

Cambridge Halls, Manchester

Environmental Statement Contents Page

April 2025

Turley

Volume 1: Primary Report and Supporting Graphics

Chapter 1: Introduction

Figure 1.1: Site Location Plan

Chapter 2: Approach to EIA

Chapter 3: Site Context

Chapter 4: Development Specification

Figure 4.1 Floor Plan – Basement

Figure 4.2: Floor Plan - Ground Floor

Figure 4.3: Floor Plan - Level 01

Figure 4.4: Floor Plan - Level 02

Figure 4.5: Floor Plan - Level 03

Figure 4.6: Floor Plan - Level 04

Figure 4.7: Floor Plan - Level 05

Figure 4.8: Floor Plan - Level 06

Figure 4.9: Floor Plan - Level 07

Figure 4.10: Floor Plan - Level 08

Figure 4.11: Floor Plan - Level 09

Figure 4.12: Floor Plan - Level 10

Figure 4.13: Floor Plan - Level 11

Figure 4.14: Floor Plan - Level 12

Figure 4.15: Floor Plan - Level 13

Figure 4.16: Floor Plan - Level 14

Figure 4.17: Floor Plan - Level 15

Figure 4.18: Floor Plan - Level 16

Figure 4.19: Floor Plan - Level 17

Figure 4.20: Floor Plan - Level 18

Figure 4.21: Floor Plan - Level 19

Figure 4.22: Floor Plan - Level 20

Figure 4.23: Floor Plan - Level 21

Figure 4.24: Floor Plan - Level 22

Figure 4.25: Floor Plan - Level 23

Figure 4.26: Floor Plan - Level 24

Figure 4.27: Floor Plan - Level 25

Figure 4.28: Floor Plan - Level 26

Figure 4.29: Floor Plan - Level 27

Figure 4.30: Floor Plan - Level 28

Figure 4.31: Floor Plan - Level 29

Figure 4.32: Floor Plan - Roof

Figure 4.33: Site Elevation – South West – Cambridge Street

Figure 4.34: Site Elevation – North East – Chatham Street

Figure 4.35: Site Elevation – South East & North West Boundary St & Service Road

Figure 4.36: Site Elevation – Link

Figure 4.37: Site Elevation – South West & North East Cambridge St & Chatham St

Figure 4.38: Site Elevation – South East & North West Boundary St West & Service Rd

Figure 4.39: Section AA

Figure 4.40: Section BB

Figure 4.41: Section CC – Phase 01

Figure 4.42: Section DD – Phase 01

Figure 4.43: Section EE – Phase 02

Figure 4.44: Section FF – Phase 02

Figure 4.45: Section GG – Phase 02

Figure 4.46: Landscape General Arrangement

Figure 4.47: Roof Podium General Arrangement

Figure 4.48: Demolition Plan

Chapter 5: Consideration of Alternatives

Chapter 6: Townscape and Visual

Figure 6.1: Site Location Plan and Study Area

Figure 6.2: Designations Plan

Figure 6.3: Extract from the Strategic Level City-Wide Urban Characterisation for Core Strategy

Figure 6.4: Townscape Character Area Plan

Figure 6.5: Zone of Theoretical Visibility

Figure 6.6: Representative Viewpoint Location

Figure 6.7: Representative Viewpoint Plan and Zone of Theoretical Visibility

Figure 6.8: Viewpoint Photography - Representative Viewpoint 1

Figure 6.9: Viewpoint Photography - Representative Viewpoint 2

Figure 6.10: Viewpoint Photography - Representative Viewpoint 3

Figure 6.11: Viewpoint Photography - Representative Viewpoint 4

Figure 6.12: Viewpoint Photography - Representative Viewpoint 5

Figure 6.13: Viewpoint Photography - Representative Viewpoint 6.1

Figure 6.14: Viewpoint Photography - Representative Viewpoint 6.2

Figure 6.15: Viewpoint Photography - Representative Viewpoint 7

Figure 6.16: Viewpoint Photography - Representative Viewpoint 8

Figure 6.17: Viewpoint Photography - Representative Viewpoint 9.1

Figure 6.18: Viewpoint Photography - Representative Viewpoint 9.2

Chapter 7: Built Heritage

Figure 7.1: Heritage Asset Plan

Chapter 8: Wind

Figure 8.1: Annual wind rose from Manchester Airport (plotted from 25 years of historical weather data)

Figure 8.2: Aerial view of the site and existing surroundings including a 300m radius from the site

Figure 8.3: Aerial view of the site and existing surroundings including a 300m radius from the site

Figure 8.4: View of the existing site and surroundings modelled in the assessment of the existing baseline

Figure 8.5: Plot of the Lawson comfort results for the existing baseline (summer)

Figure 8.6: Plot of the Lawson comfort results for the existing baseline (worst-case)

Figure 8.7: Plot of the annual Lawson safety results for the existing baseline

Figure 8.8: Ground floor plan showing areas of sensitive receptors including external entrance locations

Figure 8.9: Level 01 plan showing areas of sensitive receptors including external entrance locations

Figure 8.10: Level 07 plan (podium) showing areas of sensitive receptors including external entrance locations.

Figure 8.11: View of the 3D geometry tested with the Proposed Development and existing surroundings modelled

Figure 8.12: Plot of the Lawson comfort results for the Proposed Development with existing surroundings (summer)

Figure 8.13: Plot of the Lawson comfort results for the Proposed Development with existing surroundings (worst-case)

Figure 8.14: Plot of the annual Lawson safety results for the Proposed Development in existing surroundings

Figure 8.15: Plot of the Lawson comfort results for the Proposed Development upper terraces, in existing surroundings in summer

Figure 8.16: Streamlines and 3D visuals of the air flow impacting conditions in the underpasses to Phases 01 and 02

Figure 8.17: View of the 3D geometry tested with the Proposed Development and existing surroundings modelled

Figure 8.18: Plot of the Lawson comfort results for the Proposed Development with future surroundings (summer)

Figure 8.19 Plot of the Lawson comfort results for the Proposed Development with future surroundings (worst-case)

Figure 8.20: Plot of the annual Lawson safety results for the Proposed Development in future surroundings

