the context of both the UK national carbon budgets, and the Tyndall Centre recommended energy-only carbon budgets and Logika carbon budgets for Manchester City. As such, the cumulative contributions of other GHG sources that make up the national and local contexts have been considered within the assessment.

## Mitigation Measures

14.63. This section describes the mitigation measures "embedded" into the Proposed Development (or 'primary mitigation') (i.e. where feasible) as well as additional supplementary mitigation measures (or 'secondary mitigation') that have been proposed, which are relevant to this Chapter.

14.64. The Energy and Carbon Statement (ECS) (HCGE, 2025) sets out the following embedded mitigation measures:

<u>In-use stage Operational Energy (lifecycle stage B6)</u>

- The proposed development is designed to be "all-electric", with no reliance on gas or fossil fuel for the heating of the premises. The use of air source heat-pump heating and cooling will take advantage of the advancing decarbonisation of the electricity grid.
- In line with Policy JP-S2, 140 roof mounted photovoltaic (PV) panels will be installed at roof level of Tower 01, 02 and 03 the Proposed Development.
- Direct electric heating provides fast acting space heating with high levels of controllability to support the ongoing decarbonisation of the grid.
- The building fabric performance will ensure that heating and cooling demands are minimised.

14.65. The Circular Economy Statement (CES) (Buro Happold, 2025) sets out the following mitigation measure:

<u>Product Stage (lifecycle stage A1-A3)</u>

- Materials from the existing building that are not suitable or selected for re-use will 'go through a careful demolition process with segregated waste streams that minimise the demolition waste sent to landfill.'
- Construction materials are to follow a sustainable procurement plan process, with key components responsibly sourced to minimise environmental effects.
- Material specifications with high recycled content have been considered and will be adopted subject to market availability, structural, programme and financial constraints. Optimisations under consideration include:
    - Prioritise concrete with recycled aggregate is being considered within the landscape design for built up areas;
    - Prioritise concrete with cement replacement;
    - Prioritise aluminium with recycled content, if possible, with post-consumer recycled content;
    - Prioritise reused steel and/or new structural steel with high recycled content;
    - Prioritise low carbon steel reinforcement rebar with high rates of recycled content;

    - Aim to procure low carbon and/or reused raised access floor, subject to availability, warranty and fire risk.

- The materials circular economy strategic approach targets waste reduction in line with MCC's local plan ambitions' and includes the following principles:
    - Target off-site pre-fabricated elements to minimise construction waste.
    - Integration of reuse materials where technically, practically and financially feasible in an efficient manner to reduce the need of new materials and reduce demolition waste.
    - Adopt design for disassembly and adaptability strategies on elements that are expected to require of replacement due to use patterns and improved performance along the lifespan of the project.
    - Target reuse of excavation waste in the landscape if feasible to reduce excavation and construction waste along with minimising new materials brought to site.
    - Careful segregation to minimise contamination of materials with potential for recycling.
    - Contaminated materials that cannot be recycled but are combustible will be sent to an incineration plant with energy recovery dedicated to district heating
    - Materials sent to landfill will be minimised. The predicted waste quantified in the Demolition Environmental Management Plan (DEMP) estimates the possibility to divert from landfill 99% of estimated weight of demolition and excavation waste streams. This will be reviewed and confirmed by the relevant contractors during the design stages.
- Construction waste will be minimised through a lean design strategy that reduces material demand and avoids oversizing where feasible.
- The project will aim to divert at least 90% by tonnage of demolition waste by tonnage from landfill, emphasising sustainability and resource efficiency, in alignment with BREEAM Construction Waste Management requirements.
- The Proposed Development is targeting a construction waste resource efficiency benchmark of ≤6.5 tons of waste generated per 100$m^2$(GIA), in line with BREEAM requirements.
- A Sustainable Procurement Plan (SPP) is to be undertaken. This sets out the requirements for sustainable and ethical sourcing.

<u>Lifecycle embodied carbon (lifecycle stage A1-A5, B1-B5 and C1-C4)</u>

- The design will prioritise accessibility, maintenance, and replaceability of building components. During the detailed design stage, the team will develop strategies to enable the disassembly and recoverability of materials, ensuring alignment with this principle.
- Building services proposal is designed to allow easy replacement of major plant systems throughout the building's lifespan. For concealed elements, removable panels on floors and walls will be prioritised to provide access to frequently serviced equipment without impacting the structure.'
- Modular and demountable building services equipment will be emphasised, enabling straightforward, non-destructive replacement. Self-finished materials and dry connections will also be prioritised, minimising the use of adhesives, sealants, and silicon-based solutions. This approach supports layer independence and enhances the building's adaptability and sustainability.
- Landscape architectural design incorporates the retention of mature trees at the northwest corner and west of the project site preserving natural capital and avoiding the embodied carbon associated to the removal, disposal, and replacement of the existing asset.
- Hard-wearing materials will be prioritised at entrances to ensure durability, complemented by climate-resilient landscaping. Key pavements and high-traffic areas will also feature robust materials to withstand frequent use.
- Specifying prefabricated façade panelling in alignment with the project site's architectural language, ensuring seamless integration with its surroundings while reducing façade maintenance requirements by ensuring easy access and replacement of elements to support long-term upkeep.

Operational water consumption (lifecycle stage B7)

- Incorporating sustainable drainage systems which reduce maintenance risks and support a durable and sustainable surface water network.

14.66. The WLCA (Buro Happold, 2025) (Appendix 14.5) sets out the following measures and recommendations :

- The procurement of low carbon materials is a key priority for the project to minimise environmental impact.
- The development incorporates high performance solar control glazing, local shading to the opening windows via external louvres and solar shading from façade articulation are helping to mitigate solar gains and ensure a passive approach to mitigating overheating.
- Provides recommendations for the Use of low carbon Ductwork in lieu of typical galvanized steel ductwork can help lower emissions.
- Develop an Operation & Maintenance (O&M) manuals for the development, clearly identifying the maintenance strategy for the building.

## Residual Effects

### Comparison with UK and Manchester Carbon Budgets

14.67. Table 14.7, Table 14.8 and Table 14.9 set out the net GHG emissions arising from the Proposed Development's construction and operational phases in the context of the UK national carbon budgets, the Tyndall Centre Energy Only Carbon Budgets for Manchester City and the Logika Carbon Budgets for Manchester City respectively, considering both the embedded mitigation. Both the non-decarbonised and decarbonised scenarios have been included in the contextualisation.

14.68. Given that the future baseline GHG emissions from the EIA Site are considered to be zero, the Proposed Development's net GHG emission are consistent with the gross GHG emissions. The budget comparison has there been undertaken based on the Proposed Development's gross GHG emissions.

Table 14.7 - Post mitigation comparison of the GHG emissions arising from the Proposed Development with the UK National Carbon Budgets

| UK National Carbon Budgets | | Impact | | | |
|---|---|---|---|---|---|
| | | Non-Decarbonised Scenario | | Decarbonised Scenario | |
| UK Carbon Budget Period | UK Carbon Budget ($MtCO_2e$) | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of UK Carbon Budget | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of UK Carbon Budget |
| Fourth (2023-2027) | 1,950 | 3,579.46 | 0.0002 | 3,579.46 | 0.0002 |
| During the fourth budget period, the Proposed Development would generate GHG emissions from the construction process (A1-A5). This equates to 0.0002% of the total carbon budget in both the non-decarbonised and decarbonised scenarios. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on the UK's ability to meet this carbon budget. | | | | | |
| Fifth (2028-2032) | 1,725 | 26,740.88 | 0.0016 | 24,335.79 | 0.0014 |
| During the fifth budget period, the Proposed Development would generate GHG emissions from the construction process (A1-A5), in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.0016% and 0.0014% of the total carbon budget in the non-decarbonised scenario and decarbonised scenario respectively. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on the UK's ability to meet this carbon budget. | | | | | |
| Sixth (2033-2037) | 965 | 8,212.15 | 0.0009 | 3,058.40 | 0.0003 |
| During the sixth budget period, the Proposed Development would generate GHG emissions from in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.0009% of the | | | | | |

| UK National Carbon Budgets | | Impact | | | |
|---|---|---|---|---|---|
| | | Non-Decarbonised Scenario | | Decarbonised Scenario | |
| UK Carbon Budget Period | UK Carbon Budget ($MtCO_2e$) | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of UK Carbon Budget | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of UK Carbon Budget |
| total carbon budget in the non-decarbonised scenario and 0.0003% in the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on the UK's ability to meet this carbon budget. | | | | | |
| Seventh (2038-2042) | 535 | 8,212.15 | 0.0015 | 3,058.40 | 0.0006 |
| During the seventh budget period, the Proposed Development would generate GHG emissions from in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.0015% of the total carbon budget during the non-decarbonised scenario and 0.0006% during the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on the UK's ability to meet this carbon budget. | | | | | |

Table 14.8 - Post-mitigation comparison of the GHG emissions arising from the Proposed Development with the Tyndall Centre Energy-Only Carbon Budgets for Manchester City

| Tyndall Centre Energy Only Carbon Budgets for Manchester | | Impact | | | |
|---|---|---|---|---|---|
| | | Non-Decarbonisation Scenario | | Decarbonisation Scenario | |
| Carbon Budget Period | Carbon Budget ($MtCO_2e$) | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of Carbon Budget | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of Carbon Budget |
| Fourth (2023-2027) | 4.60 | 0.00 | 0.0000 | 0.00 | 0.0000 |
| During the fourth budget period, the Proposed Development would not produce any GHG emissions related to operational energy. | | | | | |
| Fifth (2028-2032) | 2.40 | 2,250.77 | 0.0938 | 495.87 | 0.0207 |
| During the fifth budget period, the Proposed Development would generate GHG emissions from operational energy (B6). This equates to 0.0938% of the total carbon budget in the non-decarbonised scenario and 0.0207% of the total carbon budget in the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |
| Sixth (2033-2037) | 1.20 | 4,823.08 | 0.4019 | 1,062.58 | 0.0885 |
| During the sixth budget period, the Proposed Development would generate GHG emissions from operational energy (B6). This equates to 0.4019% of the total carbon budget in the non-decarbonised scenario and 0.0885% in the total carbon budget during the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |
| Seventh (2038-2042) | 0.60 | 4,823.08 | 0.8038 | 1,062.58 | 0.1771 |
| During the seventh budget period, the Proposed Development would generate GHG emissions from operational energy (B6). This equates to 0.8038% of the total carbon budget in the non-decarbonised scenario and 0.1771% in the total carbon budget during the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |

Table 14.9 - Post-mitigation comparison of the GHG emissions arising from the Proposed Development with the Logika Carbon Budgets for Manchester City

| Logika Carbon Budgets for Manchester | | Impact | | | |
|---|---|---|---|---|---|
| | | Non-Decarbonisation Scenario | | Decarbonisation Scenario | |
| Carbon Budget Period | Carbon Budget ($MtCO_2e$) | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of Carbon Budget | GHG emissions from the Proposed Development ($tCO_2e$) | Proposed Development % of Carbon Budget |
| Fourth (2023-2027) | 10.58 | 3,579.46 | 0.0338 | 3,579.46 | 0.0338 |
| During the fourth budget period, the Proposed Development would generate GHG emissions from the construction process (A1-A5). This equates to 0.0338% of the total carbon budget in both the non-decarbonised scenario and decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |
| Fifth (2028-2032) | 7.79 | 26,740.88 | 0.3433 | 24,335.79 | 0.3124 |
| During the fifth budget period, the Proposed Development would generate GHG emissions from the construction process (A1-A5), in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.3433% of the total carbon budget in the non-decarbonised scenario and 0.3124% in the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |
| Sixth (2033-2037) | 4.91 | 8,212.15 | 0.1673 | 3,058.40 | 0.0623 |
| During the sixth budget period, the Proposed Development would generate GHG emissions from in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.1673% of the total carbon budget in the non-decarbonised scenario and 0.0623% of the total carbon budget in the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |
| Seventh (2038-2042) | 2.77 | 8,212.15 | 0.2965 | 3,058.40 | 0.1104 |
| During the seventh budget period, the Proposed Development would generate GHG emissions from in use stage embodied carbon (B1-B5), operational energy (B6), operational water consumption (B7), and operational transport. This equates to 0.2965% of the total carbon budget in the non-decarbonised scenario and 0.1104% of the total carbon budget in the decarbonised scenario. It is expected that the proposed mitigation set out in sections 14.63 to 14.66 would reduce the GHG emissions generated by the Proposed Development. However, it has not been possible to quantify this at this stage. The Proposed Development is unlikely to have a material impact on Manchester City's ability to meet this carbon budget. | | | | | |

## Proposed Development alignment with Policy requirements and the Net Zero trajectory

14.69. As set out in paragraph 14.38, the IEMA GHG Guidance sets out an approach where the assessment of effect significance should comprise judgements on the Proposed Development's consistency with policy requirements. A review of the compliance of the Proposed Development with relevant policy is presented in Table 14.10.

Table 14.10 - Compliance of the Proposed Development with relevant policy

| Policy requirement | Proposed Development compliance |
|---|---|
| **National Policy** | |
| **The National Planning Policy Framework (MHCLG, 2025)** | **Paragraph 164:**<br>The ECS (HGCE, 2025) sets out; |

| Policy requirement | Proposed Development compliance |
|---|---|
| **Paragraph 164:** ***'New development should be planned for in ways that help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings in plans should reflect the Government's policy for national technical standards.'***<br><br>**Paragraph 165*****: 'To help increase the use and supply of renewable and low carbon energy and heat, plans should:***<br><br>***a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and life extension, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);***<br><br>***b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and***<br><br>***c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.'***<br><br>***Paragraph 166: 'In determining planning applications, local planning authorities should expect new development to:***<br><br>***a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and***<br><br>***b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.'*** | • The Proposed Development commits to operational net zero carbon from day one via a supply of zero carbon energy. The Proposed Development will utilise air source heat pump (ASHP) for heating and cooling.<br>• The installation of 140 PV panels across Tower 01 to 03 of the Proposed Development.<br>• Direct electric heating provide fast acting space heating with high levels of controllability to support the ongoing decarbonisation of the grid.<br>• The building fabric performance will minimise heating and cooling demands.<br><br>The CE (Buro Happold, 2024) and the WLCA (Buro Happold 2025) sets out:<br>• The design will consider the application of materials with recycled content and the potential of specifying recycled aggregates during the procurement process<br><br>**Paragraph 165:**<br><br>The ECS (HGCE, 2025) sets out;<br>• The Proposed Development will maximise solar PV onsite, installing up to 140 PV panels.<br>• An all-electric approach is proposed, with no reliance on fossil fuels for heating.<br>• Direct electric heating provide fast acting space heating with high levels of controllability to support the ongoing decarbonisation of the grid.<br>• The building fabric performance will minimise heating and cooling demands.<br><br>**Paragraph 166:**<br>• The Proposed Development will use low-energy implementations such as ASHP, as set out within ECS (HGCE, 2025), in line with the ambitions of national, regional, and local policy. |
| **<u>The Building Regulations Part L 2021 Edition</u>**<br><br>**A 31% reduction in carbon emissions over the previous Part L (2013) standard, achieved through better fabric performance standards, alongside low carbon heating and/or renewable energy generation e.g., solar photovoltaics (PV).** | The ECS (HGCE, 2025), states that<br>• The Proposed Development will comply with current Building Regulations Part L (2021).<br>• Sets out the measures to be implemented to reduce energy demand and how the Proposed Development will meet the requirements of Part L. Measures in , high efficiency building services have been |

| Policy requirement | Proposed Development compliance |
|---|---|
| | selected to ensure that the development makes optimal use of the energy it uses, followed by and appraisal of Low and Zero Carbon (LCZ) technologies showing that photovoltaics and air source heat pumps can provide further energy and $CO_2$ emissions reductions. |
| **Regional Policy** | |
| **<u>Places for Everyone (PfE) Joint Development Plan for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan (2024)</u>**<br><br>**Policy JP-S 2 Carbon and Energy:**<br><br>• **Promote the 'retrofitting of existing buildings with measures to improve energy efficiency and generate renewable and low carbon energy, heating and cooling'**<br>• **'Use of life cycle cost and carbon assessment tools'**<br>• **'Positive approach to renewable and low carbon energy schemes'**<br>• **'An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable:**<br><br>  • **Be net zero carbon**<br>  • **Incorporate adequate electric vehicle charging points**<br>  • **[] prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date'**<br><br>**Policy JP-S 6 Resource Efficiency**<br><br>***'Using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.'*** | **Policy JP-S 2 Carbon and Energy**<br><br>The ECS (HGCE, 2025) sets out the following, in line with JP-S2:<br><br>• The Proposed Development will maximise solar PV onsite, installing up to 140 PV panels.<br>• An all-electric approach is proposed, with no reliance on fossil fuels for heating.<br>• The building fabric performance will minimise heating and cooling demands.<br><br>A Whole Life Cycle Carbon Assessment (WLCA) has been undertaken at each lifecycle stage (Buro Happold, 2025) and sets out the operational energy use for the Proposed Development.<br><br>**Policy JP-S Resource Efficiency**<br><br>The ECS (HGCE, 2025) sets out the following in relation to JP-S;<br><br>• The Proposed Development will maximise solar PV onsite, installing up to 140 PV panels.<br>• An all-electric approach is proposed, with no reliance on fossil fuels for heating.<br>• The building fabric performance will minimise heating and cooling demands.<br><br>The Circularity Statement (Buro Happold, 2025) sets out the following:<br><br>• Integration of reuse materials where technically, practically and financially feasible in an efficient manner to reduce the need of new materials and reduce demolition waste.<br>• Construction waste will be minimised through a lean design strategy that reduces material demand and avoids oversizing where feasible<br>• Material specifications with high recycled content have been considered and will be adopted subject to market availability, |

| Policy requirement | Proposed Development compliance |
|---|---|
| | structural, programme and financial constraints.<br>• The materials circular economy strategic approach targets waste reduction in line with MCC's local plan ambitions.<br>• The project will aim to divert at least 90% by tonnage of demolition waste by tonnage from landfill, emphasising sustainability and resource efficiency, in alignment with BREEAM Construction Waste Management requirements<br>• The Proposed Development is targeting a construction waste resource efficiency benchmark of ≤6.5 tons of waste generated per 100m$^2$(GIA), in line with BREEAM requirements.<br>• Building components will be chosen for ease of replacement throughout the lifecycle<br>• Landscape architectural design incorporates the retention of mature trees at the northwest corner of the project site preserving natural capital and avoiding the embodied carbon associated to the removal, disposal, and replacement of the existing asset, alongside additional tree planting.<br>• Hard-wearing materials will be prioritised at entrances to ensure durability, complemented by climate-resilient landscaping. Key pavements and high-traffic areas will also feature robust materials to withstand frequent use. |
| **Local Policy** | |
| **<u>Guide to Development in Manchester Supplementary Planning Document and Planning Guidance. Adopted April 2007</u>**<br><br>***'Developers should aim to reduce CO2 emissions by at least 25% more than the requirements of the current Building Regulations'***<br><br>***'Developers should aim for at least 20% of final site energy demand to be met by on-site renewable energy technologies.'***<br><br>***'New developments should seek to use water efficiently, through specification of water efficient device and through the use of rainwater harvesting and grey water recycling.'***<br><br>***'building materials used in new development and refurbishment schemes [are required] to be environmentally friendly wherever possible, and encourages the use of*** | • The ECS (HGCE, 2025) sets out the all-electric approach, with the use of solar PV panels where feasible.<br>• The Circularity Statement (Buro Happold, 2025) sets out how the design will prioritise the use of low embodied carbon materials in the Proposed Development and minimise waste to landfill during demolition.<br>• The WLCA (Appendix 14.5) provides an overview of how the Proposed Development will make use of building materials with low embodied carbon. |

| Policy requirement | Proposed Development compliance |
|---|---|
| ***recycled building materials, which is also energy efficient. Site waste management plans should, therefore, be implemented to reduce the quantity of waste generated, and to increase re-use and recycling. Opportunities for reuse of existing structures should be explored, and where this is not appropriate, materials should be reused on site and incorporated into the new design where practicable. Materials that are environmentally friendly, of low embodied energy, locally sourced, and can be recycled or reclaimed when the building comes to the end of its life should be prioritised. Materials that contain environmentally damaging chemicals should be avoided.'*** | |
| **<u>Manchester's Local Development Framework. Core Strategy Development Plan Document (MCC, 2012) (as amended, 2024)</u>**<br><br>**Policy EC 1 Employment and Economic Growth in Manchester**<br><br>***'Development proposals should have regard to: [] an aim of zero carbon emissions, through energy efficiency, renewable energy and contributing to low and zero carbon decentralised energy infrastructure'***<br><br>***Policy EN 4 Reducing $CO_2$ Emissions by enabling Low and Zero Carbon Development***<br><br>***'All development must follow the principle of the Energy Hierarchy.'***<br><br>***'New development [] must be located and designed in a manner that allows advantage to be taken of opportunities for low and zero carbon energy supplies'***<br><br>***'New development [] will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings;***<br><br>***'new development [] will be required to connect to and/or make contributions to low or zero carbon energy schemes and/or to incorporate provision to enable future connection to any existing/potential decentralised energy schemes.'***<br><br>***'use of building materials with low embodied carbon in new development and refurbishment schemes.'*** | **Policy EC 1**<br><br>The ECS (HGCE, 2025) sets out the following;<br>• The Proposed Development will maximise solar PV onsite, installing up to 140 PV panels.<br>• An all-electric approach is proposed, with no reliance on fossil fuels for heating.<br>• The building fabric performance will minimise heating and cooling demands.<br><br>**Policy EN 4**<br>• The ECS (HGCE, 2025) sets out the all-electric approach, with the use of solar PV panels where feasible.<br>• The Circularity Statement (Buro Happold, 2025) sets out how the design will prioritise the use of low embodied carbon materials in the Proposed Development and minimise waste to landfill during demolition.<br>• The WLCA (Appendix 14.5) provides an overview of how the Proposed Development will make use of building materials with low embodied carbon. |

## Residual effects

14.70. Table 14.11 and Table 14.12 set out the assessment of residual effect significance for the construction and operational stages respectively in accordance with the IEMA GHG Guidance.

Table 14.11 - Assessment of residual effect significance during the construction stage

| Receptor | Compliance with existing and emerging policy | Effect significance |
|---|---|---|
| **Global atmosphere** | As set out in Table 14.10, it is considered that the Proposed Development is consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. Therefore, in line with the IEMA GHG Guidance, this is considered to be a Minor Adverse effect. In line with the guidance, this effect is considered to be not significant. | Minor adverse, direct, long term and permanent. |

Table 14.12 - Assessment of residual effect significance during the operational stage

| Receptor | Compliance with existing and emerging policy | Effect significance |
|---|---|---|
| **Global atmosphere** | As set out in Table 14.10, it is considered that the Proposed Development is consistent with applicable existing and emerging local, regional, and national net zero policy and good practice design standards for projects of this type. Therefore, in line with the IEMA GHG Guidance, this is considered to be a Minor Adverse effect. In line with the guidance, this effect is considered to be not significant. | Minor adverse, direct, long term and permanent. |

## Monitoring

14.71. No future monitoring is proposed

## Reference List


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- DESNZ (2022). British energy security strategy;
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- Greater London Authority (GLA) (2013). Scope 3 (Embodied) Guidance on Greenhouse Gas Accounting and Reporting;
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- Waste and Resource Action Programme (WRAP) (2011b). Procurement Requirements for Carbon Efficiency.