Chapter 9: Daylight, Sunlight and Overshadowing

Chapter 10: Climate Change

Chapter 11: Socio-Economics and Human Health

Figure 11.1: Socio-Economics and Human Health Study Area Plan

Chapter 12: Air Quality

Chapter 13: Noise and Vibration

Figure 13.1: Study Area and Nearest Noise Sensitive Receptors

Chapter 14: Assessment of Cumulative Effects

Figure 14.1: Cumulative Project Plan

Chapter 15: Summary

Volume 2: Technical Appendices to the Primary Report

Appendix 1.1: Information required to be included within an ES

Appendix 1.2: Statement of Technical Competence

Appendix 2.1: EIA Scoping Report

Appendix 2.2: EIA Scoping Opinion

Appendix 6.1: Townscape and Visual Impact Assessment

Appendix 7.1: Heritage Assessment

Appendix 8.1: CFD Methodology

Appendix 9.1: Legislation and Guidance

Appendix 9.2: Location Plan

Appendix 9.3: Spot Height Drawings

Appendix 9.4: Window Location

Appendix 9.5: Daylight and Sunlight Results

Appendix 9.6: Sun on Ground Results

Appendix 9.7: Transient Overshadowing

Appendix 12.1: Air Quality Technical Appendix

Appendix 13.1: Acoustic Assessment Report

Appendix 13.2: Construction Noise and Impact Assessment

Appendix 13.3: Road Traffic Noise Increase Assessment

Appendix 13.4: MUGAs and Gyms Noise and Vibration Assessment

Volume 3: Environmental Management Plan

Volume 4: Non-Technical Summary

1. Introduction

Overview

- 1.1 This Environmental Statement (ES) is part of a suite of documents that supports the detailed planning application (hereafter referred to as the 'Application') submitted by Unite Students and Manchester Metropolitan University (hereafter referred to as the 'Applicant') to Manchester City Council (MCC) for a Purpose Built Student Accommodation (PBSA) development (hereafter referred to as the 'Proposed Scheme'). The Proposed Scheme is for 2,302 PBSA units (Use Class Sui Generis) and other supporting commercial/community uses.
- 1.2 The Proposed Scheme will be delivered at the site of the existing Cambridge Halls^a, which is bound by buildings along Boundary Street West to the south; A5067 Higher Cambridge Street to the west; buildings along Higher/Lower Chatham Street to the east; and the Manchester Metropolitan University Business School to the north. The EIA Boundary, as defined on **Figure 1.1** and hereafter referred to as the 'Site'^b, is approximately 1.29 hectares (ha) in area. Further details of the Site are provided in **Chapter 3: Site Context**.
- 1.3 Turley were commissioned by the Applicant to undertake the EIA and prepare this ES, with support from a competent project team (as set out in **Table 1.1**). The ES reports the outputs of the EIA process undertaken in accordance with The Town and Country Planning (EIA) Regulations 2017 (as amended)¹ (the 'EIA Regulations').
- 1.4 The ES, alongside a series of other application documents and plans, has been submitted to MCC and is available on MCC's website for viewing and downloading at the following link:
<https://pa.manchester.gov.uk/online-applications/>
- 1.5 Members of the public may comment via MCC, either in writing or through MCC planning portal website.

Manchester City Council

Town Hall Extension
Albert Square
Manchester
M2 5DB

Tel: 0161 234 4490
Email: building.control@manchester.gov.uk

Definition and Aims of EIA

- 1.6 EIA is defined by Regulation 4, Paragraph 1 of the EIA Regulations as "*a process consisting of:*

^a An existing student accommodation on-site (approximately 800 beds).

^b The Site for the purpose of the assessments in the EIA is larger than the planning site boundary, this is further explained in **Chapter 2: Approach to EIA** and **Chapter 4: Development Specification**.

(a) the preparation of an environmental statement;

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

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

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

(a) population and human health;

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

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

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

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

- 1.8 The aim of EIA, as defined by online national Planning Practice Guidance (PPG)² is:

“to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process. The regulations set out a procedure for identifying those projects which should be subject to an Environmental Impact Assessment, and for assessing, consulting and coming to a decision on those projects which are likely to have a significant environmental effect. The aim of EIA is also to ensure that the public are given early and effective opportunities to participate in the decision making procedures”.

- 1.9 The EIA Regulations do not require an ES to assess compliance with planning policy or guidance with respect to the Proposed Scheme. A **Planning Statement** has been prepared and submitted with the Application that examines the merits of the Proposed Scheme against relevant national and local planning policy. However, where planning policy has informed assessments within the ES (i.e. the level of effect or assessment methodology) this has been clearly referenced.

Legal Framework for the EIA

Overview of the EIA Process

- 1.10 The EIA Regulations require that prior to consent being granted, for certain types of development, an EIA must be undertaken. The EIA Regulations set out the types of development which must always be subject to an EIA (referred to as Schedule 1 development) and other development which may require an EIA, if they are likely to give rise to significant environmental effects (referred to as Schedule 2 developments). The EIA process for the Proposed Scheme is summarised below.

Stage 1: EIA Screening

- 1.11 The Proposed Scheme does not fall within the description of any projects listed within Schedule 1 of the EIA Regulations. However, the Proposed Scheme falls within the remit of the EIA Regulations as it meets the threshold/criteria within Schedule 2 10(b) (Urban development projects), as it includes more than 150 dwellings. The threshold/criteria do not determine the requirement for EIA but requires a subsequent stage to determine “whether the development is likely to have significant effects on the environment by virtue of factors such as its nature, size or location”. Given the characteristics of the Proposed Scheme and receiving environment (the Site), a number of potentially significant effects were identified and therefore an EIA has been undertaken.

Stage 2: EIA Scoping

- 1.12 In accordance with Regulation 15, Paragraph 1 of the EIA Regulations, a formal request for an EIA Scoping Opinion supported by an EIA Scoping Report (**Appendix 2.1**) was submitted to MCC on 29th January 2025.
- 1.13 An EIA Scoping Opinion (**Appendix 2.2**) was received from MCC on 7th April 2025. An agreed scope of assessment for individual technical topics is set out within **Technical Chapters 6 – 13**, respectively.
- 1.14 Further details of the Scoping process are provided within **Chapter 2: Approach to EIA**.

Environmental Statement (ES)

- 1.15 The findings of the EIA are presented in this ES which has been prepared in accordance with Regulation 18, Paragraphs 3 – 5 and Schedule 4 of the EIA Regulations, as well as PPG. An overview of the EIA procedure and methodology adopted throughout the ES is provided in **Chapter 2: Approach to EIA**. The specific methodology adopted for each technical topic is detailed within the respective **Technical Chapters 6 – 13**.
- 1.16 The ES is provided in four volumes:
- **Volume 1: Primary Report and Supporting Graphics** – providing the main text of the ES, which is divided into Chapters. Each environmental topic scoped in for assessment is detailed within the respective **Technical Chapters 6 – 13**.
 - **Volume 2: Technical Appendices to the Primary Report** – encompasses a range of technical reports which have informed the technical assessments presented in **Volume 1**.
 - **Volume 3: Environmental Management Plan** – provides a schedule of primary and tertiary mitigation considered an integral part of the Proposed Scheme and secondary mitigation identified through further assessment and reported within **Volume 1**. This acts as the checklist for all mitigation which is required to be implemented as part of the approved plans and planning conditions / obligations.
 - **Volume 4: Non-Technical Summary** – provides a summary of the ES in a non-technical language to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

- 1.17 The full suite of documents within **Volume 1: Primary Report and Supporting Graphics** and **Volume 2: Technical Appendices to the Primary Report** have been listed in the respective **Contents Page**.
- 1.18 **Appendix 1.1** provides a breakdown on the information required to be included within an ES as defined by Regulation 18, Paragraph 3 – 4 and Schedule 4 of the EIA Regulations, and where the respective information is located within this ES.

Project Team and Competent Expertise

- 1.19 Regulation 18, Paragraph 5(a) of the EIA Regulations requires the ES to be prepared by competent experts.
- 1.20 Turley have been responsible for the coordination, compilation and procedural review of the ES. The Institute of Environmental Management & Assessment (IEMA) has awarded Turley the EIA Quality Mark in recognition of our technical quality and commitment to improvement in practice.
- 1.21 All technical assessment has been undertaken by a suitably qualified project team (**Table 1.1**), inclusive of a thorough technical review to assure technical credibility, followed by a subsequent procedural review by the EIA coordination team and EIA Project Director.
- 1.22 A statement outlining the relevant expertise/qualification of the project team is provided as **Appendix 1.2**.



Table 1.1: Project team and their roles

Team Member	Role
Unite Students and Manchester Metropolitan University	Applicant
Cartwright Pickard	Architect
Cumming Group	Project Manager
Turley	Planning and EIA consultants. Technical Consultant for townscape and visual, built heritage, climate change, and socio-economics.
Heyda Ltd and Blackbird Acoustics	Technical consultant for noise and vibration
Arup	Technical consultant for wind microclimate and air quality
Delva Patman Redler LLP	Technical consultant for daylight, sunlight, and overshadowing

Application Documents and Plans

- 1.23 The ES is one of the documents submitted alongside the Application for the Proposed Scheme. For a full list of documents and plans and their planning status (i.e. for approval or supporting information), please refer to the **Planning Statement**.
- 1.24 A number of other documents and plans have been submitted for the Application that provide a greater level of detail on how the Proposed Scheme is likely to come forward, or how the Proposed Scheme complies with policy, or provide assessments for environmental topics for which no likely significant effects are considered to arise. Where information from these documents has informed the description of the Proposed Scheme upon which the ES is based, this is clearly stated within **Chapter 4: Development Specification**. However, they do not inform the assessment of likely significant effects and are not connected to the ES. These documents, each of which has been prepared by a technical expert, are submitted as standalone Application documents.