# 15. Socio-Economics

## Introduction

15.1. This Chapter of the ES has been prepared by Buro Happold and assesses the likely environmental effects of the Proposed Development with respect to socio-economics. This chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the EIA Site and surrounding area, the mitigation measures required to prevent, reduce, or offset any significant adverse effects, and the likely residual effects after these measures have been adopted.

15.2. The authors of this Chapter have the following qualifications/experiences.

| | Lead Author | Reviewer |
|---|---|---|
| Name | Ellen Newman | Monica Laucas |
| Company | Buro Happold | Buro Happold |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | MSc International Economics, Finance and Development, BA Economics and Politics | BSc Urban Sociology, MSc Local Economic Development |
| Years technical experience (in technical area) | 4 | 8 |
| Number of EIA's delivered to date | 6 | 20+ |

## Assumptions and Limitations

15.3. Assumptions made during the assessment include:

- Employment densities used to calculate employment from the commercial floorspace are based on the 2015 Homes and Communities Agency's (HCA) Employment Density Guidance;
- The existing retail units on Site are currently vacant. The assessment therefore assumes that no employment is associated with the Site; and
- Professional judgement is used to assess the significance of effects and the proportionate impact of the Proposed Development, as there are no standards or guidelines for defining socio-economic impacts. Relevant guidance has been used throughout where relevant, for example the HCA Employment Densities Guide has been used to calculate gross jobs based on commercial floorspace and use class.

15.4. Potential limitations of the assessment include:

- The baseline conditions used for the socio-economic assessment may change over time and this could influence the findings of the assessment, and could lead to the findings suffering from statistical time lag; and
- The latest Use Class Order, published in 2021, does not include employment density guidance for calculations allowing additional flexibility to the new use classes it proposes. For the purposes of calculating employment generated during operation of the Proposed Development, the assessment applies the 2015 HCA Employment Densities Guide to use classes pre-2021. If facilities are used differently, then there may be variations in employment generation.

## Relevant Legislation, Policy and Guidance

### Legislation

15.5. N/A

## Policy

**National**

National Planning Policy Framework (NPPF); (MHCLG, 2024)

15.6. The NPPF sets out the planning policies for England and how these should be applied, providing a framework for local authorities, planning inspectors, and decision-makers to prepare plans for sufficient housing and other developments in a sustainable manner.

15.7. The NPPF provides a set of principles and objectives for balancing competing interests, such as the need for housing and economic growth with environmental protection and community well-being.

15.8. The NPPF outlines the importance of considering an appropriate mix of housing size and type of tenure to reflect the housing need for different groups within the local communities, and this should be reflected in any plan. This includes those requiring affordable housing, families with children, older people, students, people with disabilities, and other groups.

Homes England Strategic Plan 2023-28; (Homes England, 2023)

15.9. The Strategic Plan published by Homes England focuses on the delivery of high-quality homes and thriving places, aimed at supporting levelling up of communities across England. The strategic objectives outlined in the Plan include: delivery homes that people need; creating vibrant and successful places; building a housing and regeneration sector that works for everyone; enabling sustainable homes and places; and promoting high-quality homes in well-designed places.

15.10. Outlined within the Plan, local governments are best placed to understand the housing needs and challenges in their local area and Homes England will work with local authorities to deliver the right housing for each area. There will also be collaboration with private housebuilders, master developers, lenders, and commercial real estate. Homes England also recognise the importance of working with affordable housing providers to deliver much-needed new affordable housing.

**Regional**

Greater Manchester Strategy 2021-2031; (GMCA, 2021)

15.11. This strategy sets out the long-term vision and priorities for the Greater Manchester area. It outlines the region's ambitions and objectives across various domains, including the economy, environment, transport, housing, health, and social issues.

15.12. The Proposed Development will help achieve some of the priorities and socio-economic objectives set, for the prosperity and holistic growth of the region, within the strategy document. The following are the key objectives of the strategy:

- Reduce inequalities to drive economic growth, ensuring that a variety of demographics are contributing to and benefitting from the region's success;
- Foster and maintain social infrastructure and increase engagement with the local community;
- Make Greater Manchester accessible for people of all ages and backgrounds;
- Increase access to sustainable transport through improved public transport, cycling and pedestrian infrastructure;
- Redevelop buildings to achieve equality and environmental goals.

15.13. The strategy has shared commitments with other strategies in the area, and aims to ensure local communities, neighbourhoods, villages, towns, cities and districts are protected and strengthened, and new homes will be delivered in line with the Housing Strategy (2019-2024). The strategy will ensure the housing delivered is safe, decent and affordable.

Places for Everyone (PfE) Joint Development Plan 2022-2039; (GMCA, 2024)

15.14. Places for Everyone is a long-term plan of nine Greater Manchester districts which will determine the kind of development that takes place in their boroughs, maximising the use of brownfield land and urban spaces while protecting Green Belt land from the risk of unplanned development.

15.15. The plan is the result of a process that began as the Greater Manchester Spatial Framework (GMSF) in 2014 and has been informed by the feedback received from residents, businesses, and the development industry to previous consultations on that Plan. It has now become the statutory development plan for each of the nine PfE authorities in March 2024. The nine districts covered by the Plan are: Bolton; Bury; Manchester; Oldham; Rochdale; Salford; Tamesides; Trafford; and Wigan. Key policies include:

- Policy JP-H1: Scale, distribution and phasing of new housing development - This sets out the minimum number of additional dwellings of 175,185 that will be delivered over the period 2022-2039 with an annual average of around 10,305 across nine PfE authorities, of which 60,061 new dwellings are set for Manchester with an annual average of 3,533 new dwellings.
- Policy JP-H3: Type, Size and Design of New Housing – Development across the plan area should seek to incorporate a range of dwelling types and sizes, which meet local needs and deliver inclusive neighbourhoods. Housing provision should accommodate specific groups, such as students, which will be addressed through local plans.
- Policy JP-Strategy 2: City Centre – The role of Manchester City Centre as the most significant economic location in the country outside London will be strengthened. This will be done by focusing on business, retail, leisure, culture and tourism, and increasing the role of residential in growing the City Centre.
- Policy JP-J1: Supporting Long-Term Economic Growth – The policy places emphasis on maintaining a high level of economic diversity across the region, and facilitating the development of high value clusters in key economic sectors. It also aims to support local job growth, by seeking agreements with employers and developers, including housebuilders, to enter into local labour and training agreements through planning obligations.
- Policy JP-P5: Education, Skills and Knowledge – The policy aims to make enhancements to education, skills and knowledge to benefit existing and new residents. This will be done by enabling the delivery of new and improved facilities, and supporting the continued growth and success of the university sector. This will also be done through ensuring the delivery of sufficient school places to respond to the demands from new housing, such as through working with education providers to forecast changes in demand for school places, and where appropriate requiring housing developments to make a financial contribution to the provision of additional school places.

**Local**

Manchester Core Strategy (2012-2027); (MCC, 2012)

15.16. The Manchester Core Strategy document, also knows as the Core Strategy Development Plan Document (DPD), is a key planning document that sets out the long-term spatial vision and strategic policies for the City of Manchester. It provides a framework for guiding development and shaping the city's growth and regeneration. The document is prepared by Manchester City Council and is based on extensive research, consultation, and analysis of the city's needs and aspirations. It covers a wide range of planning related topics, including land use, housing, employment, transportation, community facilities, and the environment. The Core Strategy was updated following the adoption of Places for Everyone (PfE) Joint Development Plan in March 2024. Some of the Core Strategy policies have been replaced by PfE policies.

15.17. Policy H12 supports the development of new purpose-built student accommodation, particularly where schemes align with university redevelopment plans or partnerships and contribute to Manchester City Council's regeneration priorities. The policy outlines that suitable sites should be located near university campuses or along high-frequency public transport routes. High-density schemes are encouraged in areas compatible with existing developments and within walking distance of retail facilities, provided they do not increase on-street parking.

15.18. Policy C1 states that the development of district centres that is aligned with the distinct local character, provides housing, a good range of services including retail, health, and leisure facilities.

## Guidance

**National**
Planning Practice Guidance (MHCLG, 2016)

15.19. Planning Practice Guidance was first published in 2016 by the Ministry of Housing, Communities & Local Government, and sets out a series of planning guidance documents for local planning authorities, developers, and other stakeholders on various aspects of the planning system. Individual guidance documents have been updated since 2016.

15.20. The guidance documents cover several aspects around housing, including housing and economic needs assessment, housing for different groups, housing for older and disabled people, housing supply and delivery, among other pieces of housing guidance. There is also guidance for 'first homes', which stipulates that first homes should be considered to meet the definition of 'affordable housing' for planning purposes.

15.21. Guidance is provided for housing needs of different groups. Strategic policy-making authorities need to plan for sufficient student accommodation whether it consists of communal halls of residents or self-contained dwellings. Policy makers are encouraged to consider options which would support both the needs of the student population as well as local residents. Local Planning Authorities should also engage with universities to ensure they understand student accommodation requirements in their area.

**Local**
Investing in Success: An Economic Strategy for Manchester (MCC, 2023a)

15.22. The Economic Strategy for Manchester outlines the commitments across the City to deliver inclusive economic growth where every resident has the opportunity to thrive, businesses can grow, and an environment where creativity and enterprise flourish. The economic performance of Manchester City is linked to the economic performance of Greater Manchester, and having a prosperous Manchester will lead to a prosperous Greater Manchester. By growing the economy of the city centre and being able to better connect people with the city centre, it can provide greater opportunities for people across the whole city region.

15.23. The Economic Strategy for Manchester outlines the commitments across the City to deliver inclusive economic growth where every resident has the opportunity to thrive, businesses can grow, and an environment where creativity and enterprise flourish. The economic performance of Manchester City is linked to the economic performance of Greater Manchester, and having a prosperous Manchester will lead to a prosperous Greater Manchester. By growing the economy of the city centre and being able to better connect people with the city centre, it can provide greater opportunities for people across the whole city region.

15.24. Some of the key enablers of growth for Manchester City have been reported:

- Housing: By creating a well-balanced housing market characterised by affordability and availability, this will act as a catalyst for economic activity. This can foster an environment conducive to investment and innovation, and supports the city's ambition for sustainable living environments that are well-connected to employment hubs and complemented by essential amenities and services.
- Transport: Transport networks facilitate the movement of people and goods, connecting skilled workers to employment hubs and enabling businesses to operate efficiently. The city has expanded its transport network, but there is a current reliance on private vehicles poses challenges, which will require further improvements in public transport.
- Infrastructure: A range of critical infrastructure must be in place to deliver the next phase of economic growth and ensure that the city remains competitive and attracts new businesses. Infrastructure is also essential to ensure residents have the services and facilities they need. Digital connectivity is also now an essential to businesses and residents, and maintaining Manchester's competitiveness in all sectors requires continued investment in digital infrastructure.
- Skills, enterprise and labour: The emphasis is not just about meeting the immediate needs of the local economy, but also about preparing for the future, ensuring the workforce is well equipped to adapt to new challenges and opportunities. The Greater Manchester Local Skills Improvement Plan identifies the types of skills that are needed to enable occupations in science, technology and the green economy, and also healthcare, teaching ad business management.

## Assessment Methodology and Significance Criteria

15.25. This section of the assessment outlines the methodology used to establish the potential economic and social effects of the Proposed Development assessed against the baseline conditions. The effects of the Proposed Development are considered at varying spatial levels according to the nature of the effect considered. This proposed approach follows HCA Additionality Guide 4th Edition, which is the widely accepted guidance for socio-economic assessments.

### Scenarios Tested

15.26. Scenario 1 will be considered in our assessment under the Baseline Conditions section.

15.27. Socio-economic impacts have been assessed for the construction and operational phases of the Proposed Development (Scenario 2), under the Identification and Evaluation of Likely Significant Effects section. Cumulative effects will also be assessed (Scenario 3), and a qualitative assessment of the additional impacts from the IDM Masterplan will also be assessed (Scenario 4).

### Baseline Study Methodology

15.28. The relevant baseline data has been accessed and analysed for the Site and/or local electoral ward level, and at the Borough and/or regional level where relevant. The baseline section of the assessment has been compiled using the following data sources:

- Additionality Guide (HCA, 2014);
- Annual Population Survey (ONS, 2025a);
- Business Register and Employment Survey (ONS, 2023a);
- Census data (ONS, 2021);
- Manchester City Council data;
- Department for Education (DfE) data;
- Greater Manchester data;
- National Health Service (NHS) data; and
- 2019 and 2025 Index of Multiple Deprivation (Ministry of Housing, Communities and Local Government)

### Scope of the Assessment

15.29. The socio-economic assessment has been considered against existing socio-economic conditions. There are no obligatory standards or guidelines for defining socio-economic impacts and the significance of effects. In order to assess the significance of effects, professional judgement as to the proportionate impact of the Proposed Development in its local, regional, and/or national context has been used. Relevant guidance has been used to calculate impacts. For example, the HCA Additionality Guidance has been used to apply relevant multipliers, leakage rates, and displacement rates in calculations and the HCA Employment Densities Guide has been used to calculate gross jobs based on commercial floorspace and use class.

15.30. The principal economic effect of the Proposed Development is considered relative to Manchester City Council, Greater Manchester (local), greater North West (regional) and England (national), as these represent the principal labour market catchment areas.

15.31. The measurement of additionality requires an intervention options, a reference (baseline) case, estimation of gross direct effects, leakage, displacement, and multiplier effects. This applies to this assessment's estimate of the employment generated by the Proposed Development.

15.32. Gross direct effects are the total effect of an intervention in terms of a specific output, such as employment. This considered both direct and wider induced effects.

15.33. Where possible, quantitative assessment has been undertaken. This relates particularly to the assessment of employment and economic effects. Gross employment is calculated in relation to the demolition and construction phases of the Proposed Development. The methodology applies for the calculation of gross employment generation

in the demolition and construction phase is based on a turnover per construction employee estimate. For this assessment the average turnover per construction employee is £153,360 (in the North West of England). The number of FTE jobs created have been calculated based on the convention that each permanent FTE job is equivalent to ten person years of temporary employment.

15.34. At the operational stage, employment density figures for the non-residential uses within the Proposed Development are, where possible, derived from the HCA Employment Densities Guide.

15.35. In calculating the estimated number of jobs generated by the Proposed Development, both at the demolition and construction, and operational stages, the methodology follows that set out in the HCA Additionality Guide 4th Edition. The guidance recommends that the gross number of jobs should be adjusted to arrive at a net figure which takes account of deadweight, leakage, and displacement. The same guidance has been used when calculating the indirect and induced multiplier effects. For clarity, the definitions of these terms are summarised below:

- Deadweight: Defined as the 'output that would have occurred without the intervention'. In this case the 'intervention' is the Proposed Development;
- Leakage effects are outputs that benefit those outside the intervention's target area and are deducted from the gross direct effects. With regard to employment generation, this can be interpreted as those employed at the Proposed Development who reside outside of Manchester. According to 2021 Census Data from the Office for National Statistics (ONS), 57.8% of those working in Manchester city live outside this area, and 3.8% of those working in the North West live outside the region. These correspond to a high to very high leakage rate for Manchester and a low leakage rate for the North West, as per HCA additionality guidance (ONS, 2021; HCA, 2014).
- Displacement is the number of intervention outputs (e.g., jobs) that are accounted for by reduced outputs elsewhere in the target area. The additional employment generated at the Proposed Development would be net of employment lost from the existing uses on the Site. A displacement rate of 25% is assumed based on guidance and 'ready reckoner' values provided in the HCA Guidance.
- Indirect and induced multiplier effects in commercial development pertain to employment, investment and income associated with both the construction phase and occupation of the premises. The presence of multiplier effects implies that the Proposed Development will have proportionately greater effects than the direct effect of investment alone. For example, employment generated further along the supply chain represents an indirect multiplier effect, while those jobs created through extra spending from workers in the area represent an induced multiplier. For the purposes of this assessment, a multiplier of 1.5 has been applied.

15.36. Additional expenditure associated with the Proposed Development is calculated with reference to estimated annual spending by students from the University of Manchester (UoM, 2024).

15.37. The expected population for the Proposed Development is based off the number of student rooms available in the Proposed Development, assuming there will be one student per room.

15.38. GVA is generated from the direct, indirect and induced jobs associated with the Proposed Development during construction and operational employment. Gross and net direct jobs are calculated by applying GVA per FTE figures for relevant sectors of employment (ONS, 2023a; ONS, 2025d). Indirect and induced GVA is associated with supply chain activities and broader economic effects from additional spending from workers. For the purposes of the assessment, a multiplier of 1.5 has been applied.

## The Study Area

15.39. Effects on social and community infrastructure are assessed by various geographical effect areas, according to the most up-to-date socio-economic data or policy available. This depends in part on the availability of relevant data, but the impacts of the Proposed Development on social and community infrastructure will likely be more local in nature, rather than regional or national. Table 15.1 below illustrates the geographical area of effects and summarises the rationale for the effect area.

Table 15.1: Geographic Area of Effect

| Effect | Geographical Area of Effect | Rational base for impacted area |
|---|---|---|
| Employment generation during demolition and construction phase | Greater Manchester and North West Region | Since demolition and construction employment is relatively mobile, it is not generally considered appropriate to assess the potential employment effects of the demolition and construction stage at the local level. |
| Employment generation during operational phase | Manchester City, Greater Manchester | Given the nature of the Proposed Development, which includes commercial space, it is likely that operational employment could impact at all scales. |
| Additional local spending | Manchester City, Greater Manchester, and North West Region | The impact of additional local spending could impact at all scales. |
| Health Provision | Within 1.5km of the Site | Considered a reasonable walking distance within 1.5km. |
| Open Space | On-site, 720m radius or 15 minute walk time | Recommended standard for natural and semi-natural open space as per the Manchester City Open Space Assessment (MCC, 2025a). |
| GVA | Greater Manchester and North West Region | GVA is associated with employment generation which impacts at the local and regional level. |

15.40. The assessment of likely socio-economic effects is considered based on:

- *Magnitude of change* – this entails consideration of the absolute numbers of residents or employees affected and the size of the geographic area within which effects will be experienced;
- *Scale of the impact* – this requires consideration of the relevant magnitude of each impact in its relevant market context; and
- *Duration of the impact* – more weight is given to long-term permanent changes than to short-term, temporary ones.

15.41. Conformity with standards for provision or accessibility as set out in relevant guidance and scope for mitigation is considered.

## Surveys and Data Sources

15.42. Survey data has not been used to inform this assessment.

15.43. The following data sources have been used for the assessment:

- Design freeze Schedule of Accommodation
- Construction cost for the Proposed Development
- Output in the construction industry (ONS, 2025c)
- Construction Statistics Annual Tables (ONS, 2023b)
- Homes and Communities Agency Employment Density Guide (HCA, 2015)
- Student Expenditure in Manchester (UoM, 2024)
- Business Register and Employment Survey data (ONS, 2023a)
- Regional GVA by industry (ONS, 2025d)
- General Practice Workforce (NHS, 2025)

## Source of Effect

15.44. Table 15.2 sets out the potential effects from the Proposed Development, and the receptors likely to be impact by these effects.

Table 15.2: Potentially significant socio-economic effects

| Effect | Receptor | Applicable Development Phase |
|---|---|---|
| Temporary Employment Opportunities, direct and indirect | The local economy and labour market | Construction |
| Employment generation through the increased population and new commercial space | The local economy and labour market | Operation |
| Increase in student accommodation | The local housing market | Operation |
| Increased spending in the local economy as a result of the increased population | The local economy and local businesses | Operation |
| Increased demand for healthcare facilities | Local residents; new residents; children and young people in the local area | Operation |
| Increased demand for open space | Local residents; new residents; children and young people in the local area | Operation |
| Gross Value Added (GVA) impacts through increased temporary and permanent employment | Local economy | Construction & Operation |

## Significance Criteria

15.45. The following criteria have been used to describe the sensitivity of the receptors, the magnitude of the impacts and the significance of the effects. There is no statutory definition of what constitutes a significant socio-economic effect and guidance is of a generic nature. The assessment of effects in this chapter has been based on the methodology presented in Chapter 2. The assessment has sought to be objective and to quantify effects where possible. Where quantification has not been possible, a qualitative assessment has been made and justified. A detailed description of the methodology for impact magnitude and sensitivity is included below.

**Methodology for Determining Sensitivity**

15.46. Receptors sensitive to socio-economic factors vary in their nature and scale, and as such their values cannot be directly compared. Evaluation of socio-economic receptors therefore requires a qualitative, rather than quantitative assessment of the sensitivity of each receptor, regarding their ability to respond to change based on recent rates of change and turnover. The criteria for assessing the sensitivity of receptors in outlined in Table 15.3.

Table 15.3: Criteria for determining receptor sensitivity

| Sensitivity | Examples of Receptor |
|---|---|
| High | Receptors that will be most directly affected by any effects of the Proposed Development and receptors with significant economic or social stake in the area (e.g. residents of the Proposed development, new employees) |
| Medium | Receptors that are sensitive to effects by virtue of proximity, accessibility or the specific facilities or uses provided by the Proposed Development (e.g. local community facilities, existing residents) |
| Low | This category represents receptors that are likely to experience some effect from the Proposed Development but at a low level (e.g. existing local businesses) |
| Negligible | Receptors with minimal connection to the Site and little likelihood of being affected by any development effects (e.g. regional population) |

**Methodology for Determining Impact Magnitude**

15.47. The criteria used to assess how far an effect deviates from the baseline condition i.e., the magnitude of change, are described in Table 15.4.

Table 15.4: Criteria for determining magnitude of change/impact

| Magnitude of Impact | Criteria for Assessing Effect |
|---|---|
| Major | Effects that would have a significant economic or social effect locally or would be felt more widely than the city scale. Likely to directly affect many receptors or those with high sensitivity. |
| Moderate | Effects that have a material economic or social effect locally or would be felt at a city scale. |
| Minor | Effects that have some economic or social effect at a much-localised level. |
| Negligible | Effects that have minimal economic or social effects. |

**Impact Significance Matrix**

15.48. This assessment uses the scale of significance described in ES Chapter 2 Methodology to assess the potential and residual effects of the Proposed Development against the baseline conditions. As mentioned, the assessment process aims to be objective and quantifies the effects as far as possible. However, some socio-economic effects can only be evaluated on a qualitative basis.

15.49. The significance of a potential effect is derived by considering both the sensitivity of the feature and the magnitude of change, as demonstrated in Table 15.5.

Table 15.5: Matrix for determining effect significance

| | | Magnitude of Change/Impact | | | |
|---|---|---|---|---|---|
| | | Major | Moderate | Minor | Negligible |
| Receptor Sensitivity | High | Major | Major | Moderate/Minor | Negligible |
| | Moderate | Major | Moderate | Minor | Negligible |
| | Low | Moderate/Minor | Minor | Minor | Negligible |
| | Negligible | Negligible | Negligible | Negligible | Negligible |

15.50. Note that moderate and major effects are considered 'significant'. Where an effect is assessed as being within the 'Moderate / Minor' category, professional judgment has been used to determine if it is considered a significant effect or not.

**Sensitive Receptors**

15.51. The socio-economic context is ever evolving and responsive, with ongoing shifts that impact various elements. In this section of the ES chapter, the adaptability of receptors is evaluated, assigning a 'low' sensitivity designation to those capable to adjusting to changes. For instance, displaced workers who can secure alternatively employment within the surrounding area or within Greater Manchester are considered less sensitive than receptors that exhibit less flexibility, like social infrastructure resources. A summary of the identified receptors and their sensitivity can be found in Table 15.6.