References

¹ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, SI 2017/517, as amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018, SI 2018/695.

² Ministry of Housing, Communities and Local Government [Online Tool]. Planning Practice Guidance Environmental Impact Assessment. Available at: <https://www.gov.uk/guidance/environmental-impact-assessment>.

2. Approach to EIA

Introduction

- 2.1 This Chapter sets out the approach and methodology that has been undertaken to complete the assessment of the likely significant environmental effects of the Proposed Scheme (as described in **Chapter 4: Development Specification** and supporting plans).
- 2.2 This Chapter sets out the following:
- Adoption and application of best practice within the EIA process;
 - Consultation, including a summary of the EIA Scoping process and stakeholder engagement;
 - The scope of the ES including the technical topics scoped in and out of the ES; and
 - Approach to the assessment of likely significant effects, specifically covering: consideration of the full extent of the development and the baseline environment; consideration of future baseline and receptors; identification of sensitive receptors; information to inform the assessment in the ES (development specification and detailed plans); quantum of development; massing and location; assessment scenarios; implementation of mitigation and monitoring; determining the level of effect and significance; limitations and assumptions; and EIA requirements at later stages.

Adoption of Best Practice

- 2.3 As confirmed within **Chapter 1: Introduction**, this ES meets the requirements set out in Regulation 18, Paragraphs 3 – 4 and Schedule 4 of the EIA Regulations¹.
- 2.4 In addition, the EIA (and therefore the ES) has been undertaken with due consideration of the following guidance documents:
- Ministry of Housing, Communities and Local Government, National Planning Practice Guidance (PPG) [Online]²; and
 - Institute of Environmental Management and Assessment (IEMA), Institute of Environmental Management and Assessment (IEMA) Impact Assessment Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction³.

Consultation

- 2.5 The following sections of this Chapter set out the consultation and engagement process that has been undertaken with stakeholders, consultees and the public, including through the EIA Scoping process that has been undertaken for the Proposed Scheme.

EIA Scoping

- 2.6 A request for an EIA Scoping Opinion, together with an EIA Scoping Report (**Appendix 2.1**), prepared in line with Regulation 15, of the EIA Regulations was submitted to MCC on 29th

January 2025. In response, MCC provided an EIA Scoping Opinion on 7th April 2025 (**Appendix 2.2**), supported by technical responses from consultees (both statutory and non-statutory) and other interested parties.

- 2.7 Where additional information or clarification was requested as part of the EIA Scoping Opinion, **Table 2.1** summarises the comments received and how these have been addressed within the ES. Full details of all comments received can be found in **Appendix 2.2**.
- 2.8 The scope of Cumulative Projects for cumulative assessment was also confirmed through the Scoping process. The full list of Cumulative Projects can be found in **Chapter 14: Assessment of Cumulative Effects**.
- 2.9 Whilst the EIA Scoping Report sought to establish the overall framework for the ES in relation to the environmental topics and likely significant effects, the Proposed Scheme and the strategies that underpin it have been refined or informed by further technical studies, modelling and analysis works and engagement with consultees. As a result, whilst the ES is based on the EIA Scoping Opinion, where the scope of the assessment proposed within the EIA Scoping Report has been altered or amended, this has been clearly identified within the Scope of Assessment section of **Technical Chapters 6 – 13**.
- 2.10 This is considered to be in accordance with paragraph 038 of PPG which states that: *“...where it becomes evident during the assessment process...that a particular environmental factor is absent or unlikely to be significantly affected by a proposed development, there should be no need for further assessment of that factor even if it was identified in the scoping process...”*
- 2.11 The EIA Scoping Opinion (**Appendix 2.2**) raised one question on topic breadth which is addressed in **Table 2.1** below. Therefore the topic breadth remains as reported in the EIA Scoping Report (**Appendix 2.1**).

Table 2.1: Summary of EIA Scoping Opinion Comments

Consultee	Summary of Comments	How / where the comment is addressed
MCC (Highways)	<i>“Whilst Highways agree that EIA assessment of the operational phase are not necessary due to the proposed parking provision at the site and accessible location, no evidence has been provided with regard to baseline surrounding traffic flows and daily construction vehicle movements in order to support scoping out of the construction phase. Further evidence is therefore requested by Highways, or should such data not be available at this stage, highways suggest that assessment of the construction phase is scoped into the EIA assessments, once further detail can be obtained on baseline traffic flows and construction vehicle numbers/routeing.</i> <i>Assessment should not only consider construction trip generation but also traffic redistribution impacts associated with any required traffic management/temporary road closures during the construction phase. Assessment should consider any required traffic management/temporary road closure impacts on pedestrians during the construction phase.”</i>	At the peak construction stage period it is estimated a maximum of 25 HGVs will attend Site with approximately 50 journeys per day. On average it is expected 18 HGVs will attend Site with approximately 36 journeys per day. All construction stage traffic would route from the A57 (M). Given the low increase in vehicles (less than 6 two-way movements per hour), the percentage increase would likely be less than 1%. A Construction Traffic Management Plan (CTMP) will be prepared by the principal contractor (when appointed) which will set out the proposed routing of construction traffic and measures to enforce such routing (i.e. signage). This will be agreed with MCC Highways. Overall, the construction vehicle movements are not considered to be of a level whereby they would result in significant traffic effects.
MCC Environmental Protection Officer	<i>“Noise assessments must also consider the operation of the proposed retail/commercial units and include deliveries/servicing.”</i>	Appendix 13.1 and Appendix 13.3 consider the noise from the proposed retail/commercial units, including deliveries/servicing.

Stakeholder and Public Engagement

- 2.12 The Project Team have undertaken technical consultation with relevant consultees to inform the scope, assessment methodology/approach and in some instances the outputs of baseline studies/surveys. The specifics of technical consultation are reported within **Technical Chapters 6 – 13**.
- 2.13 In addition, consultation with the public was undertaken from 29th January to 19th February, and included meetings with ward members; delivery of leaflets to site neighbours; hosting a dedicated project website; a public information drop in events; an online webinar and social media adverts. The environmental related comments raised and where these are considered within the ES are summarised in **Table 2.2**.