Table 15.6: Identified receptors and their sensitivity

| Receptor | Sensitivity | Justification |
|---|---|---|
| Local residents | Low/ Moderate | The area is presently vacant and consequently, no current residents will be affected. However, nearby residents may be sensitive to an increase in the local population and an increase in services and service demand. |
| Children & young people in the local areas | Low | There are currently no residents and no children on the Site. The Proposed Development will not lead to any additional children in the area, and therefore existing children are less likely to be affected by an increase in service demand. |
| Local businesses | Low | Sensitivity varies depending on the nature of the business. Businesses located near the Proposed Development are more likely to experience greater footfall from the increase in new residents. While certain businesses might experience temporary disruptions during the construction phase, it is important to note that the long-term impacts will ensure owing to the rise in local expenditure. |
| Employment opportunities/labour market | Low | The impact of the Proposed Development is expected to be minimal due to the Site's current vacancy. More employment opportunities are expected to be created through the inclusion of commercial space. |
| New residents within the Proposed Development | Moderate/ High | The Proposed Development will have moderate to high levels of impact on new residents. New residents are likely to be readily adaptive to change. |
| New employees within the Proposed Development/labour market | Moderate/ High | The Proposed Development will have moderate to high levels of impact on new employees. New employees and businesses are likely to be readily adaptive to change. |
| The local economy | Low | The Proposed Development is anticipated to have a limited impact on the local economy, primarily due to the short-term nature of construction activities and the modest scale of commercial space. |
| Local housing market | Moderate/ High | The Proposed Development will deliver 1,041 PBSA units. It is currently assessed that there is a shortage of PBSA in Manchester and the local housing market would therefore be highly sensitive to the Proposed Development. |

## Baseline Conditions

15.52. In this section, an overview of the current socio-economic conditions in the Site's local and regional surroundings is presented. The assessment relied on various data sources, including:

- The 2021 Census data for insights into the area's demographics and economy;
- Data from the Office for National Statistics (ONS) to gain a comprehensive understanding of key local socio-economic indicators;
- Information from the National Health Service (NHS) to comprehend healthcare and related socio-economic aspects in the Site's vicinity;
- Information from DfE to assess the capacity of educational facilities within 2km and 3.2km from the Proposed Development for primary and secondary schools respectively.

15.53. Furthermore, relevant local and regional studies and assessments conducted in both Manchester City and Greater Manchester have been referenced to enhance the understanding of the Site's existing socio-economic dynamics.

## Existing Site

15.54. The site, covering approximately 0.6 hectares, is located in Manchester City Centre and is bounded by Charles Street to the south, the 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 currently comprises a disused multi-storey car park (closed since October 2024) and three vacant retail units (last occupied in June 2025). These structures are no longer fit for and planning permission for demolition was approved in December 2025.

## Demographics

15.55. The Site is located within the Piccadilly ward, approximately 2.4km from Manchester City Centre. Piccadilly ward had a population of 11,663 in 2021, accounting for 2.11% of the total population of Manchester in 2021 (ONS, 2021)

15.56. The population of Manchester increased by 8.0% between 2019 and 2024, compared to 5.1% and 4.3% regionally and nationally, indicating rapid population growth within Manchester. The total population in Manchester in 2024 was 589,670 (ONS, 2025b). The total population in Manchester is expected to grow by 8.3% by 2035, with people aged 16-64 expected to grow by 10.7%, from 417,700 to 462,272 (ONS, 2025e).

15.57. The proportion of the population of working age (aged 16-64) in Manchester was 70.9% in 2024. This was higher than the rate in the North West and England, which were 62.6% and 62.9% respectively. This figure is projected to remain fairly consistent, falling only to 69.9% in Manchester by 2035 (ONS, 2020).

15.58. According to the ONS Census 2021, Manchester has a population density of 4,772.7 (measured by number of usual residents per square kilometre). This is significantly higher than the population density across the North West, which is just 525.8, and England which is 433.5 (ONS, 2021). Of the 331 local authorities across the UK, Manchester ranks highly, being the 29$^{th}$ most densely populated local authority. The most densely populated local authorities above Manchester mainly fall within London, and Manchester is the most densely populated local authority in the North West.

15.59. The population of the Piccadilly Ward, where the Proposed Development is located, comprises almost entirely of people aged 16-64 (95.0%), of which the vast majority are under 35 (73.4% aged 16-34). This is considerably higher than the Manchester, regional and national levels (ONS, 2021). Overall, 26.6% of the total population in the Piccadilly Ward were full time students in 2021 (3,031 out of 11,375). This indicates that the Piccadilly Ward has a much higher concentration of students compared to Manchester as a whole (18.0% of total population), and the North West (8.0% of total population) (ONS, 2021).

15.60. Data from the 2021 Census shows that the ethnic minority population forms 43.2% of the population in Manchester. This is a significant increase from the proportion recorded in 2011, where 33.4% of the population were from ethnic minority backgrounds. The proportion of the population from an ethnic minority is much higher in Manchester compared to regional and national levels, where only 14.4% and 19.0% of the population respectively are from an ethnic minority (ONS, 2021). The largest minority ethnic group was Asian, Asian British or Asian Welsh, in both Manchester and the North West, comprising 20.9% and 8.4% of the population respectively (ONS, 2021).

## Economic Profile

15.61. In 2024, the economic activity rate of those aged 16-64 was 72.8% in Manchester, which is lower than both the regional and national levels, which were 76.5% and 78.9% respectively. This level has increased slightly in Manchester from 2020 where the economic activity rate was 71.3% (ONS, 2025a). The employment rate of those aged 16-64 in Manchester lagged significantly behind the regional and national levels in 2019, where it was just 66.8%. The regional employment rate in 2019 was 74.5% and the national employment rate was 76%. This gap has persisted as in 2024 the employment rate of the working age population had decreased slightly to 66%, compared to regional and national levels of 73.4% and 75.7% respectively.

15.62. In 2024, 45.5% of the population aged 16-64 in Manchester had a degree level qualification or above (Regulated Qualifications Framework (RQF) Level 4+). This is roughly the same as the regional level, which was 42.8%, and lower than the national level which was 47.1%. The proportion of those aged 16-64 with no qualifications was 7.8% in Manchester, which is slightly lower than the regional level, at 8% (ONS, 2025a).

15.63. The employment rates measured by occupation group are presented in Table 15.7. The largest share of employment in Manchester is in the professional, scientific & technical group (13.3%), followed by health (11.8%) and business administration & support services (11.4%). The professional, scientific & technical industry group is higher than the proportions in the North West and England, while health is slightly lower than the proportions regionally and nationally. The occupation groups with the smallest share of the workforce are agriculture, forestry & fishing (0%), mining, quarrying & utilities (0.4%) and motor trades (0.5%).

Table 15.7: Employment by industrial group

| Broad Industrial Group | Manchester | North West | England |
|---|---|---|---|
| Agriculture, forestry & fishing | 0.0% | 1.0% | 1.2% |
| Mining, quarrying & utilities | 0.4% | 1.1% | 1.1% |
| Manufacturing | 2.6% | 8.5% | 7.0% |
| Construction | 2.2% | 5.0% | 5.0% |
| Motor trades | 0.5% | 1.6% | 1.8% |
| Wholesale | 2.8% | 3.7% | 3.7% |
| Retail | 7.4% | 8.7% | 8.2% |
| Transport & storage (inc postal) | 6.3% | 4.7% | 5.1% |
| Accommodation & food services | 7.9% | 7.5% | 7.6% |
| Information & communication | 5.5% | 2.9% | 4.7% |
| Financial & insurance | 5.5% | 2.4% | 3.3% |
| Property | 3.5% | 2.0% | 2.2% |
| Professional, scientific & technical | 13.3% | 9.6% | 9.7% |
| Business administration & support services | 11.4% | 8.6% | 8.7% |
| Public administration & defence | 5.2% | 5.0% | 4.4% |
| Education | 9.4% | 8.1% | 8.4% |
| Health | 11.8% | 15.6% | 13.5% |
| **Arts, entertainment, recreation & other services** | 4.2% | 4.0% | 4.5% |

## Gross Value Added (GVA)

15.64. As of 2023, the total Gross Value Added (GVA) in the North West was approximately £243.4bn (in current price estimates), representing approximately 12% of the total GVA across England which was £2,113bn. Greater Manchester represented approximately 41% of this, with a total GVA across all sectors of £100.4bn. Manchester City accounted for approximately 36% of the Greater Manchester total, with a total GVA of £35.9bn (ONS, 2025d). Manchester has a GVA per capita of £55,371 in 2022, which is significantly higher than the regional and national averages which were £29,232 and £33,976 respectively (ONS, 2024).

15.65. Across Greater Manchester in 2023, industries generating a significant amount of GVA include real estate activities (£11.8bn), wholesale, retail & trade (£11.5bn), and human health and social work (£10.4bn). Industries generating the lowest amount of GVA are mining and quarrying (£27.0m), agriculture, forestry and fishing (£48.0m), and activities of households (£78.0m).

## Contribution of Higher Education Institutes (HEIs) to the city's economy

15.66. The city of Manchester is internationally renowned for the strength of its HEIs and has always maintained a strong civic bond with the Council and local communities. Manchester's HEIs are home to world-class facilities and specialisms, centres of excellence, research and expertise and as such have supported growth in the city's key sectors. The large and growing sectors bolstered by the city's graduate talent pool include business, financial and professional services, creative and digital, cyber, fintech, bioscience, advanced material and research and development.

15.67. According to a report on the Economic Benefit of the City's Universities (MCC, 2025b), the two Manchester universities (University of Manchester (UoM) and Manchester Metropolitan University (MMU)) created significant economic impact on the local, regional and national economies. The total contribution of the two Universities is estimated to be approximately £10 billion per annum.

15.68. MMU's total estimated contribution to the economy in 2022/23 was:

- £937 million GVA and 16,420 jobs in the City of Manchester;
- £1.4 billion GVA and 23,880 jobs in Greater Manchester; and
- £2.4 billion GVA and 36,810 jobs in the UK.

15.69. UoM generated a significant economic impact in 2022/23, creating £7.2 billion in economic impact across the UK, and supporting 3,950 jobs in the City of Manchester, with a further 31,000 FTE jobs across the UK. An estimated 1 in 25 jobs in Manchester are supported by the UoM.

15.70. Other significant benefits from the Universities include research and knowledge exchange, which was estimated to be worth around £5m in income during 2022/23 from Man Met activities. The total research income for the UoM is significant, estimated at £337m in 2022/23. Other benefits include creation of spin-out and start-up companies, the impact from students through day-to-day spending, part-time work and volunteering, and an impact on tourism from additional visitors coming to Manchester for the Universities.

15.71. It is important that students are attracted to remain in the City after they graduate, to fill the expected rise in higher level skills jobs being created in Manchester. UoM sees 49% of its graduates remaining in the North West immediately after graduating, with 99% of those originally from the region remaining there. It is estimated that 57% of Man Met graduates live/work in greater Manchester, including 35% in the City of Manchester.

## Health

15.72. NHS Greater Manchester serves a total of 3,304,805 patients registered across a total of 406 GP practices. There are a total of 2,857 GP FTEs across Greater Manchester, which equates to an average patient list size of 1,157 per FTE GP (NHS Digital, 2025).

15.73. There are eight GP practices situated within a 1.5km walking radius from the Proposed Development Site, shown in Table 15.8. Almost all of these GP surgeries have a patient-to-GP ratio of higher than 1,800, the Department for Health (DfH) target of registered patients per FTE GP. The nearest GP practice to the Proposed Development is The Doc's Surgery, which is situated approximately 0.3km from the Proposed development, and has a patient-to-FTE GP ratio of 1,955.

Table 15.8: GP Surgeries within 1.5km of the development

| Surgery Name | Number of Patients | Number of Full Time GPs | Ratio of Patients to GPs |
|---|---|---|---|
| The Doc's Surgery | 13,997 | 7 | 1,955 |
| Cornbrook Medical Practice | 17,804 | 7 | 2,558 |

| Surgery Name | Number of Patients | Number of Full Time GPs | Ratio of Patients to GPs |
|---|---|---|---|
| Vallance Medical | 14,467 | 3 | 4,410 |
| Brunswick Medical Practice | 7,770 | 3 | 2,368 |
| City Health Centre | 15,740 | 5 | 3,402 |
| New Islington Medical Centre | 12,715 | 5 | 2,464 |
| The Arch Medical Practice | 23,096 | 12 | 1,971 |
| **Ancoats Urban Village Medical Practice** | 13,640 | 9 | 1,516 |
| Total | **119,229** | **51** | **2,329** |

* Numbers may not add due to rounding

15.74. The following dentists are within 1.5km of the EIA Site. All are accepting new NHS patients except from City Centre Dentists and Ocean Dental Limited:

- City Centre Dentists (0.65km)
- My Dentist Stephenson Square (0.95km)
- The Vallance Dental Centre (0.95km)
- 207 Dental Care (0.95km)
- Ocean Dental Limited (0.95km)
- Bupa Dental Centre (0.95km) (only accepting NHS patients for children under 17)
- Manchester DP (1.15km)
- New Cross Dental Surgery (1.2km) (only accepting NHS patients for children under 17)
- Revive Dental Care (1.25km)

15.75. There are two hospitals within 1.5km of the EIA Site, a general hospital and a dental hospital. Manchester Royal Infirmary is located 1.4km from the EIA Site and is a large NHS Hospital and teaching hospital with a wide range of departments and services offered.

15.76. Greater Manchester Integrated Care Partnership offers a range of services including living with long COVID, mental health support, and vaccinations, among others. The Greater Manchester mental health support hub provides resources for a number of different topics including eating disorders, talking therapy, bereavement, and suicide prevention. There are also a number of telephone numbers and links to external support platforms including SilverCloud, Kooth, Qwell, and the Greater Manchester Bereavement Service. Greater Manchester Integrated Care Partnership have also published the Greater Manchester Mental Health and Wellbeing Strategy (GM Integrated Care Partnership, 2024).

## Index of Multiple Deprivation

15.77. The Index of Deprivation (IMD) is a national dataset published by the Ministry of Housing, Communities, and Local Government (MHCLG), that provides a tool for ranking deprivation spatial analysis in England at the local authority level and Lower-level Super Output Areas (LSOAs). The IMD combines deprivation information from seven domains: income; employment; education, skills and training; health deprivation and disability; crime; barriers to housing and services; and living environment.

15.78. There are 295 LSOAs in Manchester local authority, and 41% of these (120) were in the 10% most deprived LSOAs in 2025, up from 43% in 2019. An additional 54 LSOAs were in the 20% most deprived in 2025, meaning over half of the LSOAs in Manchester were in either the 10% or 20% most deprived. There are five LSOAs in the 10% least deprived and five LSOAs in the 20% least deprived neighbourhoods in England. Overall, Manchester presents high levels of

deprivation, remaining the second most deprived local authority in England in the 2025 IMD results, out of 296 local authorities (MHCLG, 2025).

15.79. As of 2025, Manchester was ranked 1 out of 296 for crime deprivation, the same rank as in 2019, with 39% of the LSOAs in the 10% most deprived. Manchester also performs poorly in terms of health deprivation, ranking 4 out of 296, with 46% of the LSOAs in the 10% most deprived. Manchester performs better for education, skills and training, ranking 63rd with 11% of LSOAs in the 10% most deprived.

15.80. The Site is located within Manchester LSOA 055A, within the Piccadilly Ward. This LSOA is ranked around the middle for deprivation in England, with just over half of neighbourhoods in England ranked more deprived than Manchester 055A. Compared to other LSOAs in Manchester, it is relatively less deprived, as 85% of neighbourhoods across the city are ranked as more deprived than LSOA 055A. The LSOA is most deprived in terms of crime, ranking among the 10% more deprived neighbourhoods in England, but least deprived in terms of income and employment, ranking among the 10% least deprived neighbourhoods in England.

## Student Accommodation Profile

15.81. According to the MCC's report on PBSA in Manchester (MCC, 2023b), 20 sites have been identified within the city for Student Accommodation which could potentially support around 12,500 PBSA bed spaces. This includes the ID Manchester Site. This would ease the pressure on the private rental housing market in Manchester.

15.82. According to the report, it is broadly recognised that there is a shortage of PBSA in Manchester, and projections estimate that demand for new PBSA could be between 5,440 and 11,320 bedspaces up to 2030. Demand will need to be reviewed regularly as the actual demand depends on a number of factors, but current estimates consider that around 750 new bed spaces would be required per annum up to 2030.

## Open Space

15.83. An open space audit was conducted in 2025 in Manchester and identified that there are over 170 parks and significant areas of semi-natural and amenity open space in Manchester. The report highlights the importance of all communities being able to access high quality open space. There have been some new open spaces created recently, including Mayfield Park, and City River Park at Victoria North (MCC, 2025a).

15.84. The 2025 open space audit outlined the proposed local standards for different types of open spaces, outlining the quantity standard measured by hectares per 1,000 population, and the accessibility standards measured by walking time and driving time away from the space. This criteria is applied to city parks, local parks, natural and semi natural open space, amenity green space, provision for children, provision for young people, and outdoor sports facilities.

15.85. In 2025, there were 101 hectares of local parks in Central Manchester. Central Manchester is likely to experience the most population growth and therefore demand for open space, and the provision of sufficient open space will be most needed in this area due to the high density of housing.

15.86. Mayfield Park was developed as in an earlier phase as part of the Mayfield Strategic Regeneration Framework (SRF), which is now complete and operational. This provides 6 acres of open and play space within walking distance of the EIA Site.

15.87. The Proposed Development is within a reasonable walking distance, as per Manchester City Council's accessibility standards, of four parks, gardens, and outdoor sports facilities. Table 15.9 below shows the parks and open spaces within close proximity to the Proposed Development, and the proposed accessibility standards outlined in the 2025 Open Space Audit.

15.88. The 2025 Open Space Audit identifies the proposed local standards for different categories of outdoor space, presented in Table 15.9.

Table 15.9: Open spaces within the vicinity of the development

| Open Space typology | Quality Standard (ha per 1,000 population) | Accessibility Standard | Example and distance from Proposed Development (m) |
|---|---|---|---|
| City Parks | 0.2 | 15 minute drive | Mayfield Park (650)<br>Pin Mill Brow (1,300)<br>Symphony Park (250) |
| Local Parks | 0.49 | 10 minute walk (480) | Vimto Park (50)<br>Ardwick Green (825) |
| **Natural and Semi Natural Open Space** | 1.9 | 15 minute walk (720)<br>15 minute drive time (City Centre) | n/a |
| Amenity Green Space | 0.4 | 10 minute walk (480) | Ardwick Green (825) |
| Provision for Children | 0.027 | 10 minute walk (480) | Gartside Gardens (610)<br>Mayfield Park (650) |
| Provision for young people | 0.034 | 15 minute walk (720) | n/a |
| Outdoor Sports Facilities | 0.98 | 15 minute walk time (720) | Nicholls Communit Football Centre and Powerleague (1,250) |

## Identification and Evaluation of Likely Significant Effects

### Construction Phase

15.89. The Proposed Development is expected to generate new employment opportunities within the construction sector. To estimate the scale of this employment, standard ratios for gross output per construction employee have been used. The assessment first projects the total gross construction employment resulting from the Proposed Development and subsequently considers factors such as leakage, displacement, and multiplier effects. These analyses have enabled an evaluation of the net impacts on both local and regional economies.

15.90. The estimated construction period for the Proposed Development space is approximately 3 years, accounting for the overlap between enabling works and the construction programme (i.e., non-permanent works). Consequently, the impact is transient in nature. Although these employment opportunities are short-term, they represent a favourable economic impact that can be quantified based on the construction's scale and type.

15.91. The direct expenses associated with constructing the Proposed Development will boost economic activity within the Piccadilly Ward, Manchester and the broader regional economies. To estimate the employment generated during the temporary construction phase, the average output per construction industry employee is applied to the estimated total construction cost. As a result, the Proposed Development is projected to generate a total of up to 99 person-years of construction employment on-site.

15.92. Using the convention of equating ten person-years of employment to one full-time equivalent (FTE) job in the construction sector, it is estimated that approximately up to 88 gross FTE construction jobs will be generated during the temporary construction phase.

**Leakage Effects**

15.93. Leakage effects refer to impacts that occur outside the project's immediate area. In the case of the Proposed Development, leakage pertains to the loss of employment opportunities beyond the boundaries of Manchester City. Analysis utilising Census 2021 origin-destination data reveals that 62.9% of individuals employed in Manchester travel less than 10km to their work destination, or work from home in Manchester. This corresponds to a medium to high leakage rate of 37.1%, as defined by HCA Additionality Guidance (HCA, 2014), suggesting that a substantial portion of the benefits will accrue to individuals residing outside the project's benefit area.

15.94. Applying a leakage rate of 37.1% to the estimated up to 88 gross direct construction jobs created by the Proposed Development indicates that an estimate of up to 56 individuals from within Manchester and up to 33 individuals from outside of Manchester will be employed on-site throughout the construction period.

**Displacement Effects**

15.95. Displacement measures the extent to which a project's benefits are offset by reductions in output or employment elsewhere. Increased demand for labour has the potential to draw workers away from other positions, thereby reducing the net benefit.

15.96. Construction workers often shift between projects, especially when delays occur or to meet project deadlines. It is assumed that due to the labour market's flexibility and the fact that construction workers at the Proposed Development represent a small proportion of the Manchester labour force, displacement effects on direct construction employment will be minimal. In the context of a Manchester construction project, a low displacement rate of 25% is considered appropriate, as per the HCA guide (HCA, 2014). Applying this displacement rate to the total gross direct employment figure of up to 22 construction employees yields a net direct employment figure of up to 66 workers.

**Multiplier Effect**

15.97. In addition to the direct employment generated by the Proposed Development itself, there will be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply chain linkage multipliers). Additionally, part of the income of the construction workers and suppliers will be spent within the Greater Manchester Area, generating further employment (in terms of induced or income multipliers).

15.98. Applying a multiplier of 1.5 to the total net direct employment figure of 33 construction workers results in net indirect employment of 99 jobs during the construction period.

**Net Construction Employment Effects**

15.99. Table 15.10 presents the temporary employment generated by construction of the Proposed Development, taking leakage, displacement, and multiplier effects into account. The total net additional employment created by the Proposed Development within Manchester is estimated to be up to 62 FTE jobs, whilst up to 37 FTE jobs will be created outside Manchester, supporting a total of 99 FTE net jobs during the temporary construction phase.

Table 15.10: Construction Employment Effects

| | Manchester | Elsewhere | Total |
|---|---|---|---|
| Gross Direct Employment | 56 | 33 | 88 |
| Displacement | 14 | 8 | 22 |
| Net Direct Employment | 42 | 25 | 66 |
| Indirect & Induced Employment | 21 | 12 | 33 |
| **Total Net Employment** | **62** | **37** | **99** |

* Numbers may not add due to rounding

Buro Happold Calculations, 2025

15.100. In the context of a large labour pool of construction workers in Manchester, the direct, indirect and induced employment and expenditure created by the temporary construction phase of the Proposed Development is assessed to result in a minor beneficial, long-term and temporary effect on the Manchester economy.

**Construction GVA**

15.101. The construction employment has the potential to add economic benefits to the local and regional economies through GVA effects.

15.102. GVA per construction FTE in 2025 prices (£94,623.40) has been applied to the employment figures presented in Table 15.10 to calculate gross and net direct GVA associated with construction employment. Indirect and induced GVA

effects have been estimated by applying a multiplier of 1.5. The total net GVA is estimated to be £9.4m per annum from construction employment, of which £5.9m is expected to impact the local Manchester economy. Table 15.11 provides further details.