Table 2.2: Summary of Environment Related Public Feedback

Topic	General Comment	Relevant Technical Chapter
Affordability of new housing	<i>"Keep student accommodation affordable."</i>	Chapter 11: Socio-Economics and Human Health considers the provision of PBSA as an environmental effect.
Pedestrian access	<i>"Public right of way must be maintained."</i>	Chapter 4: Development Specification sets out pedestrian access arrangements.
Building height	<i>"32 and 24 stories is too high and will block out sunlight and sky."</i>	The height and massing of the building has been assessed in: Chapter 6: Townscape and Visual; Chapter 7: Built Heritage; Chapter 8: Wind; and Chapter 9: Daylight, Sunlight and Overshadowing.
High quality design / aesthetic improvement	<i>"The scheme should be high quality design with Net-Zero ambitions etc."</i> <i>"The current hall is an eyesore, the replacement looks really nice and I really like the landscaping proposal to green up the space."</i>	Chapter 4: Development Specification and the associated detailed plans set out the design of the Proposed Scheme. In terms of physical appearance, this has been assessed in Chapter 6: Townscape and Visual and Chapter 7: Built Heritage . The impacts on climate change have been assessed in Chapter 10: Climate Change .
Opposition to increased student numbers / Impact on local community	<i>"The overly dense scheme is increasing the density of students housed in the same area threefold."</i> <i>"There is already a disproportionate amount of student housing in the local area - adding more will further</i>	Chapter 11: Socio-Economics and Human Health considers the provision of PBSA as an environmental effect. Other socio-economic and human health effects related to the PBSA

Topic	General Comment	Relevant Technical Chapter
	<i>detract from having a stable, balanced community in the area."</i>	use were not considered to be significant (Appendix 2.1).
Impact on local infrastructure	<i>"The current infrastructure in the area is already overstretched, and this proposed development will only make this worse."</i>	Socio-economic and human health effects related to the PBSA use (and associated infrastructure) were not considered to be significant (Appendix 2.1).
Noise and antisocial behaviour	<i>"You don't care about the local community since you have moved in... children who can't sleep because your students party till 4.10 am."</i>	The effects of noise have been assessed in Chapter 13: Noise and Vibration .
Alternative development options	<i>"The existing buildings do need improving especially in terms of energy efficiency, had retrofit been considered as part of the site strategy?"</i>	The alternative considered are reported in Chapter 5: Consideration of Alternatives .

The Scope of the EIA

Technical Topics 'Scoped In'

2.14 Following the EIA Scoping exercise, the following technical topics and their associated likely significant environmental effects have been taken forward and assessed within the ES:

- Townscape and Visual (**Chapter 6**);
- Built Heritage (**Chapter 7**);
- Wind Microclimate (**Chapter 8**);
- Daylight, Sunlight, and Overshadowing (**Chapter 9**);
- Climate Change (**Chapter 10**);
- Socio-Economics and Human Health (**Chapter 11**);
- Air Quality (**Chapter 12**); and
- Noise and Vibration (**Chapter 13**).

2.15 The likely significant environmental effects considered within each technical topic are detailed within the relevant **Technical Chapters 6 – 13**.

Technical Topics 'Scoped Out' of the ES

2.16 As part of the EIA process, there are several technical topics and their associated environmental effects which are not considered to be significant and therefore 'scoped out' of the EIA. These are as follows:

- Archaeology;
- Biodiversity;
- Water Environment;

- Ground Conditions and Contamination;
- Transport and Access;
- Lighting;
- Major Accidents and/or Disasters; and
- Waste.

2.17 The evidence base to support ‘scoping out’ these technical topics is presented in the EIA Scoping Report (**Appendix 2.1**) and has been agreed as part of the EIA Scoping Opinion (**Appendix 2.2**). No further evidence is provided in the ES for scoping out these topics (with the exception of construction stage traffic, as set out in **Table 2.1**). Where mitigation informed the evidence base to ‘scope out’ the above topics, this has been captured within **Chapter 4: Development Specification** and/or **Volume 3: Environmental Management Plan**.

Approach to Assessment

- 2.18 This section outlines the approach to the assessment of likely significant environment effects adopted, as reported within this ES.
- 2.19 The exact methodology for the assessment of likely significant effects of the Proposed Scheme during the construction and operational stages is varied across each of the technical topics considered within the EIA, largely due to technical specific guidance and best practice. Therefore, each of the **Technical Chapters 6 – 13** specifically sets out the relevant technical assessment methodologies.
- 2.20 However, there are several aspects to the approach which require consistency across the ES. Where necessary, this is discussed below with the aim to identify any nuances and how these have been accommodated with the approach.

The Full Extent of Development and Consideration of the Baseline Environment

- 2.21 The boundary upon which baseline data has been collected (i.e. study areas) varies between the technical topics and therefore these are reported specifically within **Technical Chapters 6 – 13**. However, all study areas include the Site, as defined in the Site Location Plan shown on **Figure 1.1**. This represents the maximum extent of permanent and temporary development and associated works for which permission will be sought. The planning application boundary is slightly smaller than the boundary (the ‘Site’) used for the EIA. This is as a result of needed to include sufficient space for infrastructure (highways) / temporary works within the boundary assessed in the EIA (**Figure 1.1**) and public realm associated with the Proposed Scheme.
- 2.22 Schedule 4, Paragraph 3 of the EIA Regulations, states that an ES should include:
- “a description of the relevant aspects of the current state of the environment (baseline scenario)”.*
- 2.23 Likely significant effects as a result of the Proposed Scheme have been described in the ES in relation to the deviation from the baseline environment within the Site and / or relevant technical study areas.

2.24 The baseline environment comprises the prevailing existing environmental characteristics and conditions of the Site and relevant technical study areas. The establishment of this baseline is based upon, where relevant and necessary:

- Site visits and surveys;
- Desk-based studies;
- Review of existing site-specific information or public literature;
- Modelling;
- Review of relevant national and local planning policies; and
- Consultation with the relevant statutory consultees through the EIA process.

2.25 The baseline conditions for the purpose of the ES may vary dependent on the timing of the survey or the date when data sources have been accessed. All baseline conditions within **Technical Chapters 6 – 16** are based on data accessed or surveys conducted in 2024 and/or 2025, with the exception of those listed in **Table 2.3**.

Table 2.3: Summary of Baseline Adopted within Technical Chapters 6 – 13

Chapter	Data Collection Type	Timeframe
Chapter 6: Townscape and Visual	Initial desktop Baseline Townscape and Visual Appraisal	June 2024
	Site visit	June 2024
Chapter 7: Built Heritage	Site visit	May 2024
Chapter 8: Wind	Site Visit	June 2024
	Review of local wind climate	Autumn 2024
Chapter 9: Daylight, Sunlight, and Overshadowing	Point Cloud Survey	July 2024
Chapter 10: Climate Change	Baseline local and regional GHG emissions (Government's UK Local Authority & Regional CO ₂ Emissions Statistics)	2022
Chapter 11: Socio-Economics and Human Health	Desk-based study of publicly accessible socio-economic and human health data	February 2025
Chapter 12: Air Quality	Baseline data from existing sources / websites	Latest data available as of February 2025

Chapter	Data Collection Type	Timeframe
Chapter 13: Noise and Vibration	Baseline noise survey	July 2024, November and December 2024

- 2.26 This was confirmed as part of the EIA Scoping Report (**Appendix 2.1**) and subsequent EIA Scoping Opinion (**Appendix 2.2**).
- 2.27 Throughout the EIA, the origin of all third-party data, the dates of surveys and the dates when data sources have been accessed are clearly outlined within the relevant **Technical Chapters 6 – 13**, alongside any limitations or assumptions.

Consideration of the Future Baseline and Receptors

- 2.28 Schedule 4, Paragraph 3 of the EIA Regulations states that an ES should include:
- “...an outline of the likely evolution thereof (without implementation of the development) as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of availability of environmental information and scientific knowledge”*
- 2.29 As required by the EIA Regulations, the ES reports the future baseline scenario within each of the **Technical Chapters 6 – 13** and under a ‘do nothing’ scenario, which is further discussed in **Chapter 5: Consideration of Alternatives**. These discussions consider potential changes to the Site and study area assuming no further development and the continuation of the existing management regime.
- 2.30 As set out under ‘Approach to the Assessment Against a Consistent Baseline’, the assessments presented in the ES are largely based on the deviation from the existing baseline scenario (as future baseline conditions are presented for information purposes only). The ‘Assessment Scenarios’ section below specifies instances where there is a deviation from this approach.
- 2.31 Consideration has been given to future sensitive receptors of the Proposed Scheme (i.e. future residents) within a number of the Technical Chapters or supporting appendices, where applicable. Although the consideration of such receptors is not specifically required by the EIA Regulations, these receptors have been considered to provide certainty to MCC that the Proposed Scheme is unlikely to create future issues when operational. As such future receptors have been considered within the following Technical Chapters/documents, with further details of the specific receptors being assessed set out within the respective Chapter/document:
- **Chapter 8: Wind Microclimate;**
 - **Chapter 11: Socio-Economics and Human Health;**
 - **Chapter 12: Air Quality; and**
 - **Chapter 13: Noise and Vibration.**

Identification of Sensitive Receptors

- 2.32 Schedule 4, Paragraph 4 of the EIA Regulations states that an ES should include:

“a description of the factors specified in Regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora); land (for example land-take), soil, (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaption), material assets, cultural heritage, including architectural and archaeological aspects, and landscape”

- 2.33 Consistent with the EIA Regulations, the identification of the aspects of the environment likely to be significantly affected by the Proposed Scheme has been identified and set out within the ‘Sensitive Receptors’ section of each **Technical Chapters 6 – 13**. These are summarised in **Table 3.1** in **Chapter 3: Site Context**.