Table 15.11: GVA from Construction Employment

| GVA Type | Manchester | Elsewhere | Total |
|---|---|---|---|
| Gross Direct | £5,256,569 | £3,103,785 | £8,360,354 |
| Net Direct | £3,942,427 | £2,327,839 | £6,270,266 |
| Net Indirect and Induced | £1,971,213 | £1,163,920 | £3,135,133 |
| Total Net GVA | **£5,913,640** | **£3,491,759** | **£9,405,399** |

15.103. In the context of the Manchester economy, the total net GVA generated by the temporary construction phase of the Proposed Development is assessed to result in a minor beneficial long-term and temporary effect on the Manchester and North West economies.

## Operational Phase

15.104. This section analyses the scale, duration, and significance of socio-economic effects relative to the baseline socio-economic conditions recognised in the previous sections of this chapter. Effects are assessed for the Proposed Development once completed and occupied.

15.105. Relevant aspects of the Proposed Development are designed-in mitigation.

**Existing Employment Deadweight**

15.106. The existing employment that the Site supports can be referred to as the 'deadweight' level of employment. 'Deadweight' refers to the outcome which would have occurred without intervention. As the Site does not currently accommodate any employment, the existing employment deadweight is considered zero.

**Operational Employment and Economic Effects**

15.107. Upon completion and operation, the Proposed Development is expected to create long-term job opportunities. When estimating the operational job impact of the Proposed Development, it is essential to consider both its gross and net effects. This evaluation should account for factors such as leakage, displacement, and multiplier effects.

15.108. The level of existing employment supported by the Site can be described as its "deadweight" employment. Deadweight refers to the outcome that would naturally occur without any external intervention. Since the Site currently does not host any employment, its existing employment deadweight is zero.

15.109. The number of jobs generated by the Proposed Development will be contingent on the final mix of development and the allocation of floor space by usage category. The preliminary Proposed Development plan includes approximately 591.6 sq. m. (Net Internal Area) of commercial Use Class E space across three units.

15.110. Based on appropriate employment density calculations, it is anticipated that the Proposed Development, once completed and operational, could yield a total of 17-70 gross direct jobs within the proposed commercial space. It is worth noting that the estimated gross direct employment might not accurately represent the actual employment resulting from the commercial floor space. This discrepancy arises from the employment density assumptions made during this stage. As Commercial Use Class E provides flexible space, a range of employment densities for different uses under Flexible Use Class E have been used to estimate the highest to lowest employment potential. The maximum employment arises from General Office (Finance and Insurance), and the minimum arises from Retail (Warehouse). The precise employment density of the flexible commercial space will depend on the specific arrangement of each usage during operation.

Table 15.12: Gross Direct Operational Employment

| Employment Space | Floorspace (sqm) (NIA) | Employment Density | Gross Direct Employment |
|---|---|---|---|
| **General Office (Finance and Insurance)** | 591.6 | 10 | 59 |
| **Retail (warehouse)** | 591.6 | 90 | 7 |
| **PBSA** | 18,703 (1,041 beds) | 0.01 FTEs per bed | 10 |

Buro Happold Calculations, 2025

15.111. Assuming a leakage rate of 37.1%, a low level of displacement (25.0%) and a 1.5 multiplier, it is estimated that the Proposed Development will result in a total net gain of an estimated 242-301 jobs, of which approximately 152-189 will be created within Manchester. Table 15.13 presents further details.

Table 15.13: Net Operational Employment

| Employment Type | Maximum employment scenario | | | Minimum employment scenario | | |
|---|---|---|---|---|---|---|
| | Manchester | Elsewhere | Total | Manchester | Elsewhere | Total |
| Gross Direct Employment | 44 | 26 | 70 | 11 | 6 | 17 |
| Displacement | 11 | 6 | 17 | 3 | 2 | 4 |
| Net Direct Employment | 33 | 19 | 52 | 8 | 5 | 13 |
| Indirect and Induced Employment | 16 | 10 | 26 | 4 | 2 | 6 |
| **Total Net Employment** | **49** | **29** | **78** | **12** | **7** | **19** |

Buro Happold Calculations, 2025

15.112. Considering the additional net direct, indirect, and induced employment created by the permanent employment from the Proposed Development, it is assessed that there will be minor beneficial long-term permanent effect, under each scenario, on the city of Manchester economy.

**Operational GVA**

15.113. Upon completion of the Proposed Development, the operational employment generated in the commercial space has the potential to generate economic benefits to the local and regional economies measured by additional GVA.

15.114. The final additional GVA from the Proposed Development is contingent on the final mix of employment in the commercial space. For the purposes of the assessment, GVA from employment associated with the maximum and minimum scenarios presented in Table 15.13 has been calculated. GVA per FTE job benchmarks have been applied to the estimated gross direct and net direct employment for the relevant sectors under the different scenarios. Table 15.14 provides the GVA per FTE for relevant sectors.

Table 15.14: GVA per FTE (2025 prices) (ONS, 2023a; ONS, 2025d; Buro Happold Calculations, 2025)

| Sector | Output per FTE (£, 2025 prices) |
|---|---|
| **Retail** | 58,426 |

| Sector | Output per FTE (£, 2025 prices) |
|---|---|
| Financial Services | 192,486 |
| Accommodation | 49,715 |

15.115. After applying the GVA per FTE benchmarks to generate gross and net direct GVA. Indirect and induced GVA has been calculated assuming a multiplier of 0.5. After applying this multiplier, the additional total net GVA per annum is estimated to be £1.0m-£13.4m. Table 15.15 provides further details.

Table 15.15: Annual GVA from the Proposed Development (2025 prices) (ONS, 2023a; ONS, 2025d; Buro Happold Calculations, 2025)

| GVA Type | Maximum GVA Scenario | | | Minimum GVA Scenario | | |
|---|---|---|---|---|---|---|
| | Manchester | Elsewhere | Total | Manchester | Elsewhere | Total |
| Gross Direct GVA | £7,465,645 | £4,408,153 | £11,873,797 | £547,237 | £323,121 | £870,358 |
| Net Direct GVA | £5,599,233 | £3,306,114 | £8,905,348 | £410,428 | £242,341 | £652,769 |
| Indirect and Induced GVA | £2,799,617 | £1,653,057 | £4,452,674 | £205,214 | £121,170 | £326,384 |
| Total Net GVA | **£8,398,850** | **£4,959,172** | **£13,358,022** | **£615,642** | **£363,511** | **£979,153** |

15.116. Considering the additional net direct, indirect and induced GVA generated from the two employment scenarios, it is assessed that there will be a minor beneficial, long-term permanent effect, under each scenario, on the Manchester and North West economies.

**Indicative PBSA Unit Mix**

15.117. The Proposed Development will introduce 1,041 new purpose built student accommodation units into the neighbourhood. This includes 720 cluster units and 321 studios.

15.118. The likely number of future residents at the Proposed Development assumes that there will be one student per room, resulting in a total of 1,041 new residents to the local area.

**Additional Local Spending**

15.119. To estimate the benefit of the Proposed Development in terms of additional local expenditure, local data on average expenditure for undergraduate students in Manchester has been applied to the estimated number of student residents. Data from the University of Manchester estimates that first year undergraduate students spend £13,685 per annum.

15.120. To ensure a conservative estimate of new local spending, it is further assumed that some of those moving to the accommodation would already reside in the local area, Manchester, and would thus not generate and net new expenditure. According to a report on the Economic Benefit of the city's Universities (MCC, 2025b), in 2022/23 40% of Manchester Met student enrolments and 1 in 4 University of Manchester first year domestic students were from the Greater Manchester region. To account for this, a displacement rate of 25% has been applied. This discount also accounts for the potential to 'double count' the employment benefits.

15.121. To account for additional regional expenditure rather than at city of Manchester level, a leakage rate is accounted for. It is assumed that 37.1% of the student expenditure will be leaked outside of Manchester.

15.122. By applying these assumptions, a total net expenditure of £6,453 per person per annum is generated into the Manchester economy, as shown in Table 15.16.

Table 15.16: Direct, Indirect and Induced Spending per Person per Annum in Manchester (HCA, 2014; MCC, 2025b; Buro Happold calculations, 2025)

| | Gross Direct Expenditure (£) | Net Direct Expenditure (£) | Total Net Expenditure (£) |
|---|---|---|---|
| **Total Net Spending** | 13,685 | 10,264 | 6,453 |

15.123. Applying the average expenditure figures to the estimated 1,041 students occupying the PBSA within the Proposed Development, an estimated total net benefit of up to £6.7m million per annum of additional local spending is generated. Table 15.17 shows the direct, indirect, and induced residential spending in Manchester.

Table 15.17: Direct, Indirect and Induced Residential Spending in Manchester (HCA, 2014; MCC, 2025b; Buro Happold, 2025)

| | Gross Direct Expenditure (£) | Net Direct Expenditure (£) | Total Net Expenditure (£) |
|---|---|---|---|
| **Total Net Spending** | 14,246,085 | 10,684,564 | 6,717,915 |

15.124. Considering the additional annual spending by residents within the Proposed Development, it is assessed that there will likely be a moderate beneficial (significant), long-term permanent effect at the local level and a minor beneficial (not significant), long-term permanent effect at all other spatial scales.

**Student Accommodation**

15.125. While there are no specific PBSA targets identified in the Core Strategy, a report on PBSA in Manchester by the Strategic Director of Growth and Development to the Economy Scrutiny Committee (MCC, 2023b), forecasted that the demand for PBSA could be between 5,440 and 11,320 bedspaces up to 2030. This equates to approximately 750 new bed spaces per annum up to 2030.

15.126. The Proposed Development will contribute to meeting these targets by providing an additional 1,041 units, which represents approximately 9-19% of the PBSA target identified in the report.

15.127. Once the Proposed Development is completed, the additional 1,041 PBSA units are considered to have a moderate beneficial (significant), long-term permanent effect on meeting the target for new PBSA provision in Manchester.

**Primary Healthcare**

15.128. The baseline analysis identifies seven GP practices located within a 1.5km walking distance of the Site. The current patient-to-FTE GP ratio stands at 2,329 which is higher than the national average of 1,800 patients per GP.

15.129. The projected addition of 1,041 residents to the Proposed Development will increase the demand on local healthcare facilities. Furthermore, since 2015, employees have had the option to register with a GP near their workplace rather than their home. The inclusion of 12-49 new employees to the local area as a result of the Proposed Development, is expected to have a minimal impact on local GP practices.

15.130. In the scenario where all new residents and employees choose to register with local GPs, the patient-to-GP ratio would rise to 1 GP per 2,350 patients, which is higher than the national standard of 1,800 patients per GP. The younger population profile of the Piccadilly Ward may offset some of the increasing pressure surrounding GP practices, under the assumption that an elderly patient would likely generate higher demand for healthcare services. Furthermore, the overcapacity is typical of city centres and urban areas, which typically have a higher patient-to-GP ratio compared to more rural settings. In addition, students often remain registered with their family GP, reflecting their generally younger and healthier demographic profile. The university provides a student GP service via the on-campus medical GP practice (provided by the Robert Darbishire Practice), which are currently accepting students.

15.131. However, the healthcare services in the surrounding area are already operating at or above capacity, meaning any additional registrations from new residents would contribute further pressure. Taking these factors into account, and in line with EIA's worst-case scenario principle, it is assessed that the Proposed Development is likely to have a minor adverse (not significant) effect on primary healthcare provision at the local level.

**Open Space**

15.132. Manchester City Council sets out standards of green space provision for local parks at 0.49 ha/1,000 persons, natural and semi-natural greenspace at 1.9 ha/1,000 persons, and amenity greenspace at 0.4 ha/1,000 persons.

15.133. It is estimated that the Proposed Development will accommodate 1,041 residents, who will place additional demands on open space. The baseline analysis has shown that the Site has access to four park and open spaces, including the newly developed Mayfield Park.

15.134. The Proposed Development includes approximately 3,464 sqm of open space, consisting of a new public square, soft landscaping, spaces for socialising, and seating, which will be open and accessible to all. The provision of open space will help mitigate the impact the increased resident population may have on public spaces in the local area and provide new accessible open space for residents and employees within the surrounding locality.

15.135. Overall, it is assessed that the Proposed Development will have a negligible effect on open space provision in the local area.

## Cumulative Effects

15.136. Cumulative effects occur when a single receptor is affected by more than one effect at any point in time. Prospective developments within the surrounding area could have cumulative socio-economic effects with respect to population, student accommodation provision, employment, spending, and demand for social infrastructure.

15.137. This section of the chapter assessed the socio-economic effects of the Proposed Development in combination with the potential socio-economic effects of the committed developments.

15.138. All of the cumulative schemes have been considered for their cumulative effect within Manchester. Those cumulative schemes which have provided commercial floorspace and PBSA units have been included in the calculations.

15.139. In addition to the cumulative schemes, the application for Weston Halls and Pendulum Hotel, (ref: EIASCO/25/009) on behalf of iQ Student Accommodation, is considered for cumulative effects.

### Construction

15.140. The construction phase of the Proposed Development along with the committed developments identified will generate additional construction related employment within Manchester and the North West. The scale of the construction employment generated cannot be readily quantified on the basis that the information available for each scheme is commercially sensitive. In addition, the timing and phase of the construction of these schemes along with the Proposed Development may not occur over the same periods, therefore the temporary construction related effects may not coincide.

15.141. The combined effects of the developments are likely to have a major beneficial (significant), long-term cumulative effect on construction employment due to the potential for the committed developments to generate a considerable amount of construction employment (in addition to the Proposed Development).

### Operation

15.142. All of the cumulative schemes have been assessed during the operational phases due to the effects on the same target economic areas. While detailed information regarding the amount of employment floorspace to be generated by these cumulative schemes is not available for all schemes, a high-level assessment suggests that gross direct employment resulting from the cumulative schemes may be upwards of 4,000 jobs. Thus, there will be an overall major beneficial, long-term permanent effects on employment within Manchester and the North West.

15.143. The cumulative schemes together with the Proposed Development, assuming they are built and complete, will provide approximately 6,700 new PBSA units in Manchester. In addition, the application for the student

accommodation block at Weston Halls (iQ Student Accommodation) also includes up to 2,700 units, which would take the total up to 9,400 student units, if the application is approved. Thus, there will be an overall permanent major beneficial, long-term cumulative effect on PBSA provision within Manchester.

15.144. Residents within the Proposed Development and the cumulative developments will put additional demand on social infrastructure. Current provision is likely to be inadequate to meet the future demand arising from the high number of residential units coming forward, especially for healthcare provision. However, given the identified housing need in policy documents and the absence of identified capacity issues, it is expected that planning policy will continue to ensure that there is sufficient investment into the necessary services and infrastructure to accommodate the demand of additional users. In addition, other developments may make contributions through relevant S106 agreements, to contribute towards increased capacity to deal with the demand for primary healthcare and other social infrastructure, wherever necessary to supplement the provision planned within the committed developments. In this case, the cumulative schemes are likely to have a negligible effect on social infrastructure provision.

15.145. The increase in residential units arising from the cumulative developments will increase demand for open space and put pressure on existing provisions. The cumulative schemes have proposed public realm and landscaping works. If this takes the form of open space provision, the cumulative developments will likely have a minor beneficial effect on open space provision. However, if no open space is provided, then the cumulative developments will likely have a negligible effect on open space provision.

**IDM Masterplan**

15.146. Scenario 4 assesses the Existing Baseline, Plot H, Cumulative Schemes, and the IDM Masterplan. The IDM Masterplan includes different plots to make up the innovation district and includes new offices, homes, leisure, community, and green space. Sister Plot C (included in cumulative calculations) includes nearly 50,000sqm of office space, which constitutes approximately 30% of the total Masterplan (approx. 168,000sqm). Further phases of development are understood to be focused on R&D and innovation space, retail, commercial, and hotel, and have the potential to provide significant additional employment and economic benefits to Manchester and the North West.

## Mitigation Measures

### Construction Phase

15.147. There are no adverse significant socio-economic effects identified for the Proposed Development during the construction phase.

### Operational Phase

15.148. There are no significant socio-economic effects identified for the Proposed Development that require mitigation during the operational phase. However, the Proposed Development will deliver 1,041 PBSA units, which will likely place additional pressure on primary healthcare facilities. The applicant should seek to work with Manchester City Council to address this.

## Residual Effects

15.149. The Proposed Development is assessed to have an overall beneficial effect on the local population and economy, increasing economic activity through additional local spending, increased GVA and provision of new PBSA units.

### Construction Phase

15.150. Table 15.18 summarises the residual effects of the Proposed Development during demolition and construction.

### Operational Phase

15.151. Table 15.18 summarises the residual effects of the Proposed Development during operation.

Table 15.18: Summary of residual effects of the Proposed Development

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Demolition and Construction Phase | | | | |
| Creation of 99 new additional construction jobs | Regional workforce | None required | N/A | Minor beneficial, long-term and temporary effect. |
| Creation of £9.4m in additional GVA | Local and regional economy | None required | N/A | Minor beneficial long-term and temporary effect. |
| OPERATIONAL PHASE | | | | |
| Increase in residential population could lead to additional local spending | Local businesses | None required | N/A | Moderate beneficial (significant), long-term permanent effect at the local level and a minor beneficial (not significant), long-term permanent effect at all other spatial scales. |
| Generation of 19-78 net new additional jobs once complete and operational | Local employment | None required | N/A | Minor beneficial (not significant) long-term permanent effect |
| Provision of up to 1,041 new PBSA units of different sizes | Local housing market | None required | N/A | Moderate beneficial (significant), long-term permanent effect |
| The Proposed Development could lead to additional people requiring healthcare provision through GP services. However, as students often retain their GP registration at their family home, the additional demand for GP services is likely to be small. However, the baseline assessment indicates that the existing patient to GP ratio is higher than average, and additional residents could place additional pressure on the healthcare services. | Local residents | None required. Given that the effect on primary healthcare provision is assessed as minor adverse and therefore not significant, no specific mitigation is required. | N/A | Minor adverse (not significant), long-term and permanent effect. |
| Up to an additional 1,041 people could reside in the local area as a result of | Local Residents | None required | N/A | Negligible |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| the Proposed Development, increasing the pressure on green space. The Proposed Development includes 3,464 sqm of open space, which will be open and accessible to all. | | | | |
| The Proposed Development could lead to an additional £1.0m-£13.4m in GVA as a result of additional employment. | Local and regional economies | None required | N/A | Minor beneficial, long-term permanent effect. |

## Monitoring

15.152. No monitoring is recommended for any of the socio-economic effects.

## Reference List

15.153. This ES Chapter has been prepared in reference to the following:


- DfE, (2025); Department for Education Information about Schools
- GM, (2020); Physical Activity across Greater Manchester. Greater Manchester Moving.
- GMCA, (2019). Greater Manchester Housing Strategy
- GMCA, (2021). Greater Manchester Strategy 2021-2031
- GMCA, (2024). Places for Everyone (PfE) Plan
- HCA, (2014). Homes and Communities Agency Additionality Guide
- HCA, (2015). Employment Density Guide
- Homes England, (2023). Homes England Strategic Plan 2023-28
- MCC, (2012). Manchester Core Strategy (2012-2027)
- MCC, (2022). Manchester Housing Strategy
- MCC, (2023a). Investing in Success: An Economic Strategy for Manchester
- MCC, (2023b). Purpose Built Student Accommodation in Manchester
- MCC, (2025a). Manchester City Open Space Assessment
- MCC, (2025b). Report on the Economic Benefit of the City's Universities
- MHCLG, (2016). Planning Practice Guidance
- MHCLG, (2024). National Planning Policy Framework (NPPF).
- MHCLG, (2025). Index of Multiple Deprivation
- NHS Digital, (2025). General Practice Workforce

- ONS, (2020); Population Projections 2018
- ONS, (2021); Census
- ONS, (2023a); Business Register and Employment Survey
- ONS, (2023b); Construction Statistics Annual Tables
- ONS, (2024); Regional Gross Value Added per head and income components
- ONS, (2025a); Annual Population Survey Jan-Dec 2018
- ONS, (2025b); Mid-Year Population Estimates
- ONS, (2025c); Output in the Construction Industry
- ONS, (2025d); Regional Gross Value Added by Industry
- ONS, (2025e); Population Projections 2022
- UoM, (2024): University of Manchester Undergraduate Cost of Living 2024/25

# 16. Human Health

## Introduction

16.1. This Chapter of the ES has been prepared by Buro Happold and assesses how the Proposed Development could directly and indirectly impact the key determinants of health; to identify those people most likely to be affected by the Proposed Development regarding health inequality; to identify measures to enhance the positive impacts and mitigate any negative effects of the Proposed Development on public health, and to establish responsibilities for delivering and monitoring these impacts.

16.2. The authors of this Chapter are:

| | Lead Author | Reviewer |
|---|---|---|
| Name | Ellen Newman | Monica Laucas |
| Company | Buro Happold | Buro Happold |
| Qualifications/Accreditations relevant to technical area inlc. IEMA | MSc International Economics, Finance and Development<br>BA Economics & Politics | BSc Urban Sociology, MSc Local Economic Development |
| Years technical experience (in technical area) | 3 | 8 |
| Number of EIA's delivered to date | 6 | 20+ |

## Assumptions and Limitations

16.3. Potential limitations of the assessment include:

- This Human Health chapter of the Environmental Statement (ES) is based on the HUDU/NHS Planning for Health Rapid Health Impact Assessment (HIA) Toolkit. Given the lack of clear industry recognised methodology of health effects in EIA, particularly in respect of significance, the methodology is different to the other ES Chapters. Instead, the assessment follows the HUDU methodology, which provides a structured framework for evaluating health impacts in the context of urban development (refer to Assessment Methodology and Significance Criteria for further detail); and

- The baseline conditions may change over time and this could influence the findings of the assessment, and could lead to the findings suffering from statistical time lag.

16.4. Assumptions made during the assessment include:

- The assessment presented in the Human Health ES Chapter will be qualitative and based on the framework provided by the HUDU/NHS Planning for Health Rapid HIA Toolkit;
- The existing retail units on Site are currently vacant. The assessment therefore assumes that no employment is associated with the Site; and
- The expected population for the Proposed Development is based off the number of student rooms available in the Proposed Development, assuming there will be one student per room.

## Relevant Legislation, Policy and Guidance

### Legislation

16.5. There is no specific legislation relating to health.

## Policy

**National**

National Planning Policy Framework (NPPF) (MHCLG, 2024)

16.6. The NPPF sets out the Government's economic, environmental, and social planning policies for England. The social objectives include supporting "strong, vibrant and healthy communities." These policies outline the Government's vision of sustainable development, which should be interpreted and applied locally to meet local and community aspirations.

16.7. Chapters from the NPPF which are important for human health are:

- Chapter 8: Promoting healthy and safe communities: This sets out the requirement that planning policies and decisions should aim to provide healthy, inclusive, and safe places, which promote social interactions, are safe and accessible, and enable and support healthy lives.

- Chapter 9: Promoting sustainable transport: outlines support for developments in sustainable locations, reducing congestion and emissions, improving air quality and public health, and pursuing opportunities to promote walking and cycling.

- Chapter 12: Achieving well-designed places: describes the standards of good design, including the use of design measures that can promote safe, inclusive and accessible places and thereby improve health and wellbeing. Good design includes, for example, measures that mitigate and minimise light, noise and air pollution.

**Regional**

Places for Everyone (PfE) Joint Development Plan 2022 – 2039 (GMCA, 2024)

16.8. The Plan is a long-term plan for nine Greater Manchester districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan) for jobs, new homes, and sustainable growth. Policy JP-P6 is related to health and outlines the following:

- To help tackle health inequality, new developments will be required, as far as practicable, to: maximise their positive contribution to health and wellbeing; support healthy lifestyles; and be supported by a Health Impact Assessment for all developments that require an Environmental Impact Assessment;

- Where appropriate, the provision of new or improved health facilities as part of new development, proportionate to the additional demand they would generate;

- Enabling and continued enhancement and successful operation of hospitals; and

- Facilitating greater integration of health and social care, and the provision of integrated wellness hubs, including the co-location of health, community and wellness services.

**Local**

Manchester Core Strategy 2012-2027 (MCC, 2012)

16.9. The Manchester Core Strategy document, also known as the Core Strategy Development Plan Document (DPD), is a key planning document that sets out the long-term spatial vision and strategic policies for the City of Manchester. It provides a framework for guiding development and shaping the city's growth and regeneration.

16.1. Policy H12 supports the development of new purpose-built student accommodation, particularly where schemes align with university redevelopment plans or partnerships and contribute to Manchester City Council's regeneration priorities. The policy outlines that suitable sites should be located near university campuses or along high-frequency public transport routes.

16.2. Policy C1 states that the development of district centres that is aligned with the distinct local character, provides housing, a good range of services including retail, health, and leisure facilities.

## Guidance

**National**

Planning Practice Guidance: Healthy and Safe Communities (MHCLG, 2022)

16.3. The Healthy and Safe Communities guidance was first published in 2014 and last updated in 2022, setting out guidance on promoting healthy and safe communities. Paragraph 001 of the guidance considers planning and health together in two ways: "in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system (taking into account the changing needs of the population)".

16.4. Paragraph 003 defines a healthy place as "one which supports and promotes healthy behaviours and environments and a reduction in health inequalities for people of all ages. It will provide the community with opportunities to improve their physical and mental health, and support community engagement and wellbeing".

Health Equity in England: The Marmot Review 10 Years On (2020)

16.5. The Marmot Review (2010) argues that serious avoidable health inequalities exist across England and shows these inequalities to be determined by a wide range of socio-economic factors (Institute of Health Equity, 2010). Health is linked to both individuals and communities. Policy objectives include: giving children the best start in life; improve living standards; creating fair employment; and strengthening the impact of ill health prevention.

16.6. The Marmot Review 10 Years On report published in February 2020, strengthens the argument provided in the Marmot Review, showing that health inequalities in England are increasing (Institute of Health Equity, 2020a). Social and ethnic inequalities in health should be addressed to ensure better health outcomes for all. The report makes the case for a multi-disciplinary approach to achieve a reduction in health inequalities, which integrates health policies with housing, economic development and transport policies.

The Public Health England Strategy 2020-2025

16.7. This strategy sets out Public Health England's priorities for the next five years and how it will work to protect and improve the public's health. 10 key priorities have been identified in the strategy, and include:

- Priority 3: "Creating cleaner air – develop and share advice on how best to reduce air pollution levels and people's exposure to polluted air"
- Priority 5: "Best start in life – work to improve the health of babies, children and their families to enable a happy healthy childhood and provide the foundations of good health into adult life"

16.8. The importance of working towards a fairer society has been outlined, which means providing the foundations for everyone to have good physical and mental health. By investing in early years, it can offer good value for money and can ensure equality from an early stage, where most inequalities in health often begin.

Spatial Planning for Health (PHE, 2017)

16.9. This report provides evidence of links between spatial planning and health, focusing on five key built environment topics – neighbourhood design, housing, healthier food, natural and sustainable environment, and transport. Details on each topic can be found in Appendix 16.a.

Health Impact Assessment in Spatial Planning (PHE, 2020)

16.10. This document provides a guide for local authority public health and planning teams setting out process and practice with regard to the wider determinants of health and wellbeing for plan-making and the planning application process. It identifies eight categories of health and wellbeing outcomes in planning: reduce health inequalities; improve mental health and wellbeing; improve diet and weight; improve musculoskeletal health; improve respiratory health; improve cardiovascular health; protect environmental health; and provide access to health and care infrastructure and services. The guide is mostly associated with the plan-making and associated strategic environmental assessment

processes. It does include an annexe on integrating HIA in EIA and this does confirm the importance of a proportionate and justified approach.

Effective Scoping of Human Health in Environmental Impact Assessment (Institute of Environmental Management and Assessment (IEMA), 2022)

16.11. The guidance provides a framework that supports a proportionate approach that can apply to all scales and sectors of EIA. It confirms that a wider determinants approach should be taken by EIA scoping, and for health this means deciding on the relevant health issues that are likely and have the potential to significantly affect population health.

16.12. An EIA health chapter is required when either other EIA technical topics have been scoped in to assess likely and potential significant effects on human receptors, or there is a likely significant change for the health of a group of individuals due to the proposed project and in a wider determinant of health not covered by other technical EIA topics.

**Regional**

Mental Health and Wellbeing Strategy 2024-2029 (GM Integrated Care Partnership, 2024)

16.13. The Strategy addresses how the Greater Manchester Integrated Care Partnership has a responsibility to deliver the targets outlined in the NHS England's 10-year plan for mental health. This latest strategy builds on the 2016-2021 strategy and seeks to address how Manchester can face challenges head on and improve the mental health and wellbeing of people living in Greater Manchester.

Greater Manchester Strategy 2021-2031 (GMCA, 2021a)

16.14. This strategy sets out the long-term vision and priorities for the Greater Manchester area. It outlines the region's ambitions and objectives across various domains, including the economy, environment, transport, housing, health, and social issues.

16.15. The strategy recognises that changing demographics and an ageing population will present major challenges to improving population health and the need for significant innovation to transform the health and social care system. The strategy aims to tackle inequalities, including the widening gap in healthy life expectancy between areas within Manchester. The strategy aims to ensure easy access to all residents to high quality culture, outdoor, sport and leisure opportunities, which will bring significant health benefits to the population of Manchester. Through the strategy, a new Integrated Care System and an Integrated Care Board are being delivered which will replace the current Health and Social Care Partnership and provide a new delivery structure for health and care systems across Manchester.

Improving Health and Care in Greater Manchester: 2023-2028 Strategy (GM Integrated Care Partnership, 2023)

16.16. This strategy follows on from the 'taking charge' strategy from 2015, and sets out how the region intends to work together to improve the health of people in the city-region. The strategy sets out missions and priority actions, in response to the current challenges being faced in the city-region. This includes, but is not limited to, the following:

- Strengthen our communities: help people, families and communities feel more confident in managing their own health.
- Helping people stay well and detecting illness earlier: collaborate to reduce smoking rates, increase physical activity, tackle obesity, and alcohol dependency. Also want to do more to identify and treat high blood pressure and other conditions that are risk factors to poor health.

16.17. The strategy also identifies the model for health and conditions for good lives. The model for health includes improving community wellbeing, increasing primary care networks and neighbourhood teams, and having adequate dental and community pharmacy services.

## Assessment Methodology and Significance Criteria

16.18. Buro Happold has used the assessment matrix set out within the Rapid HIA Tool, taking into account published data and information from a variety of sources, and applying professional judgement informed by relevant guidance to evaluate the health impacts of the scheme.

16.19. This HIA has considered how the Proposed Development may influence the physical and mental health and wellbeing of local residents and inhabitants of the proposed scheme considering the key determinants of health.

### What is the HIA?

16.20. The 'Healthy and Safe Communities' guidance describes the Health Impact Assessment (HIA) as a useful tool to assess and address the impacts of development proposals (MHCLG, 2019).

16.21. The Manchester City Council Local Plan Integrated Appraisal (MCC, 2025b) describes an HIA as an element that "has regard to health impacts and promote the reduction of health inequality" and is used as a method for a structured assessment within its plan-making process to evaluate health impacts to identify, appraise and mitigate effects.

16.22. The HIA has two overarching purposes:

- Assess the potential impact of a programme and/or development on a) population health and b) the distribution of population health;
- Recommend ways to mitigate these impacts, by preventing negative impacts while promoting positive impacts.

16.23. There are three types of HIA:

- A 'full' HIA, which involves a comprehensive analysis of all potential health and wellbeing impacts;
- A 'rapid' HIA, which is a less resource-intensive process and involves a more focused investigation of health impacts;
- A 'desktop' HIA, which draws on existing knowledge and evidence, often using published checklists (NHS, 2019).

16.24. For the purpose of this report, due to the diverse nature of health determinants and health outcomes which are to be assessed, it is not possible to quantify the severity or extent of the effects that give rise to these health impacts. Therefore, the Rapid HIA Tool produced by the NHS Healthy Urban Development Unit (HUDU) has been selected as the most appropriate method to adequately assess the health impacts and outcomes of the Project (NHS, 2019a).

16.25. More details on assessing the outcomes for health and wellbeing are provided in Appendix 16.b.

### Rapid HIA Workshop Tool

16.26. The Healthy Urban Development Unit (HUDU) was created by the GLA in partnership with the NHS with the aim of maximising the opportunities to improve health and wellbeing and to narrow health inequalities. The unit's work includes assessing health and wellbeing impacts of new developments, and centres on the production of a HUDU 'checklist' of considerations to apply at the planning stage for new developments. Each item on the list is informed by a science base, good practice, and industry standards for health and wellbeing outcomes.

16.27. The Planning for Health 'Rapid HIA Tool' is produced by the HUDU to assess the health impacts of new developments, ensuring that the planning proposals have an overall positive rather than a negative impact, on health.

16.28. The 'Rapid HIA Tool' suggests the evaluation of potential health impacts under eleven topics or broad determinants, which include:

- Housing and design affordability
- Access to health and social care services and other social infrastructure
- Access to open space and nature
- Air quality, noise and neighbourhood amenity

- Accessibility and active travel
- Crime reduction and community safety
- Access to healthy food
- Social cohesion and inclusive design
- Access to work and training
- Minimising the use of resources
- Climate change

16.29. Further details on assessing the outcomes for health and wellbeing are included in Appendix 16.b.

## Scenarios Tested

16.30. The assessment will test the following scenarios:

- Scenario 1: Existing Baseline
- Scenario 2: Existing Baseline + Plot H
- Scenario 3: Existing Baseline + Plot H + Cumulative
- Scenario 4: Existing Baseline + Plot H + Cumulative + IDM Masterplan

## The Study Area

16.31. The geographical extent of the assessed impacts depends on the type of effect and the receptors. Effects will be considered during the construction phase and once the scheme is complete (operational).

## Surveys and Data Sources

16.32. This Chapter is accompanied by the following appendices:

- 16.a: Guidance and Regulations
- 16.b: Assessing the Outcomes for Health and Wellbeing
- 16.c: Health Determinants and their Relevance to the Proposed Development

16.33. The assessment considered the potential consequences for health and wellbeing from the construction and operation of the proposed scheme and draws information from the following reports:

- Air Quality ES Chapter
- Noise and Vibration ES Chapter
- Transport ES Chapter
- Socio-economics ES Chapter
- Climate Change ES Chapter
- Design and Access Statement
- Sustainability Statement

- Energy Strategy
- Circular Economy Statement
- Landscape Strategy
- Community Consultation responses
- Thermal Comfort Report

16.34. No primary surveys have been collected for the assessment on health.

### Source of Effect

16.35. The approach to assessing the human health effects of the Proposed Development are based on a socio-environmental model of health. The model defines health broadly and recognises that health and well-being are attributable, not just to health service intervention, but to a wide set of inter-related factors such as lifestyle, employment, education and income.

16.36. Best practice principles provided in the HUDU Rapid HIA Toolkit will form the basis for the approach to assessing impacts on health and wellbeing. The eleven topics or broad determinants recommended in the HUDU Toolkit are listed in the table below, together with the key potential health impacts associated with each and the relevance to the Proposed Development.

16.37. For this assessment, all eleven of the health determinants have been scoped in. The full list of health determinants and their relevance to the Proposed Development are included in Appendix 16.c.

### Significance Criteria

16.38. This HIA is a qualitative rather than quantitative assessment, due to the diverse nature of the health determinants and health outcomes assessed. Although this HIA describes the likely qualitative health impacts, it is not possible to quantify the severity or extent of the effects which give rise to these health impacts. As such, the potential impacts during construction and operation are described as either positive, neutral, negative or uncertain, as outlined in Table 16.1.

Table 16.1: Impact categories for health impact assessment

| Impact Category | Impact Symbol | Description |
|---|---|---|
| **Positive** | + | A beneficial impact is identified |
| **Neutral** | 0 | No discernible health impact is identified |
| **Negative** | - | An adverse impact is identified |
| **Uncertain** | ? | Where uncertainty exists as to the overall impact |

## Baseline Conditions

16.39. To understand the potential for health impacts, it is important to establish the assessment baseline. This section focuses on the health determinants in the area surrounding the Site in order to provide a demographic context of the existing community locally. It then considers the baseline in terms of access to infrastructure and conditions relevant to the health of the potential occupants of the Proposed Development.

### Population Profile

16.40. The population of Manchester was 589,670 in 2024, representing a 8% increase in five years, from the population in 2019 (ONS, 2025b). The population of Manchester grew proportionately more than that in the North West region and England between 2019 and 2024, which saw growth of 5.1% and 4.3% respectively. ONS population projections

estimate that the population of Manchester will be 638,904 by 2035, representing a 8.3% increase from the 2024 figure (ONS, 2025c).

16.41. The proportion of the population of working age (aged 16-64) in Manchester was 70.9% in 2024. This was higher than the rate in the North West and England, which were 62.6% and 62.9% respectively (ONS, 2025b). This figure is projected to remain fairly consistent, falling only to 69.9% in Manchester by 2035 (ONS, 2020).

16.42. According to the ONS Census 2021, Manchester has a population density of 4,772.7 (measured by number of usual residents per square kilometre). This is significantly higher than the population density across the North West, which is just 525.8, and England which is 433.5 (ONS, 2021). Of the 331 local authorities across the UK, Manchester ranks highly, being the 29th most densely populated local authority. The most densely populated local authorities above Manchester mainly fall within London, and Manchester is the most densely populated local authority in the North West.

16.1. The population of the Piccadilly Ward, where the Proposed Development is located, comprises almost entirely of people aged 16-64 (95.0%), of which the vast majority are under 35 (73.4% aged 16-34).,This which is considerably higher than the Manchester, regional and national levels (ONS, 2021). Overall, 26.6% of the total population in the Piccadilly Ward were full time students in 2021 (3,031 out of 11,375). This indicates that the Piccadilly Ward has a much higher concentration of students compared to Manchester as a whole (18.0% of total population), and the North West (8.0% of total population) (ONS, 2021).

16.2. Data from the 2021 Census shows that the ethnic minority population forms 43.2% of the population in Manchester. This is a significant increase from the proportion recorded in 2011, where 33.4% of the population were from ethnic minority backgrounds. The proportion of the population from an ethnic minority is much higher in Manchester compared to regional and national levels, where only 14.4% and 19% of the population respectively are from an ethnic minority (ONS, 2021). The largest minority ethnic group was Asian, Asian British or Asian Welsh, in both Manchester and the North West, comprising 20.9% and 8.4% of the population respectively (ONS, 2021).

## Economic Profile

16.3. In 2024, the economic activity rate of those aged 16-64 was 72.8% in Manchester, which is lower than both the regional and national levels, which were 76.5% and 78.9% respectively. This level has increased slightly in Manchester from 2019, when the economic activity rate was 71.3% (ONS, 2025a). The employment rate of those aged 16-64 in Manchester lagged significantly behind the regional and national levels in 2019, where it was just 66.8%. The regional employment rate for those aged 16-64 in 2019 was 74.5% and the national employment rate was 76%. This gap has persisted as in 2024 the employment rate of the working age population had decreased slightly to 66%, compared to regional and national levels of 73.4% and 75.7% respectively.

16.4. In 2024, 45.5% of the population aged 16-64 in Manchester had a degree level qualification or above (Regulated Qualifications Framework (RQF) Level 4+). This is roughly the same as the regional level, which was 42.8%, and lower than the national level which was 47.1%. The proportion of those aged 16-64 with no qualifications was 7.8% in Manchester, which is slightly lower than the regional level, at 8% (ONS, 2025a).

## Health Profile

16.5. According to the 2021 Census, the proportion of Manchester's population that have very good health is 50.8% and 31.4% have good health. This is broadly in line with the North West where the levels are 47.7% and 32.7% for very good, and good health respectively. This is also higher than national levels which were 48.5% with very good health and 33.7% with good health. The proportion of the population that has bad or very bad health is just 6%, where the regional level is 6.2% and the national level is 5.2% (ONS, 2021).

16.6. The life expectancy for males in Manchester is 75.2 (one year range from 2023), which is below the North West life expectancy of 77.7 and below the national average of 79.3. Life expectancy for females is 79.9, which is also below the level in the North West, which has a female life expectancy of 81.7, and below the national average of 83.2 (OHID, 2025).

16.7. Child health in Manchester is below the national average in terms of infant mortality rate and prevalence of obesity. Infant mortality rate in Manchester for 2021-23 was 6.9 (rate per 1,000). This is higher than the regional average

which was 4.6, and the national average of 4.1. The prevalence of obesity among year 6 pupils (aged 10-11 years) in Manchester in 2023/24 was 27%. This is higher than the average across the North West which was 23.3% and England which was 22.1% (OHID, 2024).

16.8. The percentage of children (under 16s) living in low-income households was 40.7% in Manchester in 2024/25.This is significantly higher than the regional average of 27.8% and the national average of 22.1% (OHID, 2025).

16.9. Under 75 mortality rate from all causes in Manchester in 2023 was 510.4 per 100,000, which is higher than the regional and national rate, at 408.1 and 341.6 respectively. Under 75 mortality rate from circulatory diseases and from cancer were also higher in Manchester compared to the North West region and across England. The under 75 mortality rate from cardiovascular diseases was 112.6 and from cancer was 162.1 in 2023. The rates in the North West from cardiovascular diseases and cancer respectively were 93.8 and 134.5, and in England they were 77.4 and 120.8 (OHID, 2025).

## Deprivation and Health (MHCLG, 2025)

16.10. The Index of Multiple Deprivation (IMD) is a national dataset published by the Ministry of Housing, Communities & Local Government (MHCLG), which ranks local authorities and lower-level super output areas (LSOAs) in England from most deprived to least deprived. There are seven domains of deprivation, which combine to create the IMD. These domains are: income; employment; education; health; crime; barriers to housing & services; and living environment.

16.11. There are 295 LSOAs in Manchester local authority, and 41% of these (120) were in the 10% most deprived LSOAs in 2025, up from 43% in 2019. An additional 54 LSOAs were in the 20% most deprived in 2025, meaning over half of the LSOAs in Manchester were in either the 10% or 20% most deprived. There are five LSOAs in the 10% least deprived and five LSOAs in the 20% least deprived neighbourhoods in England. Overall, Manchester presents high levels of deprivation, remaining the second most deprived local authority in England in the 2025 IMD results, out of 296 local authorities.

16.12. As of 2025, Manchester was ranked 1 out of 296 for crime deprivation, the same rank as in 2019, with 39% of the LSOAs in the 10% most deprived. Manchester also performs poorly in terms of health deprivation, ranking 4 out of 297, with 46% of the LSOAs in the 10% most deprived. Manchester performs better for education, skills and training, ranking 63rd with 11% of LSOAs in the 10% most deprived.

16.13. The Site is located within Manchester LSOA 055A, within the Piccadilly Ward. This LSOA is ranked around the middle for deprivation in England, with just over half of neighbourhoods in England ranked more deprived than Manchester 055A. Compared to other LSOAs in Manchester, it is relatively less deprived, as 85% of neighbourhoods across the city are ranked as more deprived than LSOA 055A. The LSOA is most deprived in terms of crime, ranking among the 10% more deprived neighbourhoods in England, but least deprived in terms of income and employment, ranking among the 10% least deprived neighbourhoods in England.

## Lifestyle

16.14. Those who have a physically active lifestyle are at a lower risk of cardiovascular disease, coronary heart disease and stroke, compared to those who do not. According to the WHO, adults aged 18-64 should engage in at least 150 minutes of moderate-intensity activity per week (WHO, 2020). Anything above this level of physical activity is negatively correlated with the incidence of non-communicable diseases such as diabetes, obesity, hypertension and mental health disorders.

16.15. In Manchester, 64% of adults were considered active (at least 150 minutes of exercise per week), which is higher than the 62% of adults in the North West region, and slightly above the average across England which was 63.7% in 2023/24. 8.6% of adults were fairly active (30-149 minutes of exercise per week), which is only slightly below the levels across the North West and England, which were 10.7% and 10.9% respectively. 27.4% of adults in Manchester are inactive (less than 30 minutes of exercise per week), which is equal to the North West average of 27.4% and lower than the England average of 25.7% (Sports England, 2025).

16.16. In the academic year 2023-24, 51.9% of young people (aged 5-16) across Manchester were considered active, which was higher than levels across the North West and England, which were 47.6% and 47.8% respectively. Manchester

also had a slightly lower proportion of young people who were less active (28.0%) compared to the North West (30.1%) and England (29.5%) (Sport England, 2025).

16.17. Inequalities in active adults across Greater Manchester have been widening for some demographics. Since 2018/19, just one ethnic group has seen levels of inactivity decline – white other, by negative 2.4%. However, other groups have seen large increases in inactivity, with the most concerning being those from 'Other' or 'Black' ethnic backgrounds, where inactivity levels have increased by 18.6% and 16.6% respectively. Across Manchester local authority, the socio-economic inactivity gap has decreased by 1.2%, caused by inactivity increasing by 0.9% among higher socio-economic groups, and decreasing by 0.2% among lower socio-economic groups. However, the gap in inactivity between socio-economic groups still remains at 21.3% (GM, 2020).

16.18. The proportion of adults (18+) in Manchester who are overweight or obese was 60.5% in 2023/24, which is lower than the average across the North West (66.7%) and England (64.5%) (OHID, 2025).

16.19. Smoking is strongly associated with lung cancer (as well as other cancers), chronic obstructive pulmonary disease (COPD) and heart disease. Children are particularly vulnerable to second-hand smoke, which is linked to approximately 300,000 GP consultations and 9,500 hospital admissions each year in the UK. This costs the NHS £23 million annually in the region (Royal College of Physicians, 2010). Smoking prevalence in Manchester among adults in 2023 was 11.9%. This is in line with the levels across the North West (11.8%), and England (11.6%) (OHID, 2025).

## Disability Inequality

16.20. As per the Equality Act 2010, a person is considered to have a disability if they have a self-reported long-standing illness, condition, or impairment that causes difficulty when carrying out day-to-day activities. The proportion of the population of Manchester living with a 'disability which limits day-to-day activities a lot' was 8.2% in 2021, and a 'disability which limits day-to-day activities a little' was 9.4%. These levels are closely comparable with regional and national levels, which were 8.9% and 7.3% respectively for the proportion of the population with a 'disability which limits day-to-day activities a lot' and 10.5% and 10.0% respectively for the proportion of the population with a 'disability which limits day-to-day activities a little' (ONS, 2021).

16.21. In 2024, the unemployment rate for the working age population (aged 16-64) with a work-limiting disability was 11.7% and for those with a disability as defined by the Equalities Act (EA) was 8.7%. These unemployment levels are higher than regional and national levels. In the North West, unemployment rate for the population with a work-limiting disability was 8.3% and those with an (EA) disability was 6.4%, and for England, the unemployment rates were 7.3% and 5.8% respectively (ONS, 2025).

## Infrastructure Baseline

16.22. NHS Greater Manchester serves a total of 3,304,805 patients registered across a total of 406 GP practices. There are a total of 2,857 GP FTEs across Greater Manchester, which equates to an average patient list size of 1,157 per FTE GP (NHS Digital, 2025).