Information to Inform the Assessment in the ES

- 2.34 As indicated in **Chapter 1: Introduction**, the Application is detailed in nature.
- 2.35 The ES is required to provide sufficient information about the Proposed Scheme to meet the requirements of the EIA Regulations and to ensure that MCC can reasonably be satisfied that they have sufficient information of the likely significant environmental effects of the Proposed Scheme.
- 2.36 The assessments undertaken as part of the EIA and reported in this ES are based on **Chapter 4: Development Specification** and Detailed Plans (**Figure 4.1 – 4.48**) which contains all information required to inform the EIA in a single location.

Quantum of Development

- 2.37 The quantum of development, set out in detail in **Chapter 4: Development Specification**, is an upper limit to represent the possible development that will come forward and has been a key parameter used to assess likely significant environmental effects. This has informed the assessment for the following topics:
- **Chapter 10: Climate change;**
 - **Chapter 11: Socio-economics and human health;**
 - **Chapter 12: Air Quality;** and
 - **Chapter 13: Noise and Vibration.**

Massing and Location

- 2.38 The scale and location of development as defined on the Detailed Plans (**Figure 4.1 – 4.48**) and described in **Chapter 4: Development Specification** are the key parameters used to assess likely significant environmental effects for the following topics:
- **Chapter 6: Townscape and Visual;**
 - **Chapter 7: Built Heritage;**
 - **Chapter 8: Wind;**
 - **Chapter 9: Daylight, Sunlight, and Overshadowing;** and

- **Chapter 13: Noise and Vibration.**

Assessment Scenarios

- 2.39 In accordance with the EIA Regulations, the EIA has assessed the likely effects arising from the Proposed Scheme, taking account of demolition, site preparation / enabling works, earthworks, remedial works and construction (collectively referred to as ‘construction’) and operational stages.
- 2.40 The following key scenarios have been assessed where relevant to each environmental topic (and likely significant effects):
- Peak construction – this varies across environmental topics and has not been attributed to a specific year, rather it is determined at what point the worst-case effect could occur for each topic; and
 - Operation – this considers environmental effects associated with the full operation of the Proposed Scheme, once completed.
- 2.41 All scenarios (with the exception of the below) have been considered against the existing baseline conditions as defined above (see ‘Approach to the Assessment Against a Consistent Baseline’).
- 2.42 **Chapter 12: Air Quality** assesses the peak construction year (2026) against a future 2026 ‘do nothing future baseline scenario’.

Implementation of Mitigation and Monitoring

- 2.43 Schedule 4, Paragraph 7 of the EIA Regulations states that an ES should include:
- “a description of the measures to avoid, prevent, reduce, or if possible offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover construction and operational phases.”*
- 2.44 Regulation 26 states that when determining an application consideration should be given to ‘whether it is appropriate to impose monitoring measures’ including the parameters to be monitored and the duration of the monitoring.
- 2.45 In accordance with IEMA Guidance and the EIA Scoping Report (**Appendix 2.1**), three types of mitigation have been identified and used within the ES, comprising;
- **Primary:** modifications to the location or design of the Proposed Scheme made during the pre-application stage that are an inherent part of the project;
 - **Secondary:** actions that will require further activity in order to achieve the anticipated outcome. These would be included within the ES following the assessment of effect, under the ‘Secondary Mitigation or Enhancement’ section, before the reporting of the ‘residual’ effects. It is anticipated that such measures would be secured by condition or planning obligation; and

- **Tertiary:** actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects. There needs to be confidence that these will be implemented, and they need to be specific with a clear timescale for implementation and responsibility.
- 2.46 Primary and tertiary mitigation measures are considered as part of the Proposed Scheme and are set out in **Chapter 4: Development Specification**.
- 2.47 **Technical Chapters 6 – 13** have considered relevant primary and tertiary mitigation for both the construction and operational stages prior to undertaking their assessment of likely significant effects. Following the conclusion of effects based on the Proposed Scheme (inclusive of primary and tertiary mitigation) any further mitigation measures or monitoring arrangements have been identified (i.e. secondary mitigation).
- 2.48 The application of secondary and tertiary mitigation is only considered appropriate if there is a high level of confidence in the mechanism for implementation (by the Applicant or third party).
- 2.49 The primary, tertiary and secondary mitigation measures identified through the EIA process (including mitigation set out in the EIA Scoping Report (**Appendix 2.1**) and **Technical Chapters 6 – 13**) are set out in **Volume 3: Environmental Management Plan**.

Determining Level of Effect and Significance

- 2.50 A four-step approach has been adopted to define effects. The four steps comprise the following, which are discussed further below:
- Step 1: Define environmental sensitivity;
 - Step 2: Define magnitude of change;
 - Step 3: Define level of effect; and
 - Step 4: Conclude on significance.
- 2.51 The method for assessing the level of effect has varied between technical topics but in principle has been based on:
- The environmental sensitivity (or value / importance etc., as appropriate to the environmental topic) of a receptor or receiving environment to change, including aspects such as adaptability, tolerance or recoverability; and
 - The magnitude of change (or impact) from the baseline conditions, including aspects such as probability / likelihood of occurrence, geographical extent, complexity, duration, frequency and reversibility (i.e. temporary and permanent).
- 2.52 Sensitivity (or value/importance etc.) has been assessed on a scale of high, medium, low and negligible and magnitude of change on a scale of large, medium, small and negligible. Where deviations from these scales is required to meet specific technical guidance, this is outlined, where relevant, in **Technical Chapters 6 – 13**.

- 2.53 Other factors such as feedback from stakeholders, relevant legislation, international / national / regional / local standards and guidance and the inter-relationship between effects (both cumulatively and in terms of potential effect interactions) have also been considered, where appropriate.
- 2.54 The assignment of the level of effect has been based on professional judgement and the matrix below (**Table 2.4**) is intended to be a tool to assist with the process. Whilst the matrix provides ranges, this is to guide the competent expert and a definitive assessment of level of effect has been provided for each effect.

Table 2.4: Matrix to support determining the level of effect

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

- 2.55 The level of effects has been classified on a scale of major, moderate, minor, or negligible, with each effect being either adverse or beneficial^a. **Technical Chapters 6 – 13** provide clear definitions for each level of effect, based on technical guidance or professional judgment.
- 2.56 For some specific environmental topics, guidance on the nature of the effect requires that differing criteria or scales for determining level of effect are to be used. Where this is the case, this is set out in **Technical Chapters 6 – 13**. However, there has been consistency of terminology and conclusions to tie in with the above matrix. This ensures that the conclusions of the different effects can be compared during the decision-making process and robustly considered within the cumulative effects assessment (see **Chapter 15: Assessment of Cumulative Effects**).
- 2.57 A conclusion has then been provided as to whether the effect is ‘Significant’ or ‘Not Significant’ based on professional judgement. As such, significance has only been concluded for residual effects (i.e. following the application of ‘Secondary Mitigation or Enhancement’ measures).
- 2.58 Effects have also been described in line with the requirements of the EIA Regulations (i.e. as direct or indirect, short / medium / long-term and temporary or permanent).
- 2.59 **Technical Chapters 6 – 13** provide a summary of effects table, which outlines the effects assessed, associated sensitive receptors, residual effects and whether the effect is ‘Significant’ or ‘Not Significant’.

^a **Chapter 6: Townscape and Visual** also includes the ‘neutral’ category, to align with guidance.

- 2.60 Cumulative effects have been considered as a single co-ordinated assessment (**Chapter 15: Assessment of Cumulative Effects**).

Limitations and Assumptions

- 2.61 Schedule 4, Paragraph 6 of the EIA Regulations state that an ES should include:

“...details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the require information and the main uncertainties involved”

- 2.62 Where **Technical Chapters 6 – 13** experience limitations or are based on assumptions these have been clearly identified within the relevant chapter.

EIA Requirements at Later Stages

- 2.63 The ES has identified and assessed likely significant effects based on the information outlined above. This has ensured that all likely significant effects have been assessed and will inform the determination of the planning application, in accordance with PPG.
- 2.64 Should there be a change to the information outlined above or quantum and details, there may be a requirement to Screen any subsequent application to determine any likely significant effects on the environment not previously identified. Any EIA Screening Report and associated assessments will then be undertaken as required, at that stage.
- 2.65 Should a Section 73 application be required, this would be considered in the same way as a new planning application and it is likely that an EIA Scoping Report would be required to ‘scope’ the likely significant effects of the proposed change which would enable an ‘ES Supplement’ to be submitted alongside this ES. The approach will be guided by the time between the preparation of this ES and any Section 73 application.

References

¹ Her Majesty's Stationery Office (2017) The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 SI 2017/517 (as amended by the Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018, SI 2018/695). Available at <http://www.legislation.gov.uk/uksi/2017/517/contents> and <https://www.legislation.gov.uk/uksi/2018/695/contents/made> [Accessed: 02/08/2024].

² Planning Practice Guidance (PPG) – Guidance: Environmental Impact Assessment, Paragraph: 002 Reference ID: 4-002-20140306. Available at: <https://www.gov.uk/guidance/environmental-impact-assessment> [Accessed: 08/06/2024].

³ IEMA (2024). Impact Assessment Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction. Available at: <https://www.iema.net/media/oone2qce/iema-mitigation-in-eia-guidance-final.pdf> [Accessed: 05/02/2025].

3. Site Context

- 3.1 This Chapter aims to provide a high-level overview of the existing Site characteristics and the surrounding area and identifies the sensitive receptors considered in the EIA. A high-level description of the Site has been provided in this Chapter. The relevant detailed baseline characteristics of the Site and the surrounding area in relation to the technical topics 'scoped into' the EIA are considered within the relevant Chapter (**Technical Chapters 6 – 13**). A summary of the sensitive receptors included in **Technical Chapters 6 – 13** is included in **Table 3.1**.
- 3.2 The baseline characteristics for the technical topics 'scoped out' of the EIA and which are not reported in the ES are provided in the EIA Scoping Report (**Appendix 2.1**).

Location and Setting

- 3.3 The Site (**Figure 1.1**) is approximately 1.29 ha, and is located in the administrative area of MCC.
- 3.4 The Site is bound by buildings along Boundary Street West to the south; A5067 Higher Cambridge Street to the west; buildings along Higher/Lower Chatham Street to the east; and the Manchester Metropolitan University Business School to the north.
- 3.5 The wider surrounding area comprises:
- To the north by the A57(M) Mancunian Way, student accommodation buildings and university premises, and the wider City Centre located to the north of the A57(M) motorway;
 - To the west (beyond the A5067 Higher Cambridge Street) lie further PBSA premise, as well as residential and commercial buildings;
 - To the south includes buildings / educational facilities associated with Manchester Metropolitan University and a PBSA; and
 - To the east lie further educational facilities and public realm associated with All Saints Park, beyond which lies Oxford Road.
- 3.6 The Site currently comprises Cambridge Halls, an existing, operational student accommodation development of approximately 800 beds with private courtyard areas and landscaping. There are limited parking spaces on-Site, with parking spaces being limited to disabled bays and spaces for members of staff / delivery drivers.

Identification of Sensitive Receptors

- 3.7 **Table 3.1** lists the sensitive receptors at which likely significant effects may occur and their relationship to the aspects of the environment outlined in Schedule 4. These are assessed within **Technical Chapters 6 – 13**.

Table 3.1: Sensitive Receptors Identified for Assessment in this ES

Chapter	Sensitive Receptors Identified for Assessment in this ES	Schedule 4 'factor'
Chapter 6: Townscape and Visual	Local Townscape Character Area 1 – Universities Area	Landscape
	Open Space Users in All Saints Park	Population and Human Health
	Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W)	
	Residents of the Student Accommodation located adjacent the western Site boundary	
Chapter 7: Built Heritage	Grade II listed buildings: Former Manchester Ear Hospital Roman Catholic Church of St Augustine Ormond Building Righton Building Grosvenor Building Former Town Hall Façade to Mabel Tylecote Building Non-designated heritage asset: Salutation Public House	Cultural Heritage
Chapter 8: Wind	Pedestrians and cyclists in external public areas on-Site and in the immediate surroundings	Population and Human Health
Chapter 9: Daylight, Sunlight and Overshadowing	Cavendish Hall of Residence (part Ormand Building) Victoria Hall Needham Court Manchester House 44 Cavendish Street 2-28 Dalesman Walk 84 Cambridge Street Cambridge House 2-12 Elmdale Walk 2-12 Broomwood Walk 2-12 Maltham Walk 2-24 Knowles Place 60-70 Loxford Street Loxford Gardens	Population and Human Health

Chapter	Sensitive Receptors Identified for Assessment in this ES	Schedule 4 'factor'
	Manchester Metropolitan University Cavendish Hall of Residence	
Chapter 10: Climate Change	Global Climatic System	Climate
Chapter 11: Socio-Economics and Human Health	Labour force Students requiring accommodation	Population and Human Health
Chapter 12: Air Quality	Existing and proposed sensitive receptors close to roads affected by changes in traffic flows Existing sensitive receptors include; four residential properties, New Medlock House Student Halls, Cambridge House Student Halls, Faculty of Business and Law, Element Manchester Student Halls, Manchester House Student Halls, Opal Hall Student Halls, Faculty of Science and Engineering, Student Union, Cavendish Student Halls, School of Digital Arts, Manchester Law Building, and Institute of Sport Building	Population and Human Health
Chapter 13: Noise and Vibration	Residential dwellings Existing Purpose-Built Student Accommodation residences along Cambridge Street (A5067) Manchester Metropolitan University educational buildings Future users of the Proposed Scheme	Population and Human Health

4. Development Specification

Introduction

4.1 This Chapter provides a description of the Proposed Scheme, including a description of how the Proposed Scheme would be constructed and its timescales. This description, together with the supporting spatial plans within the ES, form the basis for the technical assessments presented in **Technical Chapters 6 – 13**.

4.2 The Proposed Scheme is described as:

“Demolition of existing halls of residence and erection of two buildings of 30 and 24 storeys above ground, plus basement and rooftop plant levels, comprising purpose-built student accommodation with internal and external rooftop communal amenity space (Sui Generis). Ground floor commercial and community uses (Flexible Use Classes E, F1 or F2). Hard and soft landscaping and associated highway works.”