16.23. There are eight GP practices situated within a 1.5km walking radius from the Proposed Development Site, shown in Table 16.2. Almost all of these GP surgeries have a patient-to-GP ratio of higher than 1,800, the Department for Health (DfH) target of registered patients per FTE GP. The nearest GP practice to the Proposed Development is The Doc's Surgery, which is situated approximately 0.3km from the Proposed development, and has a patient-to-FTE GP ratio of 1,955.

Table 16.2: GP surgeries within 1.5km of the development

| Surgery Name | Number of Patients | Number of Full Time GPs | Ratio of Patients to GPs |
|---|---|---|---|
| The Doc's Surgery | 13,997 | 7 | 1,955 |
| Cornbrook Medical Practice | 17,804 | 7 | 2,558 |

| Surgery Name | Number of Patients | Number of Full Time GPs | Ratio of Patients to GPs |
|---|---|---|---|
| Vallance Medical | 14,467 | 3 | 4,410 |
| Brunswick Medical Practice | 7,770 | 3 | 2,368 |
| City Health Centre | 15,740 | 5 | 3,402 |
| New Islington Medical Centre | 12,715 | 5 | 2,464 |
| The Arch Medical Practice | 23,096 | 12 | 1,971 |
| Ancoats Urban Village Medical Practice | 13,640 | 9 | 1,516 |
| **Total** | **119,229** | **51** | **2,329** |

*Numbers may not add up due to rounding

16.24. The following dentists are within 1.5km of the EIA Site. All are accepting new NHS patients except from City Centre Dentists and Ocean Dental Limited:

- City Centre Dentists (0.65km)
- My Dentist Stephenson Square (0.95km)
- The Vallance Dental Centre (0.95km)
- 207 Dental Care (0.95km)
- Ocean Dental Limited (0.95km)
- Bupa Dental Centre (0.95km) (only accepting NHS patients for children under 17)
- Manchester DP (1.15km)
- New Cross Dental Surgery (1.2km) (only accepting NHS patients for children under 17)
- Revive Dental Care (1.3km)

16.25. There are two hospitals within 1.5km of the EIA Site, a general hospital and a dental hospital. Manchester Royal Infirmary is located 1.4km from the EIA Site and is a large NHS Hospital and teaching hospital with a wide range of departments and services offered.

16.26. Greater Manchester Integrated Care Partnership offers a range of services including living with long COVID, mental health support, and vaccinations, among others. The Greater Manchester mental health support hub provides resources for a number of different topics including eating disorders, talking therapy, bereavement, and suicide prevention. There are also a number of telephone numbers and links to external support platforms including SilverCloud, Kooth, Qwell, and the Greater Manchester Bereavement Service. Greater Manchester Integrated Care Partnership have also published the Greater Manchester Mental Health and Wellbeing Strategy (GM Integrated Care Partnership, 2024).

## Open Space

16.27. An open space audit was conducted in 2025 in Manchester and identified that there are over 170 parks and significant areas of semi-natural and amenity open space in Manchester. The report highlights the importance of all

communities being able to access high quality open space. There have been some new open spaces created recently, including Mayfield Park, and City River Park at Victoria North (MCC, 2025a).

16.28. The 2025 open space audit outlined the proposed local standards for different types of open spaces, outlining the quantity standard measured by hectares per 1,000 population, and the accessibility standards measured by walking time and driving time away from the space. This criteria is applied to city parks, local parks, natural and semi natural open space, amenity green space, provision for children, provision for young people, and outdoor sports facilities.

16.29. In 2025, there were 101 hectares of local parks in Central Manchester. Central Manchester is likely to experience the most population growth and therefore demand for open space, and the provision of sufficient open space will be most needed in this area due to the high density of housing.

16.30. The Manchester City Council local standards suggest that open space should be a 10-15 minute walk away, or 720m. Approximately 650m away from the Proposed Development there is the newly developed Mayfield Park, which is the first city park in Manchester in over 100 years, and offers 6.5 acres of parkland including a kids play zone. Open spaces within the vicinity of the proposed development are presented in Table 16.3.

Table 16.3: Open spaces within the vicinity of the development

| Open Space typology | Quality Standard (ha per 1,000 population) | Accessibility Standard (m) | Example and distance from Proposed Development (m) |
|---|---|---|---|
| City Parks | 0.2 | 15 minute drive / public transport time | Mayfield Park (650)<br>Pin Mill Brow (1,300)<br>Symphony Park (250) |
| Local Parks | 0.49 | 10 minute walk (480) | Vimto Park (50)<br>Ardwick Green (825) |
| Natural and Semi Natural Open Space | 1.9 | 15 minute walk (720)<br>15 minute drive time (City Centre) | n/a |
| Amenity Green Space | 0.4 | 10 minute walk (48) | Ardwick Green (825) |
| Provision for Children | 0.027 | 10 minute walk (48) | Gartside Gardens (610)<br>Mayfield Park (650) |
| Provision for Young People | 0.034 | 15 minute walk (720) | n/a |
| Outdoor Sports Facilities | 0.98 | 15 minute walk time (720) | Nicholls Communit Football Centre and Powerleague (1,250) |

## Sports and Play Facilities

16.32. There are over 20 gyms within 2km of the Proposed Development, considered to be a typical walking distance to these types of facilities. Some of the closest gyms (within 1km) are: Gym 72 (Sackville Street); Anytime Fitness Manchester Central (Piccadilly Place); and Bannatyne Health Club (Whitworth Street).

16.33. These gyms and sports centres provide a range of services including gym space and weights, boxing and other martial arts facilities, swimming pools, sports hall facilities for games including badminton and basketball, football pitches, squash courts, and other sports facilities. In addition, Gartside Gardens has basketball and tennis courts.

## Social Infrastructure and Community Facilities

16.34. Public libraries across Manchester City Centre are managed by Manchester City Council. There are five public libraries within 2km of the Site: Central Library (0.6km); City Library (0.7km); Z-arts Children's Library (1.4km); Hulme High Street Library (1.7km); and Moss Side Powerhouse library (1.8km).

16.35. The two closest community centres are Aquarius, and The Village Hall community centre. Aquarius run courses and clubs for the community including karate club, art classes, and dance classes. The Village Hall community centre is a similar facility, running a range of activities for the local community.

16.36. There are 15 churches within a 1.5km distance from the Site. The closest is Fabric Church which is approx. 630m from the Site. In addition, there are seven mosques within 1.5km of the Site. The nearest synagogue is approx. 1km away from the Site, with a larger cluster of synagogues located north of the city centre, approx. 4km from the Site.

### Access to Work

16.37. About 71.3% of the working age population (16-64) in Manchester were economically active in 2024, which is lower than the rate across the North West and England, which were 77.7% and 79.2% respectively. This has however increased in Manchester since 2020, where the economic activity rate was 73.3%. Unemployment has fallen considerably in Manchester from 2020 to 2024, falling from 8.6% to 6.3%, but it still remains slightly higher than across the North West and England, where unemployment is 4.2% and 4.0% respectively (ONS, 2025).

### Access to Healthy Food

16.38. There are several supermarkets and convenience stores within easy walking distance of the Proposed Development. The nearest is a Sainsbury's Local located approx. 400m from the Site. The nearest larger supermarket is Aldi, located just under 1km away from the Site.

### Accessibility and Transport

16.39. Pedestrian access to the Site is currently limited. There is a small area of paved footway outside the entrance to the car park, and on the south side of Charles Street there is a footway to walk to Charles Street or Princess Street, but there are no dropped kerbs or tactile paving to facilitate this. There is access to the north east of the Site which follows the alignment of the viaduct, but this access is gated. Footways in the vicinity are of reasonable quality and more than 2m in width. Cycle access includes a 2 minute cycle along Charles Street to the Oxford Road cycle corridor. Charles Street has painted on-road cycle lanes on both sides between Princess Street and Oxford Road.

16.40. Public transport is accessible from the Site, including bus stops on Oxford Road with frequent buses, and a bus stop on Charles Street with 2 services per hour. Other services are available on Sackville Street and Princess Street. Oxford Road station is a 7 minute walk and Manchester Picadilly Station is a 10 minute walk. The nearest Metrolink stop is Piccadilly, with other lines available at St Peter's Square (12 minutes to the north).

### Air Quality

16.41. An Air Quality Management Area (AQMA) has been declared across Manchester city centre and surrounding arterial roads owing to consistent exceedances of the AQO (air quality objective) for the annual average concentration of $NO_2$. These exceedances are predominantly due to pollution from road transport, which accounts for 65% of the total $NO_2$ emission within Greater Manchester (GMCA, 2019). The entirety of the Site is within the AQMA. The automatic monitoring location which is located closest to the Site, approximately 300m to the southwest, has an annual average $NO_2$ level above the AQO level of 40 µg/$m^3$. This has been the case for the past five years, except for 2020, in which traffic flows were reduced considerable due to policies in response to the Covid-19 pandemic. Monitored baseline concentrations along the Mancunian Way, are in compliance with the UK $NO_s$ AQO.

16.42. Air quality modelling by Defra (Department for Environment, Food & Rural Affairs) shows that air quality is expected to improve with time with the increased uptake of cleaner vehicles and with newer vehicles having more stringent emission standards. The background concentrations of air quality emissions ($NO_2$, $NO_x$, $PM_{10}$, and $PM_{2.5}$) are expected to reduce over time at the Site, compared to the concentrations in 2024. However, it is important to note that these future baseline concentrations are only predictions and there remains some uncertainty regarding future concentrations of emissions.

## Identification and Evaluation of Likely Significant Effects

16.43. Where an impact has been identified, actions have been recommended to mitigate any negative impact on health, or possible opportunities to enhance health benefits. It should be noted that in many cases, mitigation to reduce these

impacts, or measures to enhance certain benefits, already form part of the Proposed Development and the assessment has considered these impacts as such.

## Housing Design and Affordability

Table 16.4

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal seek to meet all 16 design criteria of the Lifetime Homes Standard or meet Building Regulation requirement M4 (2)?** | ☒Yes<br>☐No<br>☐N/A | The Lifetime Homes Standard is replaced by the new M4(2) optional requirement in the Building Regulations. This is also a PfE policy, which requires all new homes to be built to the accessible and adaptable standard in Part M4(2) of the Building Regulations, unless specific site conditions make this impracticable.<br><br>M4(2) requires a new dwelling to provide reasonable provision for most people to access the dwelling and includes features that make it suitable for a wide range of occupants including older people, individuals with reduced mobility and some wheelchair users.<br><br>The building has been developed intending to meet the requirements of Part M Vol(2), which overs access to and use of buildings other than dwellings. The justification for this is that less than 5% of the student units are designed to have accessible provision. The accessible rooms have however been designed to meet requirements of Part M Vol(2) for wheelchair accessible rooms. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | Consider the guidelines of Part M4(2) and further accessibility requirements if needed at a later date. |
| **Does the proposal address the housing needs of older people, i.e., extra care housing, sheltered housing, lifetime homes and wheelchair accessible homes?** | ☐Yes<br>☒No<br>☐N/A | The proposed development is intended for Purpose-Built Student Accommodation (PBSA), and therefore does not include provision for housing aimed at older people. | N/A | N/A |
| **Does the proposal include homes that can be adapted to support independent living for older and disabled people?** | ☒Yes<br>☐No<br>☐N/A | The baseline identifies that the proportion of people in Manchester living with a disability under the Equality Act is broadly similar to the regional and national averages.<br><br>The Proposed Development includes 18 accessible studio units. This equates to 1.7% of the total PBSA bedspaces. The accessible studios | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | are being designed to meet the requirements of paragraph 4.24 of Part M Vol(2) for wheelchair-accessible bedrooms. | | |
| **Does the proposal promote good design through layout and orientation, meeting internal space standards?** | ☒Yes<br>☐No<br>☐N/A | The floor plan layouts look to maximise the amount of external wall and glazing available to each space, providing each room and amenity area with natural light.<br><br>The main entrance has also been designed to provide unrestricted views for management staff for safeguarding purposes, as well as encouraging human interaction between staff and residents.<br><br>The cluster apartments are 13.5sqm per unit, studios are 20sqm per unit, and the accessible studios are 25.5sqm per unit. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal include a range of housing types and sizes, including affordable housing responding to local housing needs?** | ☒Yes<br>☐No<br>☐N/A | It has been identified by MCC that there is a projected shortfall in PBSA in Manchester, and an estimated 750 new bed spaces need to be provided per annum up to 2030. There are no targets relating to affordable housing provision for PBSA.<br><br>The Proposed Development will provide 1,041 new PBSA bedspaces, including 720 cluster units and 321 studio units. This contributes to the need for student accommodation across Manchester. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action |
| **Does the proposal contain homes that are highly energy efficient (e.g., a high SAP rating)?** | ☒Yes<br>☐No<br>☐N/A | High efficiency building services have been selected to ensure that the development makes optimal use of the energy it uses. Residential areas maximise energy efficiency through a range of measures. These include electric panel heaters, $CO_2$ air source heat pumps for hot water, MVHR (mechanical ventilation with heat recovery) units, and high efficiency luminaires lighting. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Access to Health and Social Care Services and Other Social Infrastructure

Table 16.5

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal retain or re-provide existing social infrastructure?** | ☐Yes<br>☒No<br>☐N/A | There is currently no existing social infrastructure on the Site. | N/A | N/A |
| **Does the proposal assess the impact on health and social care services and has local NHS organisations been contacted regarding existing and planned healthcare capacity?** | ☒Yes<br>☐No<br>☐N/A | The baseline assessment indicates that there are eight GP practices within a walking distance of 1.5km, and the existing ratio of patients to FTE GPs is 2,329, which is higher than the Department for Health target of 1,800. The younger population profile of the Piccadilly Ward may offset some of the increasing pressure surrounding GP practices, under the assumption that an elderly patient would likely generate higher demand for healthcare services. Furthermore, the overcapacity is typical of city centres and urban areas, which typically have a higher patient-to-GP ratio compared to more rural settings. In addition, students often remain registered with their family GP, reflecting their generally younger and healthier demographic profile. The university provides a student GP service via the on-campus medical GP practice (provided by the Robert Darbishire Practice), which are currently accepting students.<br><br>The increase of 1,041 residents and 12-49 new local employees projected within the Socio-Economics ES Chapter may increase the demand for local GP services, and in the scenario where all new residents and employees choose to register with local GPs, the new patient-to-GP ratio would rise to 2,350. This is considered to have a minor adverse (not significant) effect on local NHS services. | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | None required. Given that the effect on primary healthcare provision is assessed as minor adverse in the Socio-Economics ES chapter, and therefore not significant, no specific mitigation is required. |
| **Does the proposal include the provision, or replacement of a healthcare** | ☐Yes<br>☒No | There are currently no NHS healthcare facilities on the EIA Site, nor are there plans to provide a healthcare facility. | N/A | N/A |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| facility and does the facility meet NHS requirements? | ☐N/A | | | |
| Does the proposal assess the capacity, location and accessibility of other social infrastructure, e.g. primary, secondary and post 19 education needs and community facilities? | ☒Yes<br>☐No<br>☐N/A | The baseline assessment of this report and the Socio-Economics ES Chapter have assessed the access to the local social infrastructure and suggests there is some existing capacity in local social infrastructure that would likely be sufficient, including libraries, community centres, and places of worship.<br><br>Primary and secondary school places have been scoped out of the Socio-Economic assessment, as the new residents will be University students and therefore not likely to put any additional pressure on existing primary and secondary school facilities. | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | No further action. |
| Does the proposal explore opportunities for shared community use and co-location of services? | ☒Yes<br>☐No<br>☐N/A | While the PBSA units are designed to be for residents only, the Proposed Development includes 1,486.3sqm (NIA) of residential amenity floorspace. There will also be seating and spaces for socialising in the open space. The use of commercial units is currently unknown, but it could include shared community spaces, depending on the future tenants need. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | Consider the inclusion of shared community use space in any amenity or commercial space. |

## Access to Open Space and Nature

Table 16.6

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal retain and enhance existing open and natural spaces?** | ☒Yes<br>☐No<br>☐N/A | During the construction phase it is likely that some planned closures and diversions of footpaths would be required in the vicinity of the Site. Suitable pedestrian routes would be provided during construction.<br><br>The Proposed Development includes 3,464sqm of outdoor space which will be open and accessible to all. A new public square provides amenity in the form of soft landscaping. Mature trees will be retained to the west of the Site, along with creation of an enhanced understory will establish a "green gateway" into the Site, and support biodiversity. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces?** | ☒Yes<br>☐No<br>☐N/A | The baseline assessment identifies a diverse range of park types and provisions.<br><br>The Proposed Development includes the creation of a new public square, and open space which is open and accessible to all. The Proposed Development includes hard landscaping including stone paving to primary routes, and gravel paths to existing green space. Soft landscaping includes tree planting, tree retention, and a mix of shrubs and grasses. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal provide a range of play spaces for children and young people?** | ☐Yes<br>☒No<br>☐N/A | The Proposed Development is intended for PBSA, and therefore does not include provision of play spaces for children and young people. | N/A | N/A |
| **Does the proposal provide links between open and natural spaces and the public realm?** | ☒Yes<br>☐No<br>☐N/A | Altrincham Street will be opened up as a pedestrian connection linking Plot H to Princess Street and the wider IDM masterplan area. The Proposed Development will also establish the western gateway into the Sister masterplan area, with Sister Square serving as a green "stepping stone" between long established open spaces such as Vimto Park and | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | more recently created places such as Circle Square and Mayfield Park. | | |
| Are the open and natural spaces welcoming and safe and accessible for all? | ☒Yes<br>☐No<br>☐N/A | The link between Plot H, Princess Street and the wider IDM Masterplan will have clear sight lines and be illuminated, establishing a safe walking route during both day and night. The open space has been designed such that it will be open to everyone and accessible to all. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action |
| Does the proposal set out how new open space will be managed and maintained? | ☒Yes<br>☐No<br>☐N/A | Details of how open space will be managed and maintained are not known at this stage. | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | Ensure that an appropriate maintenance strategy is agreed upon for the open space following construction of the Proposed Development. This can be agreed through planning conditions. |

## Air Quality, Noise and Neighbourhood Amenity

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal minimise construction impacts such as dust, noise, vibration and odours?** | ☒Yes<br>☐No<br>☐N/A | A construction dust risk assessment has been undertaken as part of the Air Quality ES Chapter. In line with best practice, the IAQM (Institute of Air Quality Management) construction guidance sets out the recommended mitigation measures to be implemented. Provided all recommended measures to avoid or reduce environmental effects are implemented and embedded as part of the development mitigation, the potential impacts during the construction phase can be mitigated.<br><br>High risk measures to mitigate construction dust impacts include but are not limited to:<br><br>• Develop and implement a Dust Management Plan (DMP)<br>• Carry out regular site inspections to monitor compliance with the DMP<br>• Ensure all vehicles switch off engines when stationary<br><br>For noise and vibration, the development will adopt Best Practicable Means (BPM) in accordance with the Control of Pollution Act 1974 and BS 5228 standards. Measures will be secured through a Construction Environmental Management Plan (CEMP), including but not limited to:<br><br>• Use of quieter, low-vibration plant and equipment.<br>• Acoustic hoarding/barriers along sensitive boundaries.<br>• Careful phasing of noisy activities to minimise duration and overlap.<br>• Continuous noise and vibration monitoring during high-impact works. | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | Follow the recommended mitigation measures for air quality, to reduce the impact of construction dust on human health.<br><br>Follow the recommendations to minimise the impacts of construction noise and vibration through the implementation of an approved CEMP and BPM, which will provide suitable mitigation. Where construction activities are predicted to result in significant adverse levels, secondary mitigation should be implemented. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal minimise air pollution caused by traffic and energy facilities?** | ☒Yes<br>☐No<br>☐N/A | The operation of the development will generate additional traffic on the local road network, which will likely increase the air pollution from road traffic. Given that the Proposed Development is to be car-free, there is a predicted maximum AADT (annual average daily traffic) trip generation of 34 LGVs and 1 HDVs movements during operational phase on any single road network within the vicinity of the Proposed Development. This is below the criteria for a detailed assessment outlined in the EPUK/IAQM (Environmental Protection UK) guidance and the Proposed Development is predicted to have a negligible effect on air quality.<br><br>However, due to the proximity of the Site to the train line, an $NO_x$ filtration is recommended and this has been factored into the current design. Monitoring is recommended pre-occupation to determine whether these filters are still required for the future opening year.<br><br>The proposed building energy strategy relies entirely on electric power, utilising zero-emission technologies. Diesel generators are included only for backup and life safety use. Since no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated. | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | It is recommended to follow the guidance outlined in the Air Quality ES Chapter to include $NO_x$ filtration and undertake monitoring prior to the operation of the Proposed Development. |
| **Does the proposal minimise noise pollution caused by traffic and commercial uses?** | ☒Yes<br>☐No<br>☐N/A | Construction traffic will be managed through the CEMP, with vehicle routing via Charles Street and Princess Street to avoid other sensitive/residential areas where practicable. Together with restricted working hours and monitoring, this will help maintain acceptable noise levels. No operational traffic assessment has been undertaken, as limited car use is anticipated once the development is complete.<br><br>Operational noise from commercial uses will be controlled through robust acoustic design and management measures. External façades and separating elements will be designed to meet or exceed adopted criteria, set out in line with industry | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | recognised standards for buildings, and industrial and commercial sound levels. | | |

## Accessibility and Active Travel

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal address the ten Healthy Streets indicators?** | ☐Yes<br>☒No<br>☐N/A | The Healthy Streets indicators are not relevant to developments outside Greater London. Key active mobility and accessibility considerations that would contribute towards meeting the Healthy Streets Indicators are detailed in the following assessment criteria. | N/A | N/A |
| **Does the proposal prioritise and encourage walking, for example through the use of shared spaces?** | ☒Yes<br>☐No<br>☐N/A | The proposal includes the introduction of a minimum 2m wide footway on the northern side of Charles Street, repairing a pedestrian route that is currently unusable and unsafe. The proposal also looks to open up and extend Altrincham Street, creating a fully pedestrian route leading into a new public square. Routes will be spacious, easy to navigate, and well lit.<br><br>The landscaping design and new public square incorporates a fully accessible route across the Site, meaning the shared paths and public realm are usable for all. Colonnades around the perimeter of the building allow covered walkways across the Site, giving the public protection against weather. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal prioritise and encourage cycling, for example by providing secure cycle parking, showers and cycle lanes?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development will include 64 dedicated cycle parking spaces in the basement, including 6 accessible spaces. 13 Sheffield stands will also be located within the landscaping proposal providing 26 visitor spaces. Cycle storage will be in the basement, accessible via a lift from a dedicated entrance on Charles Street, or from within the building via the baseline corridor for residents.<br><br>Charles Street will be enhanced to create a better environment for pedestrians and cyclists, and will plug the gap in the existing cycle network and creates a well defined and safe route between Oxford Road and London Road corridors. Routes will be spacious, easy to navigate, and well lit. The Proposed Development will be car-free and as vehicle movements are anticipated to be under 2,000 vehicles per day, is it proposed that cycling on Charles Street and Sackville | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | Street will be in carriageway, with no dedicated cycle infrastructure proposed, other than wayfinding/signage. | | |
| **Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?** | ☒Yes<br>☐No<br>☐N/A | As mentioned above, the enhancement to Charles Street plugs the gap in the existing cycle network, and creates a well-defined route between Oxford Road and London Road corridors. The section of Charles Street bordering the Site is the most direct route to connect into the existing cycle network in the area.<br><br>The design also integrates new pedestrian routes, including a connection along Altrincham Street, which is currently not publicly accessible, but will be developed into a pedestrianised route connecting into the public realm proposals as part of the wider Sister masterplan. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?** | ☒Yes<br>☐No<br>☐N/A | Several design features have been included in the Proposed Development to help with traffic calming. It introduces new footways on the north side of Charles Street and a fully pedestrianised, traffic-free route along Altrincham Street, complemented by tactile paving and dropped kerbs at all new and existing crossing points to improve accessibility. To moderate traffic speeds and reduce conflict, the carriageway on Charles Street is narrowed, and the development is car-free, limiting additional vehicle trips on the surrounding network.<br><br>Where vehicle activity is necessary, dedicated loading bays on Charles Street are provided to simplify servicing and ensure loading takes place safely within the highway. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Is the proposal well connected to public transport, local services and facilities?** | ☒Yes<br>☐No<br>☐N/A | As outlined in the baseline, the Site is well connected to public transport including bus stops on Charles Street, Sackville Street, and Princess Street. The closest tram stops are Piccadilly and St Peter's Square, which are served by frequent trams. The closest train stations are Oxford Road which is located 500m from the Site, and Manchester Piccadilly which | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | is 800m from the site. Many local, regional and national train services arrive or depart from these stations during peak hours. | | |
| **Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking zones, car clubs and travel plans measures?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development has a car free approach and places emphasis on using sustainable modes of transport. The Proposed Development takes advantage of its highly accessible location, provides enhanced pedestrian connectivity, and includes cycle facilities which support a modal shift away from car dependency.<br><br>The Proposed Development will be car free except for disabled parking. Two disabled parking bays are proposed on Charles Street in a lay-by arrangement. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal allow people with mobility problems or a disability to access buildings and places?** | ☒Yes<br>☐No<br>☐N/A | Level access thresholds have been included in the design for all entrances and exists for both the PBSA and commercial spaces. Level access thresholds are designed to provide a smooth, barrier-free entry and exit for everyone, including wheelchair users and people with limited mobility.<br><br>Lifts provide vertical circulation to every habitable area of the building meaning step-free access is available for all areas of the Proposed Development. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Crime Reduction and Community Safety