4.3 All temporary and permanent works will take place within the Site boundary, as shown on **Figure 1.1: Site Location Plan**. The planning application boundary is slightly smaller than the Site boundary used for the EIA. This is as a result of needed to include sufficient space for infrastructure (highways) / temporary works within the boundary assessed in the EIA (**Figure 1.1**) and public realm associated with the Proposed Scheme.

4.4 The description of the completed project should be read in conjunction with the supporting detailed plans, as follows:

- **Figure 4.1 Floor Plan – Basement;**
- **Figure 4.2: Floor Plan - Ground Floor;**
- **Figure 4.3: Floor Plan - Level 01;**
- **Figure 4.4: Floor Plan - Level 02;**
- **Figure 4.5: Floor Plan - Level 03;**
- **Figure 4.6: Floor Plan - Level 04;**
- **Figure 4.7: Floor Plan - Level 05;**
- **Figure 4.8: Floor Plan - Level 06;**
- **Figure 4.9: Floor Plan - Level 07;**
- **Figure 4.10: Floor Plan - Level 08;**
- **Figure 4.11: Floor Plan - Level 09;**
- **Figure 4.12: Floor Plan - Level 10;**

- **Figure 4.13: Floor Plan - Level 11;**
- **Figure 4.14: Floor Plan - Level 12;**
- **Figure 4.15: Floor Plan - Level 13;**
- **Figure 4.16: Floor Plan - Level 14;**
- **Figure 4.17: Floor Plan - Level 15;**
- **Figure 4.18: Floor Plan - Level 16;**
- **Figure 4.19: Floor Plan - Level 17;**
- **Figure 4.20: Floor Plan - Level 18;**
- **Figure 4.21: Floor Plan - Level 19;**
- **Figure 4.22: Floor Plan - Level 20;**
- **Figure 4.23: Floor Plan - Level 21;**
- **Figure 4.24: Floor Plan - Level 22;**
- **Figure 4.25: Floor Plan - Level 23;**
- **Figure 4.26: Floor Plan - Level 24;**
- **Figure 4.27: Floor Plan - Level 25;**
- **Figure 4.28: Floor Plan - Level 26;**
- **Figure 4.29: Floor Plan - Level 27;**
- **Figure 4.30: Floor Plan - Level 28;**
- **Figure 4.31: Floor Plan - Level 29;**
- **Figure 4.32: Floor Plan - Roof;**
- **Figure 4.33: Site Elevation – South West – Cambridge Street;**
- **Figure 4.34: Site Elevation – North East – Chatham Street;**
- **Figure 4.35: Site Elevation – South East & North West Boundary St & Service Road;**
- **Figure 4.36: Site Elevation – Link;**
- **Figure 4.37: Site Elevation – South West & North East Cambridge St & Chatham St;**

- **Figure 4.38: Site Elevation – South East & North West Boundary St West & Service Rd;**
- **Figure 4.39: Section AA;**
- **Figure 4.40: Section BB;**
- **Figure 4.41: Section CC – Phase 01;**
- **Figure 4.42: Section DD – Phase 01;**
- **Figure 4.43: Section EE – Phase 02;**
- **Figure 4.44: Section FF – Phase 02;**
- **Figure 4.45: Section GG – Phase 02;**
- **Figure 4.46: Landscape General Arrangement;**
- **Figure 4.47: Roof Podium General Arrangement; and**
- **Figure 4.48: Demolition Plan.**

The Completed Project

Land Use Classes and Maximum Quantum

4.5 The Proposed Scheme is for the following use classes and quantum:

- Purpose built student accommodation (Use Class Sui Generis) – 2,302 units;
- Retail (Use Class E) – 615m²; and
- Community or education (Use Class E, F1 or F2) – 850m².

4.6 In Phase 1, the bed spaces will be 97% cluster and 3% studios. In Phase 2, the bed spaces will be 37% cluster, 34% dorm room, 14% post-graduate cluster and 15% studios. Typical arrangements are set out within **Figures 4.3 – 4.31**.

4.7 Other supporting uses are also proposed, which are ancillary to the student accommodation use. These areas will include kitchens, laundry, study rooms, club/games rooms, gym, sports and wellness facilities, lounge, and support rooms.

4.8 The Proposed Scheme includes for one small basement in the north west of Phase 2. This contains the commercial sprinkler and pump room.

Layout / General Arrangement

4.9 Built form of the Proposed Scheme will be across two distinct plots of buildings (Phase 1 in the south of the Site and Phase 2 in the north of the Site), with height increasing to the north east corner in each building plot.

- 4.10 Phase 1 will provide retail use on the Ground Floor (**Figure 4.2**) with student accommodation and ancillary uses on Levels 01 to 22 (**Figures 4.3 – 4.20**). A courtyard will be provided within the centre of the building.
- 4.11 Phase 2 will provide for community use on the Ground Floor and Level 01. Towards the centre of the building a central kitchen will be provided (**Figure 4.2**) with breakout seating connecting to an external amenity space. Levels 01 to 28 of Phase 2 will provide for student accommodation and ancillary uses (**Figures 4.3 – 30**).
- 4.12 Between the two building plots will be a central area of public realm, accessible from Higher Chatham Street to the west and Cambridge Street to the east of the Site.

Heights

- 4.13 Built form will be based on two distinct plots of buildings across the EIA Boundary of varying heights from 8 to 30 storeys above the plinth to break down massing. Two key towers, one in each plot, will be a maximum of 24 and 30 storeys (plus rooftop plant) respectively. The maximum building height on Site will be up to 111.725m AOD for Phase 1 and 129.275m AOD for Phase 2.

Building Materials

- 4.14 The building will be constructed of the following materials:
- Red grit blast precast concrete;
 - Light red acid etched precast concrete;
 - Taupe acid etched precast concrete;
 - Green/aggregate grit blast precast concrete;
 - Silver anodic PPC aluminium and coloured green and red anodic PPC aluminium to metalwork at ground and first floors;
 - Bespoke perforate silver anodic PPC aluminium.
- 4.15 The Proposed Scheme will not contain large areas of glass, with the façade being broken into small, recessed glass elements.

Operational Access Arrangements

- 4.16 Vehicular access to the Site for vehicles associated with goods servicing, taxi drop off and refuse collection is expected to be taken from Higher Chatham Street and Lower Chatham Street, subject to agreement with MCC.
- 4.17 Drop off / pick up on move in and out days will be from Lower Chatham Street and Higher Chatham Street.
- 4.18 Priority pedestrian access will be from Lower Chatham Street and Higher Chatham Street, which will benefit from streetscape landscaping improvements. Access will be off Higher Cambridge Street to commercial and community land uses.

- 4.19 The existing cycle thoroughfare within the Site (along the Cavendish Street alignment) will remain closed and be re-routed during the operational stage as part of the University's wider masterplan aspirations to re-route cycle movements onto Boundary Street West and Rosamond Street. Pedestrian access on this route will be maintained.
- 4.20 There may be additional traffic movements on specific days of the year when students arrive / depart at the beginning and end of term. The Applicant will have a management plan in place on these days to help control the movement of vehicles around the area to minimise the potential for any disruption to the operation of the highway.

Parking Provision

- 4.21 There will be no provision for parking on-site. Provision for disabled parking will be provided on Higher Chatham Street Lower Chatham Street, providing access through the Site from Higher and Lower Chatham Street.

Landscaping and Biodiversity

- 4.22 Open space will be provided on the ground floor and Floor 01 (**Figure 4.2** and **Figure 4.3**) through the provision of 2 green courtyards, a central green space with private and public amenity areas and a tree and ornamental shrub planted building curtilage with high quality new surfacing that is open to the public. The spaces will include biodiverse planting include species that attract pollinators and offer seasonal variety, high quality surface materiality and street furniture to accommodate different user types.
- 4.23 Open space will be provided on Level 07 (**Figure 4.47**) of both phases. This will include raised planters with opportunity for 'grow your own' spaces, diverse mixed ornamental planting, a range of spaces for private and group study and the opportunity to access sunlight, away from street level and overshadowing.
- 4.24 Also provided on the Level 07 roof terraces, will be areas dedicated to student wellness and an active lifestyle, including MUGA sports pitches, outdoor calisthenics spaces and a running track, responding to the active use spaces within the building.