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal incorporate elements to help design out crime?** | ☒Yes<br>☐No<br>☐N/A | As identified in the baseline, Manchester ranks poorly for crime deprivation, ranking 1st out of all local authorities in 2025. The Site falls within the Piccadilly Ward, which fell within the 10% most deprived LSOAs for crime deprivation in 2025. It is therefore important for the Proposed Development to design out crime, to help prevent crime activities happening around the Site.<br><br>The link between Plot H, Princess Street and the wider IDM Masterplan will have clear sight lines and will be illuminated, establishing a safe walking route during both day and night. Significant anti-social behaviour has been noted at the project Site (multi-storey car park), and by revitalising this area, it is likely this anti-social behaviour will decrease. Cycle storage is also provided in the basement of the building, which will help to prevent bicycle theft. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'?** | ☒Yes<br>☐No<br>☐N/A | Clear sight lines and illuminated walking routes will make people feel safe and secure as they move through the Site during both day and night. The Proposed Development will feature a large building which is likely to attract a large number of people that can help people feel secure through the critical mass of people around. Revitalising the currently vacant multi-storey car park will also help to make people feel secure by attracting activity in an area where there is currently no activity. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal include attractive, multi-use public spaces and buildings?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development includes open space and public realm where people can gather and socialise, and will include natural features including trees and plants.<br><br>Residential amenity space is included in the Proposed Development. On the ground floor it is proposed to include space for a resident's lounge, and commercial units, and on the first floor a gym, health & wellbeing centre, co-working, | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | and lounge are proposed. Other possible uses could take the form of Entrances, Management Areas, WC's, and Laundry. | | |
| **Has engagement and consultation been carried out with the local community and voluntary sector?** | ☒Yes<br>☐No<br>☐N/A | Online consultation and engagement has been carried out and closed on the 16th December 2025. The consultation asks about general thoughts towards the Proposed Development, improvements to walking and cycling, and landscape proposals. It received 25 responses, which will be considered by the Proposed Development.<br><br>Local community groups that were engaged included local residents, business owners, frequent visitors to the area, workers in the area, people who are part of a local interest group. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Access to Healthy Food

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal facilitate the supply of local food, for example allotments, community farms and farmers' markets?** | ☒Yes<br>☐No<br>☐N/A | Commercial space is provided in the Proposed Development, but it is not know at this stage whether this will include food and beverage establishments and the supply of local food. There are no plans for an allotment or farmers' market on Site. | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | Consider whether the commercial space will be made available to a range of occupiers, including local businesses. |
| **Is there a range of retail uses, including food stores and smaller affordable shops for social enterprises?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development includes commercial space of Use Class E. However, at this stage it is not yet known what businesses will occupy these units. | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | To consider whether the commercial space will be made available to a range of |

| | | | | |
|---|---|---|---|---|
| | | | | occupiers, including local businesses. |
| **Does the proposal avoid contributing towards an over-concentration of hot food takeaways in the local area?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development includes commercial space of Use Class E and excludes the sale of hot food. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Access to Work and Training

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development is estimated to generate a net of 99 FTE temporary construction jobs during the construction phase, some of which could be in association with construction training or apprenticeship schemes.<br><br>It is also estimated that the Proposed Development will generate 19-78 long-term end-use jobs through the creation of new employment space within the Proposed Development. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal provide childcare facilities?** | ☐Yes<br>☒No<br>☐N/A | The Proposed Development is primarily a PBSA block, with commercial floorspace of Use Class E. Therefore, the Proposed Development does not include any childcare facilities. | N/A | N/A |
| **Does the proposal include managed and affordable workspace for local businesses?** | ☒Yes<br>☐No<br>☐N/A | It is not known at this stage which businesses will occupy the retail and commercial space, and therefore it is not known whether there will be managed and affordable workspace for local businesses. | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | Consider whether the commercial space will be made available to a range of occupiers, including local businesses. |
| **Does the proposal include opportunities for work for local people via local procurement arrangements?** | ☒Yes<br>☐No<br>☐N/A | A local labour agreement forms part of the supporting planning documents for the Proposed Development. This agreement will help to secure employment for local people during the construction and operation phases of the Proposed Development. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Social Cohesion and Inclusive Design

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal consider health inequalities by addressing local needs through community engagement?** | ☒Yes<br>☐No<br>☐N/A | As outlined in the baseline assessment, Manchester is the second most deprived local authority in England (MHCLG, 2025), and ranks 4th most deprived for health inequalities. The LSOA where the Site sits (Manchester 055A) ranks in the middle for deprivation, and is more deprived than 50% of neighbourhoods. Compared to other LSOAs in Manchester, it is relatively less deprived, as 85% of neighbourhoods across the city are ranked as more deprived than LSOA 055A.<br><br>The community consultation allows the local community to express their opinions on the Proposed Development. The consultation asks for general feedback, opinions on improvements to walking and cycling routes, and the landscape proposals. No comments were raised in regards to health impacts of the Proposed Development. In general there was support for the proposals to improve walking and cycling routes, and the landscape proposals including open space for people to relax and socialise. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal connect with existing communities, i.e. layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction?** | ☒Yes<br>☐No<br>☐N/A | The extension and development of Altrincham Street will provide a new pedestrian route along a key route from Piccadilly Station to the Oxford Road Corridor. The pedestrian route leads into a new public square, which incorporates a fully accessible route across the Site, meaning the shared paths and public realm are usable for all. It also provides the opportunity for the railway arches to be inhabited by SMEs in the future, which would enhance the amenities and livelihood within the local area and benefit the communities that inhabit the surrounding areas. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal include a mix of uses and a range of community facilities?** | ☒Yes<br>☐No<br>☐N/A | The Proposed Development is primarily a PBSA block, but there will be a range of uses occupying the ground and first floor. There is commercial space on the ground floor, and amenity space for residents on the first floor, including a gym, | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | Consider the use of community facilities within amenity and commercial spaces. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | lounge, health & wellbeing centre, co-working space and private dining area.<br><br>It is unknown at this stage whether community facilities will be included in the ground floor or first floor spaces, and community use within commercial space is dependent on the future tenants. | | |
| **Does the proposal provide opportunities for the voluntary and community sectors?** | ☒Yes<br>☐No<br>☐N/A | There is no existing voluntary or community use on the Site. At this stage, the Proposed Development does not directly specify opportunities for the voluntary sectors. | ☐Positive<br>☐Negative<br>☐Neutral<br>☒Uncertain | Community and voluntary groups should be considered as part of any community facilities provided. |
| **Does the proposal take into account issues and principles of inclusive and age-friendly design?** | ☒Yes<br>☐No<br>☐N/A | The building has been designed to be inclusive and accessible throughout. This includes level access thresholds in all entrances and exits throughout the building, which benefits all users, including wheelchair users, elderly people, people with prams, and people with injuries. Lifts provide access to all areas of the building meaning step-free access is available for all users and residents, allowing inclusive access throughout the building. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Minimising the Use of Resources

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal make best use of existing land?** | ☒Yes<br>☐No<br>☐N/A | The Site currently comprises a vacant multi-storey car park and three vacant retail units. The car park and retail units are no longer fit for purpose and are subject to a planning application for demolition.<br><br>The Proposed Development makes best use of existing land by revitalising a site which is no longer fit for purpose, and will contribute to the regeneration of the wider area within the IDM Masterplan.<br><br>Excavated materials (e.g., soil and building aggregates) from demolition works will be utilised, where practical, for beneficial uses including landscaping or within the public realm. The design team is to explore opportunities to reuse the existing concrete slabs, but requires detailed feasibility if considered. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal encourage recycling, including building materials?** | ☒Yes<br>☐No<br>☐N/A | The current proposal aims to minimise non-hazardous demolition, excavation, construction and operational waste sent to landfill. The design proposal will consider designing out waste through material resource efficiency, and review material specification with recycled content, with the potential of recycled aggregates, during the procurement process.<br><br>Full life cycle of building materials will be considered, with ambitions on adaptability, flexibility, and long-term value retention, with the aim of using resources responsibly, minimising pollution, enhancing structural longevity, and reducing waste during construction and operation. The specifications for materials that are reused or contain high recycled content wherever feasible will be included during design. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | Materials sent to landfill will be minimised, and it is estimated that there is the possibility to divert from landfill 99% of estimated weight of demolition and excavation waste streams. | | |
| **Does the proposal incorporate sustainable design and construction techniques?** | ☒Yes<br>☐No<br>☐N/A | Waste will be minimised during demolition and construction and uses sustainable design and construction techniques which will reduce greenhouse gas emissions.<br><br>As mentioned above, the life cycle of building materials will be considered, with the aim to minimise pollution and to reduce waste during construction. The Proposed Development is designed to ensure longevity and ease of maintenance of all components, which aligns to PfE's ambitions for durable developments. Construction techniques including minimising the use of adhesives and sealants, and using self-finished materials will enhance the building's sustainability and adaptability. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |

## Climate Change

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| **Does the proposal incorporate renewable energy?** | ☒Yes<br>☐No<br>☐N/A | The proposed building energy strategy relies entirely on electric power, utilising zero-emission technologies such as air source heat pumps to minimise potential air quality impacts. Diesel generators are included only for backup and life safety use, with maintenance testing limited to fewer than 18 hours per year. Solar PV will also be included on the roof. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, for example ventilation, shading and landscaping?** | ☒Yes<br>☐No<br>☐N/A | The mechanical ventilation with heat recovery (MVHR) units will incorporate summer bypass to ensure that increased internal temperatures do not cause pre-heating of incoming air in the summer months. A combination of ventilation measures will give the occupants control over the temperature of their residential unit. The mitigation of overheating is provided by enhanced mechanical ventilation flowrates in all areas and high performance glazing.<br><br>Heating provided in accommodation spaces will be locally controlled via a wall mounted sensor. This allows for several energy efficiency functions such as window open sensors and un-occupied room sensors. Heating and cooling are provided in systems in the amenity spaces, which will maintain temperatures within a set band. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal maintain or enhance biodiversity?** | ☒Yes<br>☐No<br>☐N/A | Biodiversity will be enhanced through the retention of mature trees to the west of the Site, enhancement of the grassland area (beneath the trees) and creation of landscaped areas. This includes planting beds and scattered tree planting. Bat and bird boxes, and bug/bee hotels will also be introduced to the Site. | ☒Positive<br>☐Negative<br>☐Neutral<br>☐Uncertain | No further action. |
| **Does the proposal incorporate sustainable urban drainage techniques?** | ☒Yes<br>☐No<br>☐N/A | At present, SUDs has not been included in the Proposed Development. This is due to surface water draining to fall towards gullies and soft landscape, spatial constraints and underground services, which have restricted the scope for SUDs. Specifically, the Sackville Street footway is host to a wealth of utilities and Charles | ☐Positive<br>☐Negative<br>☒Neutral<br>☐Uncertain | No further action. |

| Assessment criteria | Relevant to the Project? | Details and evidence | Potential health impact | Further action or mitigation recommended |
|---|---|---|---|---|
| | | Street footway has the priority to create an enhanced route for pedestrians. | | |

## Cumulative Effects

16.44. Cumulative effects occur when a single receptor is affected by more than one effect at any point in time. This section of the chapter assesses the human health effects of the Proposed Development in combination with the potential human health effects of the committed developments.

16.45. In addition to the cumulative schemes, the application for Weston Halls and Pendulum Hotel, (ref: EIASCO/25/009) on behalf of iQ Student Accommodation, is considered for cumulative effects.

### Construction Phase

16.46. The construction phase of the Proposed Development along with the committed developments identified will generate additional construction related employment within Manchester City, and Greater Manchester. The scale of the construction employment cannot be readily quantified on the basis that the information available for each scheme is commercially sensitive. In addition, the timing and phasing of the construction of these schemes along with the Proposed Development may not occur over the same time periods, therefore the temporary construction related effects may not coincide. The combined effects are likely to have an overall positive effect on construction employment in the area.

16.47. The construction phase along with the committed developments identified will also generate increased construction noise and impacts to air quality. However, the scale of this cannot be quantified or determined at this stage, and any potential mitigation measures for the individual schemes are not known. The effect of air quality and noise during construction arising from the cumulative schemes can therefore not be determined at this stage.

### Operational Phase

16.48. All of the cumulative schemes have been assessed during the operational phases due to the effects on the same target economic areas. While detailed information regarding the amount of employment floorspace to be generated by these cumulative schemes is not available, a high-level assessment suggests that gross direct employment resulting from the cumulative schemed may be upwards of 5,330 jobs. There will therefore be a positive cumulative effect on operational employment.

16.49. The cumulative schemes together with the Proposed Development, assuming they are built and complete, will provide approximately 6,322 new PBSA units in Manchester. The application for the student accommodation block at Weston Halls also includes up to 2,700 units, taking the total cumulative students accommodation units to 9,022. Thus, there will be an overall positive cumulative effect on PBSA provision within Manchester.

16.50. Residents within the proposed development and the cumulative developments will put additional demand on existing social infrastructure. Current provision would be inadequate to meet the demand arising from the high number of residential units coming forward. However, given the identified housing need in policy documents and the absence of identified capacity issues, it is expected that planning policy will continue to ensure that there is sufficient investment into the necessary services and infrastructure to accommodate the demand of additional users. In addition, other residential developments may make contributions through relevant S106 agreements, to contribute towards increased capacity to deal with the demand for primary healthcare, education and other social infrastructure, wherever necessary to supplement the provision planned within the committed developments.

16.51. The increase in residential units arising from the cumulative developments will increase demand for open space and put pressure on existing provision. However, the cumulative schemes are expected to include additional green infrastructure and open space that will accommodate their own demands (i.e. the demand arising from each individual scheme). The cumulative developments will therefore have a neutral effect on open and play space provision.

16.52. The Proposed Development will be car free and therefore the impact of operational traffic is considered to be negligible to human health, and as such cumulative effects are not considered significant.

### Assessment of the IDM Masterplan

16.53. The assessment of Scenario 4 considers the full Proposed Development, with the cumulative effects and the wider Masterplan.

16.54. The wider Masterplan will be connected, open and accessible, and will introduce new shared open and play spaces in addition to those identified in the Proposed Development and Cumulative schemes. There is also the potential for the inclusion of local amenities in the wider Masterplan, including healthcare and well-being facilities, local convenience shopping, and the addition of leisure, food and drink places where people can gather. The Masterplan will also enhance walking and cycling routes to and around the Masterplan Site, and will provide designated routes for wheelchair users, to allow access for people with all mobility needs. These will create a positive impact on health under Scenario 4, impacting physical and mental health, allowing for greater social cohesion, employment opportunities, and more physical activity.

16.55. Health impacts arising from air quality, noise, transport, and the other aspects covered in the assessment, will need to be explored further through health impact assessments for the respective planning applications for the other plots in the Masterplan.

## Mitigation Measures

### Construction Phase

16.56. The key mitigation measure recommended for the construction phase is to follow the recommendations outlined in the Air Quality ES Chapter, to minimise the impact of construction dust.

16.57. Recommendations for enhancing health impacts have been included in the assessment tables above where relevant for the construction period.

### Operational Phase

16.58. The key mitigation measures recommended for the operational phase include following recommendations outlined in the Air Quality ES Chapter to include $NO_x$ filtration, and to work with MCC to address the potential overcapacity of GP services in the surrounding area.

## Residual Effects

### Construction Phase

16.59. Table 16.4 outlines the residual effects for the Proposed Development during the construction phase. The key residual effects relate to air quality, and noise impact arising from construction.

### Operational Phase

16.60. Table 16.4 shows the residual effects for the Proposed Development during the operational phase.

Table 16.4: Residual Effects for the Proposed Development during Construction and Operational Phases

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Demolition and Construction Phase | | | | |
| Effect of emissions arising from dust generated during the construction phase of the Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | Recommended mitigation measures have been outlined in Air Quality Appendix 8.2 | Mitigation measures typically implemented through a Construction Environmental Management Plan (CEMP) to be secured by planning condition | Neutral |
| Effects of emissions arising from traffic generated by onsite NRMM (non-road mobile machinery) during the construction phase of the | Surrounding sensitive uses, e.g., residential properties and educational facilities | Recommended mitigation measures have been outlined in Air Quality Appendix 8.2 | Mitigation measures typically implemented through a Construction Environmental Management Plan (CEMP) to be secured by planning condition | Neutral |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Proposed Development on human health | | | | |
| Effects of emissions arising from traffic generated by the construction phase of the Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | No mitigation required | N/A | Neutral |
| Effects of construction noise | Identified receptors e.g., residential, PBSA, educational | Follow recommendations outlined in the Noise and Vibration ES Chapter: Implementing an approved CEMP and BPM. Where construction is predicted to have an adverse effect, secondary mitigation will be implemented. | Adherence to BPM guidance and agreed methodologies in CEMP. Mitigation will be secured through a CEMP. | Neutral |
| Operational Phase | | | | |
| Effects of emissions arising from traffic generated by the operation of Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | No mitigation required | N/A | Neutral |
| Effects of air pollution on new exposure introduced by the Proposed Development | Future sensitive uses on-site, including residential properties | Follow the recommendations outlined in the Air Quality ES Chapter: $NO_x$ filtration on Levels 00 to Level 03 | Through suitable worded condition, in which the applicability of $NO_x$ filtration is to be reviewed prior to occupation | Neutral |
| The Proposed Development could lead to additional people requiring healthcare provision through GP services. However, as students often retain their GP registration at their family home, the additional demand for GP services is likely to be small. However, the baseline assessment indicates that the existing patient to GP ratio is higher than average, and additional residents could place additional pressure on the healthcare services. | Local residents | None required. Given that the effect on primary healthcare provision is assessed as minor adverse and therefore not significant, no specific mitigation is required. | N/A | Neutral |

## Monitoring

16.61. As outlined in the Air Quality Es Chapter, air quality monitoring is recommended prior to occupation to determine the requirements for $NO_x$ filtration.

## Reference List

16.62. This chapter has been prepared in reference to the following:


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- MCC, (2025a). Manchester City Open Space Assessment
- MCC, (2025b). Integrated Appraisal of the Manchester Local Plan

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- ONS, (2023); Business Register and Employment Survey
- ONS, (2025a); Annual Population Survey Jan-Dec 2018
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# 17. Summary of Residual Effects

## Introduction

17.1. This Section summarises the residual effects that are set out in each individual relevant Section.

## Townscape and Visual Impact

### Residual Effects

17.2. As required by the EIA Regulations (2017), "moderate or above" are deemed to be significant and therefore relevant townscape and visual receptors are reported below.

Table 17.1: Summary of Residual Effects (TVIA)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Scenario 2: Construction | | | | |
| Moderate – mod/major adverse | Viewpoint 4) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate – mod/major adverse, temporary |
| Moderate adverse | Viewpoint 2) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate adverse, temporary |
| Moderate – mod/major neutral | Viewpoint 3) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate – mod/major neutral, temporary |
| Moderate – mod/major neutral | Viewpoint 5) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate – mod/major neutral, temporary |
| Moderate – mod/major neutral | Viewpoint 6) | Solid site hoardings and maintenance of tidy construction site. Controlled working hours to minimise visibility of moving cranes. | Hoarding and maintenance is responsibility of works contractor. Planning condition | Moderate – mod/major neutral, temporary |
| Moderate – mod/major neutral | Viewpoint 15) | Controlled working hours to minimise | Planning condition | Moderate – mod/major neutral, temporary |

| | | | | |
|---|---|---|---|---|
| | | visibility of moving cranes. | | |
| Moderate/major neutral | Viewpoint 8) | Controlled working hours to minimise visibility of moving cranes. | Planning condition | Moderate/major neutral, temporary |
| Moderate/major neutral | Building heights | None | n/a | Moderate/major neutral, temporary |
| Moderate neutral | Site Character | Solid site hoardings and maintenance of tidy construction site. | Hoarding and maintenance is responsibility of works contractor. | Moderate neutral, temporary |
| Scenario 2: Baseline + Proposed Development | | | | |
| Moderate – mod/major neutral | Viewpoint 4) Altrincham Street | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate – mod/major neutral, permanent |
| Moderate/major neutral | Viewpoint 8) Sackville Gardens | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate/major neutral, permanent |
| Moderate neutral | Viewpoint 3) Vimto Gardens | Building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate neutral, permanent |
| Moderate neutral | Building height | Move away from three equal sized towers as per the IDM Masterplan SRF | n/a | Moderate neutral, permanent |
| Moderate beneficial | Viewpoint 5) Sackville Street | Building materials acknowledge local vernacular. Greening at street level. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Viewpoint 6) Charles Street | Massing evolved away from three equal sized towers as per the IDM Masterplan SRF. Building materials acknowledge local vernacular. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Public Realm & streetscape | Reinstatement and enhancement of key connections. | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |
| Moderate beneficial | Site Character | Architectural design and building materials acknowledge local vernacular | Planning condition to sign off detailed design and materials palette | Moderate beneficial, permanent |

## Heritage

17.3. The residual impacts, i.e. the remaining impacts of the Proposed Development following implementation of proposed mitigation, are summarised in the Construction and Operational phases in Table 17.2 below. These effects are not considered to be significant in EIA terms and would equate to the lower end of 'less than

substantial' as per Paragraph 215 of the NPPF. Regarding the setting of non-designated heritage assets, Paragraph 216 of the NPPF states that "a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset." The effect on the settings of the non-designated heritage asset is not considered to be a significant effect in EIA terms.

Table 17.2: Summary of Residual Effects (Heritage)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Negligible | Lass O' Gowrie (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Manchester House (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Orient House (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Granby House (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Renold Building (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Manchester South Junction and Altrincham Railway Viaduct (Grade II) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Barnes Wallis and Wright Robinson | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Moffat Building | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Butterfly Stairs | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Manchester Meeting Place (Staff House) | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Morton Laboratory | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | The Mill | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Pariser Building | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Negligible | MSS Tower | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Negligible | Whitworth Street Conservation Area | Ensure that CEMP is adhered to | Secured by planning condition | Negligible adverse (temporary indirect) |
| Operational Phase | | | | |
| Negligible | Lass O' Gowrie (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible beneficial and adverse (permanent indirect) |
| Minor | Former Refuge Assurance Company Offices (Grade II*) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible adverse (permanent indirect) |
| Minor adverse | Granby House (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible adverse (permanent indirect) |
| Minor | Renold Building (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | Sculptural (Holloway) Wall (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible adverse (permanent indirect) |
| Minor-to-Moderate | Institute of Science and Technology (University of Manchester) (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | Regency House with Barclays Bank (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | 46 Sackville Street (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Minor | 42 and 44 Sackville Street (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | The Shena Simon Sixth-Form College (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | Manchester South Junction and Altrincham Railway Viaduct (Grade II) | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible-to-Minor adverse (permanent indirect) |
| Minor | Barnes Wallis and Wright Robinson | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |
| Minor | Moffat Building | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible adverse (permanent indirect) |
| Negligible | Pariser Building | Embedded design quality | Planning condition to sign off detailed design and materials palette | Negligible adverse and beneficial (permanent indirect) |
| Minor-to-Moderate | Whitworth Street Conservation Area | Embedded design quality | Planning condition to sign off detailed design and materials palette | Minor adverse (permanent indirect) |

## Noise and Vibration

17.4. When accounting for the mitigation measures identified above, the residual effects for all receptors are adjusted from those reported in the unmitigated scenario. The assessments summarised below confirm that, following implementation of primary and secondary mitigation, no significant residual adverse effects are expected during any phase of the Proposed Development.

17.5. Residual effects during the construction and operation phase after implementing the mitigation measures are provided below in Table 17.3.

Table 17.3: Summary of Residual Effects (Noise and Vibration)

| Likely Significant Effect | Receptor | Mitigation Measures | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Effects from construction noise: Direct, temporary, short-term adverse effects of up to major significance during demolition and early construction phases. | Salisbury House, Fairbairn Building, Pendulum Hotel, Ibis Hotel, James Lighthill Building | BPM; Acoustic Barriers; CEMP Controls; Noise Insulation / Temporary Rehousing (where required) | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Direct, temporary, short-term adverse effects reduced to minor–moderate, not significant. |
| Effects from construction noise: Direct, temporary, short-term adverse effects of negligible–moderate significance. | All other identified receptors (Residential, PBSA, Educational) | BPM; CEMP; Construction Traffic Management | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Direct, temporary, short-term adverse effects remain negligible–moderate, not significant. |
| Effects from construction traffic noise: Direct, temporary, short-term negligible adverse effect. | All receptors adjacent to affected road links | Construction Logistics Plan; CEMP Routing Controls | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Direct, temporary, short-term negligible adverse effect (not significant). |
| Effects from construction vibration: Direct, temporary, short-term minor–moderate adverse effects. | All identified receptors (Residential, PBSA, Educational) | BPM; Vibration Monitoring; Method Control; CFA Piling | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Direct, temporary, short-term minor–moderate adverse effect (not significant). |
| Operational Phase | | | | |
| Effects from Environmental Noise Impacts (External Sources): Direct, permanent, long-term adverse effect (negligible–major pre-mitigation). | Future Residential Occupants | High-Performance Glazing; Acoustic Ventilation Strategy | To be secured by planning condition. | Direct, permanent, long-term negligible adverse effect (not significant). |
| Effects from Environmental Vibration Impacts (Railway): Direct, permanent, long-term negligible adverse effect. | Future Residential Occupants | - | To be secured by planning condition. | Direct, permanent, long-term negligible adverse effect (not significant). |
| Effects from Noise from Building Services Plant: Direct, permanent, long-term negligible adverse effect. | Nearest Residential and PBSA Receptors | Plant Design to BS 4142 Limits; Screening / Enclosures; Noise Compliance Report | To be secured by planning condition. | Direct, permanent, long-term negligible adverse effect (not significant). |

| Likely Significant Effect | Receptor | Mitigation Measures | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Effects from Retail/ Gym Noise Impacts: Direct, permanent, long-term negligible adverse effect. | Off-Site and Adjoining Residential Receptors | Façade Sound Insulation; Internal Acoustic Treatments; Enhanced Partitions; Floating Floors; Equipment Isolation; Management Controls | To be secured by planning condition. | Direct, permanent, long-term negligible adverse effect (not significant). |

## Air Quality

### Construction Phase

17.6. The residual effects for the construction phase are presented in Table 17.4.

Table 17.4: Summary of Construction Phase Residual Effects (Air Quality)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Effects of emissions arising from dust generated during the construction phase Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | Recommended mitigation measures has been outlined within Appendix 9.2. | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition. | Negligible, short-term and temporary |
| Effects of emissions arising from traffic generated by onsite NRMM during construction phase of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | Recommended mitigation measures has been outlined within Appendix 9.2. | Mitigation measures typically implemented through a Construction environmental Management Plan (CEMP) to be secured by planning condition | Negligible, short-term and temporary |
| Effects of emissions arising from traffic generated by the construction phase of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | 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. | | | | |

### Operational Phase

17.7. The residual effects for the operational phase are presented in Table 17.5.

Table 17.5: Summary of Operational Phase Residual Effects (Air Quality)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Effects of emissions arising from traffic generated by the operation of Proposed Development on human health | Surrounding sensitive uses, e.g. residential properties and educational facilities, including Echoes Day nursey and Weston Hall (high*) | No mitigation is required | N/A | Negligible, Permanent |
| Effect of air pollution on new exposure introduced by the Proposed Development | Future sensitive uses on-site, including residential properties (high) | NOx filtration on Levels 00 to Level 03 | Through suitably worded condition, in which the applicability of NOx filtration is to be reviewed prior to occupation | Negligible, Permanent |
| **All existing sensitive receptors have been considered as high sensitivity receptors to provide a robust assessment. | | | | |

# Traffic and Transport

## Construction Phase

17.8. No significant effects have been identified on Traffic and Transport in the Demolition and Construction Stage of the Proposed Development, nor when committed developments or the wider IDM masterplan are taken into consideration.

Table 17.6: Construction Residual Effects (Traffic and Transport)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Negligible | Severance of Communities, Non-motorised User Delay, Non-motorised User Amenity, Fear and Intimidation on and by Road Users, Road User and Pedestrian Safety | Conditioned CEMP | N/A | Negligible, Not Significant |

## Operational Phase

17.9. No significant effects have been identified on Traffic and Transport in the Operational Phase of the Proposed Development, nor when committed developments or the wider masterplan are taken into consideration.

Table 17.7: Operational Residual Effects (Traffic and Transport)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Negligible | Severance of Communities, Non-motorised User Delay, Non-motorised User Amenity, Fear and Intimidation on and by Road Users, Road User and Pedestrian Safety | Framework Travel Plan | N/A | Negligible, Not Significant |

## Daylight, Sunlight and Overshadowing

### Operational Phase

Table 17.8: Summary of Residual Effects (DLSL)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Scenario 2: Baseline + Phase A + Phase C - Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Reduction in daylight | Salisbury House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Orient House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Granby House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Stanlo House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Weston Hall | None | n/a | Minor Adverse – Permanent (not significant) |
| | 121 Princess Street | None | n/a | Negligible – Permanent |
| | Princess Court | None | n/a | Negligible – Permanent |
| | Granby Village | None | n/a | Minor Adverse – Permanent (not significant) |
| | 4-6 Nobel Way | None | n/a | Negligible – Permanent |
| | 36 Charles Street | None | n/a | Negligible – Permanent |
| | Sackville Place | None | n/a | Negligible – Permanent |
| | Whitworth House | None | n/a | Negligible – Permanent |
| | Montana House | None | n/a | Negligible – Permanent |
| | 88-92 Princess Street | None | n/a | Negligible – Permanent |
| | Asia House | None | n/a | Negligible – Permanent |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Scenario 2: Baseline + Phase A + Phase C - Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Reduction in sunlight | Salisbury House | None | n/a | Negligible – Permanent |
| | Orient House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Granby House | None | n/a | Minor Adverse – Permanent (not significant) |
| | Stanlo House | None | n/a | Negligible – Permanent |
| | Weston Hall | None | n/a | Negligible – Permanent |
| | 121 Princess Street | None | n/a | Negligible – Permanent |
| | Princess Court | None | n/a | Negligible – Permanent |
| | Granby Village | None | n/a | Minor Adverse – Permanent (not significant) |
| | 36 Charles Street | None | n/a | Negligible – Permanent |
| | Sackville Place | None | n/a | Negligible – Permanent |
| | Whitworth House | None | n/a | Negligible – Permanent |
| | 88-92 Princess Street | None | n/a | Negligible – Permanent |
| | Asia House | None | n/a | Negligible – Permanent |
| Increase in shadow | Vimto Park | None | n/a | Negligible – Permanent |

## Solar Glare

### Construction Phase

17.10. The likely effects in relation to solar glare for the surrounding road users and train drivers would vary throughout the demolition and construction works, starting from installation of the first glazed façade panels and gradually increasing as all reflective cladding is installed. Once the glazed façade elements have been installed, the potential solar glare effects would be similar to those once the Proposed Development is complete and operational therefore the overall effect in terms of solar glare would range from being temporary negligible effects during demolition, then gradually changing to post mitigation residual effects of negligible to permanent, minor to moderate adverse and significant, once the Proposed Development is complete.

### Operational Phase

17.11. The likely significant effects of solar glare from the Proposed Development described above are considered a worst-case scenario. All solar glare effects are considered moderate to high sensitivity depending on the whether it is a controlled junction or not, and the effects are permanent and long term.

Table 17.9: Summary of Residual Effects (Solar Glare)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Ranging from Negligible not significant, Minor adverse not significant, | Road users at nearby road junctions | Proposed Glazing VLR Specification for south-western | Mitigation to be designed and developed in detail, secured via planning condition. | Effects will be reduced to permanent, minor adverse (not significant) upon |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| and Minor to Moderate Adverse significant effects on Solar Glare | | and north-eastern elevations may need to be restricted subject to further detailed testing post-planning. | | finalisation of additional mitigation proposed |
| Minor to Moderate adverse and significant effects on Solar Glare | Train Drivers travelling Eastbound and Westbound | Proposed Glazing VLR Specification for south-western and north-eastern elevations may need to be restricted subject to further detailed testing post-planning. | Mitigation to be designed and developed in detail, secured via planning condition. | Effects will be reduced to permanent, minor adverse (not significant) upon finalisation of additional mitigation proposed |

## Wind

### Construction Phase

17.12. All residual construction effects would be negligible (not significant).

### Operational Phase

17.13. Residual operational effects would range from minor beneficial (not significant) at proposed entrances, to negligible (not significant) at all other receptors.

Table 17.10: Summary of Residual Effects (Wind)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Negligible effect | All | None | N/A | Negligible temporary effects (not significant) |
| Operational Phase | | | | |
| Minor Beneficial effect on wind comfort | Introduced entrances at all locations around the eastern block and also the northern and southwestern entrances of the western block. | None | N/A | Minor Beneficial permanent effects on wind comfort (not significant) |
| Negligible effect | All thoroughfares, roadways, existing off-site entrances, the proposed eastern entrance of the western block, bus stops, amenity and spill out seating | None | N/A | Negligible permanent effects (not significant) |

## Climate Change

17.14. Table 17.11 and Table 17.12 set out the assessment of residual effect significance for the construction and operational stages respectively in accordance with the ISEP GHG Guidance.

Table 17.11 - Assessment of residual effect significance during the construction stage (Climate Change)

| Receptor | Compliance with existing and emerging policy | Effect significance |
|---|---|---|
| Global atmosphere | As set out in Table 14.10 of Chapter 14, it is considered that the Proposed Development is consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. Therefore, in line with the ISEP GHG Guidance, this is considered to be a Minor Adverse effect. In line with the guidance, this effect is considered to be not significant. | Minor adverse, direct, long term and permanent. |

Table 17.12 - Assessment of residual effect significance during the operational stage (Climate Change)

| Receptor | Compliance with existing and emerging policy | Effect significance |
|---|---|---|
| Global atmosphere | As set out in Table 14.10 of Chapter 14, it is considered that the Proposed Development is consistent with applicable existing and emerging local, regional, and national net zero policy and good practice design standards for projects of this type. Therefore, in line with the ISEP GHG Guidance, this is considered to be a Minor Adverse effect. In line with the guidance, this effect is considered to be not significant. | Minor adverse, direct, long term and permanent. |

## Socio-Economic

17.15. Table 17.13 summarises the residual effects of the Proposed Development during construction and operation.

Table 17.13: Residual effects of the Proposed Development (Socio-Economic)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Creation of 99 new additional construction jobs | Regional workforce | None required | N/A | Minor beneficial, long-term and temporary effect. |
| Creation of £9.4m in additional GVA | Local and regional economy | None required | N/A | Minor beneficial long-term and temporary effect. |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Operational Phase | | | | |
| Increase in residential population could lead to additional local spending | Local businesses | None required | N/A | Moderate beneficial (significant), long-term permanent effect at the local level and a minor beneficial (not significant), long-term permanent effect at all other spatial scales. |
| Generation of 19-78 net new additional jobs once complete and operational | Local employment | None required | N/A | Minor beneficial (not significant) long-term permanent effect |
| Provision of up to 1,041 new PBSA units of different sizes | Local residents | None required | N/A | Moderate beneficial (significant), long-term permanent effect |
| The Proposed Development could lead to additional people requiring healthcare provision through GP services. However, as students often retain their GP registration at their family home, the additional demand for GP services is likely to be small. However, the baseline assessment indicates that the existing patient to GP ratio is higher than average, and additional residents could place additional pressure on the healthcare services. | Local residents | None required. Given that the effect on primary healthcare provision is assessed as minor adverse and therefore not significant, no specific mitigation is required. | N/A | Minor adverse (not significant), long-term and permanent effect. |
| Up to an additional 1,041 people could reside in the local area as a result of the Proposed Development, increasing the pressure on green space. The Proposed Development includes 3,464 sqm of open space, which will be open and accessible to all. | Local Residents | None required | N/A | Negligible |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| The Proposed Development could lead to an additional £1.0m-£13.4m in GVA as a result of additional employment. | Local and regional economies | None required | N/A | Minor beneficial, long-term permanent effect. |

## Human Health

17.16. Residual effects during the construction and operation phases after implementing the mitigation measures are provided in Table 17.4. The key residual effects in relation to the construction phase relate to air quality and noise impact arising from construction.

Table 17.4: Residual Effects for the Proposed Development during Construction and Operational Phases (Human Health)

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| Construction Phase | | | | |
| Effect of emissions arising from dust generated during the construction phase of the Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | Recommended mitigation measures have been outlined in Air Quality Appendix 8.2 | Mitigation measures typically implemented through a Construction Environmental Management Plan (CEMP) to be secured by planning condition | Neutral |
| Effects of emissions arising from traffic generated by onsite NRMM (non-road mobile machinery) during the construction phase of the Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | Recommended mitigation measures have been outlined in Air Quality Appendix 8.2 | Mitigation measures typically implemented through a Construction Environmental Management Plan (CEMP) to be secured by planning condition | Neutral |
| Effects of emissions arising from traffic generated by the construction phase of the Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | No mitigation required | N/A | Neutral |
| Effects of construction noise | Identified receptors e.g., residential, PBSA, educational | Follow recommendations outlined in the Noise and Vibration ES | Adherence to BPM guidance and agreed methodologies in CEMP. Mitigation will be secured through a CEMP. | Neutral |

| Likely Significant Effect | Receptor | Mitigation Measure | Means of Mitigation Implementation | Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent) |
|---|---|---|---|---|
| | | Sections: Implementing an approved CEMP and BPM. Where construction is predicted to have an adverse effect, secondary mitigation will be implemented. | | |
| Operational Phase | | | | |
| Effects of emissions arising from traffic generated by the operation of Proposed Development on human health | Surrounding sensitive uses, e.g., residential properties and educational facilities | No mitigation required | N/A | Neutral |
| Effects of air pollution on new exposure introduced by the Proposed Development | Future sensitive uses on-site, including residential properties | Follow the recommendations outlined in the Air Quality ES Section: $NO_x$ filtration on Levels 00 to Level 03 | Through suitable worded condition, in which the applicability of $NO_x$ filtration is to be reviewed prior to occupation | Neutral |
| The Proposed Development could lead to additional people requiring healthcare provision through GP services. However, as students often retain their GP registration at their family home, the additional demand for GP services is likely to be small. However, the baseline assessment indicates that the existing patient to GP ratio is higher than average, and additional residents could place additional pressure on the healthcare services | Local residents | None required. Given that the effect on primary healthcare provision is assessed as minor adverse and therefore not significant, no specific mitigation is required. | N/A | Neutral |

## Planning Conditions or Obligations

17.17. 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.

17.18. Where inherent mitigation is included in the design of the Proposed Development, and as such will be included as the proposals, it is anticipated that suitably worded planning conditions requiring the Proposed Development to be constructed in accordance with the approved plans or details would be appropriate.

17.19. A suitably worded planning condition could be appropriate to secure the submission of a Construction Management Plan(s) for the construction phase of the Proposed Development in line with Chapters 2, 6, 7, 8, 9, 10 and 16 of the ES.

17.20. It has been anticipated that suitably worded planning conditions or obligations may be required where necessary in relation to the following measure:

- Chapter 6 (TVIA) – Development to be delivered in-line with approved plans. Planning conditions requiring details of building and public realm materials to be submitted and approved by the LPA prior to works commencing.
- Chapter 7 (Heritage) – Mitigation embedded in the high quality architecture and design of the buildings – with materials secured via planning conditions.
- Chapter 8 (Noise and Vibration) – Paragraph 8.175 Operational Noise Level Thresholds Compliance
- Chapter 8 (Noise and Vibration) – Paragraph 8.177 Glazing Specification
- Chapter 8 (Noise and Vibration) – Paragraph 8.179 Submission of Detailed Ventilation Design Drawings
- Chapter 8 (Noise and Vibration) – Paragraph 8.179 Detailed Noise Assessment
- Chapter 8 (Noise and Vibration) – Paragraph 8.185 Detailed Acoustic Design Assessment for retail units and gym
- Chapter 8 (Noise and Vibration) – Paragraph 8.187 Gym Operational Noise Management Plan
- Chapter 9 (Air Quality) and Section 16 (Human Health) – Table 9.10 NOx filtration
- Chapter 9 (Air Quality) – Implementation of a Dust Management Plan (see table 9.11 within Appendix 9.2).
- Chapter 10 (Traffic and Transport) – Paragraph 10.62 with reference to a Travel Plan to be secured via planning condition
- Chapter 12 (Solar Glare) Table 12.7 – Glazing VLR Specification for south-western and north-eastern elevations
- Chapter 14 (Climate Change) – Embedded mitigation as noted at paragraph 14.64 – 14.66
- Chapter 16 (Human Health) – To be in line with those identified for Air Quality

# 18. Type 1 Cumulative Effects

## Introduction

18.1. This Section considers 'Type 1' cumulative effects. The assessment is informed by the results of the technical assessments as set out in Section 6 to 16 inclusive of the ES.

18.2. Type 1 cumulative effects are also known as 'inter-project' effects, which are the combined effects arising from the Proposed Development upon a set of defined sensitive receptors.

18.3. Type 2 cumulative effects are considered within the ES technical Sections. The technical Sections 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

18.4. 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'.

18.5. The EIA Regulations require 'a description of the likely significant effects', including cumulative effects.

18.6. 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

18.7. As this Section considers the cumulative effects of the technical areas within the ES, all relevant policy has already been reviewed within the individual technical Sections.

### Guidance

18.8. 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.

18.9. 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'.

18.10. 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

18.11. 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.

18.12. 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.

18.13. 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.

18.14. 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.

18.15. 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.

18.16. 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

18.17. 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.

18.18. 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 Section 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

18.19. 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.

18.20. 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

### Construction Phase

18.21. Based on the methodology detailed above, Table 18.1 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 18.1: Type 1 Cumulative Effects Construction Phase

| Sensitive Receptor Group | Construction Phase Residual Effects | Likely Significant Cumulative Effects |
|---|---|---|
| **Humans** | Noise and vibration: Construction noise for existing local residents and users of the Site surroundings.<br><br>Construction traffic noise on local roads for existing local residents and proposed future local residents.<br><br>Construction vibration to existing local residents.<br><br>Socio-Economic: positive change in employment during the construction stage to increase expendable income. Moderate beneficial, temporary.<br><br>Human Health: Temporary disruption of local amenity and potential stress from construction activities. | Minor adverse (not significant) Temporary and short-term |
| **Neighbouring Residential Properties** | Noise and Vibration: Potential impact on the structural integrity and amenity of neighbouring properties as a result of vibration and noise. | Minor adverse (not significant) Temporary and short-term |
| **The Economy** | Socio-economic: Job creation and supply chain leading to increase in tax revenues and GVA.<br><br>Increased local spending on goods and services. | Minor beneficial |
| **Views, Visual Setting Townscape** | TVIA: Temporary adverse effects on visual setting during the construction period from identified viewpoints. | Minor-moderate adverse on selected views |
| **The Climate** | Climate Change: Embodied carbon CO2eq emissions affecting contributions to the carbon budgets. Construction related greenhouse gas emissions. | Minor adverse |

18.22. Table 18.1 shows that there is unlikely to be in-combination operational phase Type 1 cumulative effects to arise. This is due to the extensive technical assessments throughout the design process and the identified mitigation in-built into the design.

## Operational Phase

18.23. Based on the methodology detailed above, Table 18.2 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 18.2: Type 1 Cumulative Effects – Operational Phase

| Sensitive Receptor Group | Operational Phase Residual Effects | Likely Significant Cumulative Effects |
|---|---|---|
| Humans | Socio-Economic: Beneficial effects on provision of employment opportunities, open space provision and increased local spending. Moderate beneficial, permanent.<br><br>Wind: minor benefical effects on specific areas around the development, with regard to comfort.<br><br>Daylight, Sunlight and Overshadowing: Negligible to minor adverse effects are expected on daylight and sunlight for some surrounding properties, with some minor beneficial effects for others due to changes in building massing.<br><br>Solar Glare: Negligible to minor adverse effects are predicted from solar reflections on road users and train drivers at specific junctions and viewpoints.<br><br>Noise: Negligible to minor adverse effects are anticipated from operational plant noise and increased delivery and servicing traffic noise on local roads.<br><br>Human Health: Minor beneficial effects from improved open space and active travel routes. | Minor adverse |
| The Economy | Socio-economic: Creation of permanent operational jobs, increased local spending and contributions to the local and regional economy. | Minor beneficial |

| Sensitive Receptor Group | Operational Phase Residual Effects | Likely Significant Cumulative Effects |
|---|---|---|
| The Climate | Climate Change: Effect on the global atmosphere. | Negligible |
| Views, Visual Setting Townscape | TVIA: Visual impact on identified viewpoints following the construction of the development. | Minor adverse minor beneficial for different receptors |
| Historic Environment | Built Heritage: Visual impact on heritage assets identified. | Negligble to minor adverse |

18.24. Table 18.2 shows that there is unlikely to be in-combination operational phase Type 1 cumulative effects to arise. This is due to the extensive technical assessments throughout the design process and the identified mitigation in-built into the design

## Mitigation Measures

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

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

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