Operational Hours

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

Lighting Strategy

- 4.26 The Proposed Scheme will include lighting at accesses, pedestrian routes, and for the operation of the buildings.
- 4.27 All future lighting installations will be designed and installed in line with relevant standards and guidance, including CIE 150: 2017 – Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition; ILP GN01 - Guidance Notes for the Reduction of Obtrusive Light 2021; BS EN 12464 – 2 2014 – Outdoor Work Spaces; LG 6 (CIBSE) – The Exterior Environment 2016; and ILP Guidance Note 08/18 Bats and Artificial Lighting in the UK.

Building Safety

- 4.28 The required emergency producers/practices (i.e. Fire Emergency Evacuation Plan (FEEP)) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for the uses as part of the Proposed Scheme will be in place. In addition, the buildings will be designed, in line with Building Regulations Approved Document B: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law.
- 4.29 The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design. Site management measures (including appropriate lighting and digital entry systems at each building) will be implemented to ensure that the potential for crime and anti-social behaviour is minimised, and the Proposed Scheme will have on-site security staff present 24 hours a day.
- 4.30 There will be a diesel generator for the secondary supplies to firefighting lifts and smoke extract fans and diesel pumps for a wet risers and commercial sprinklers. These will require routine testing and maintenance for one hour a month.

Surface Water Drainage Strategy

- 4.31 The proposed surface water drainage will not increase the runoff rate and will include an allowance for climate change in accordance with relevant guidance. Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage network, in accordance with CIRIA 753 – The SuDS Manual where practical. Specifically, the following measures are proposed:
- Implementation of sustainable drainage features such as raingardens, blue roofs, tree pits etc;
 - Ensuring adequate elevation of critical infrastructure on or below ground floor level;
 - Ensure proposed external falls don't fall towards the building entrances/ exits;
 - The drainage strategy will reduce surface water runoff to 50% of the current brownfield runoff rate, incorporating a 45% allowance for climate change during a 100-year return period rainfall event; and
 - Provision of surface water storage to meet local authority requirements, which will be agreed with Lead Local Flood Authority at the next design stage.

Foul Water Strategy

- 4.32 The Site is located in the Manchester City Centre where the foul sewer network is very likely to have a capacity for new development. This will be confirmed with United Utilities as the design progresses and foul demand estimates have been provided by the design team. At this stage, it is expected that the development will reuse existing foul drainage gravity connections.

- 4.33 Damage to the existing sewers are unlikely due to offsets set out by United Utilities and Building Regulations (H4) being implemented by the design team to ensure the condition is reviewed and impacts minimised as part of the Proposed Scheme.

Potable Water Strategy

- 4.34 The United Utilities Water Resources Management Plan¹ states that there is forecasted to be a surplus of water available from 2020 – 2040, with a very small deficit occurring from 2041 – 2045. This accounts for future economic and population growth and climate change. A resilience risk is identified for Manchester, associated with numerous single points of failure on the regional aqueduct system which supplies Manchester. Following identification of this risk, United Utilities have identified five solutions to remove this risk, with the option of rebuilding all tunnel sections, the preference which is included in their plan.
- 4.35 Once utility information has been obtained, further review of connection to local potable water network will be undertaken. Risk to contamination to the potable water supply is low as a standard water connection will be undertaken following the New Roads & Street Works Act 1991.
- 4.36 The Proposed Scheme will include water saving measures such as water saving fixtures and fittings to reduce water consumption and will target 7 BREEAM credits, including:
- Wat 01 (3 credits) comparable to a 40% improvement over the BREEAM “base-building”;
 - Wat02 – Water monitoring (1 credit);
 - Wat03 – Leak detection system (1 credit) and flow control devices (1 credit); and
 - Wat04 – Water efficient equipment (1 credit).

Energy Strategy

- 4.37 The energy strategy for the Proposed Scheme will follow a fabric-first approach, following the energy hierarchy to ensure the energy demand has been reduced through passive design measures. The scheme will incorporate renewable technology which includes the use of Air Source Heat Pumps for domestic hot water, and photovoltaic panels for onsite energy generation. The energy strategy proposes an entirely fossil fuel free approach with a 6% carbon reduction over Part L 2021, in alignment with the Manchester Local Plan.
- 4.38 A sample of units which are considered the highest risk in the buildings will undergo overheating assessment in line with the requirements of Part O of the Buildings Regulations in order to assess and reduce the risk of summer overheating by taking into account future climate scenarios.

Waste Arisings and Strategy

- 4.39 British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice² suggests that the weekly waste arisings from a ‘domestic’ use is equal to the number of dwellings x [(70 litres x average number of bedrooms) +30]. The number of dwellings has been assumed to be the number of PBSA units, and therefore the average number

of bedrooms is taken to be one. On this basis the Proposed Scheme would be considered to generate approximately 230,200 litres (l) (circa 230.2m³) a week, approximately 11,970,400l (circa 11,970.4m³) per annum (assuming 52 weeks per year). It should be noted that this does not take account of any waste arising reused, recycled or diverted from landfill by another means.

- 4.40 The project types considered within BS 5906:2005 do not align with all aspects of the Proposed Scheme. In order to generate an estimate of waste generation for the non-PBSA uses, the 'entertainment complex / leisure centre' project type has been used. For this project type, the weekly waste arisings are volume per m² of floor area [100 l] x floor area. This would generate approximately 146,500 (circa 146.5m³) a week, approximately 7,618,000l (circa 7618m³) per annum (assuming 52 weeks per year).
- 4.41 This results in a total annual waste generation of approximately 19,588,400l (circa 19,588.4m³).
- 4.42 It should be noted that this does not take account of any waste arising reused, recycled or diverted from landfill by any other means.
- 4.43 The Proposed Scheme has been designed in order to take account of appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling. In addition, all waste storage/handling facilities have been designed in accordance with British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice.

Resilience to Climate Change

- 4.44 The evolving climate has been considered throughout the design of the Proposed Scheme. The evolving climate can include an increase in mean summer and winter temperatures; increase in annual precipitation; decrease in mean summer precipitation; and extreme weather events. The following key climate resilience measures are integral to the Proposed Scheme:
 - Water saving measures as set out under the 'Potable Water Strategy' section above;
 - The Proposed Scheme will be designed in accordance with current guidance and best practice, and this will include the consideration of changing climate on stability of the ground conditions, influencing foundation design as necessary;
 - The Proposed Scheme includes for planting of trees, green infrastructure and landscaping which will enhance the biodiversity of the Site, mitigating the anticipated impacts of climate change in accordance with the England Biodiversity Strategy³ and Natural England Climate Change Adaptation Manual⁴;
 - A sample of units in buildings will undergo overheating assessment in line with the requirements of Part O of the Buildings Regulations⁵ in order to assess and reduce the risk of summer overheating by taking into account future climate scenarios. Where measures are provided to reduce the risk of overheating, this will be done in accordance with the cooling hierarchy. Potential measures to be considered will include:

- Limited glazing area and recessed windows to provide reduction in solar gain, alongside optimised g-values;
- Exposed thermal mass to be explored;
- Passive ventilation via openable windows; and
- Mechanical ventilation for night purge ventilation and free cooling.

Construction of the Proposed Scheme

Construction Programme and Phasing

- 4.45 Demolition is anticipated to commence in Q4 2025, with the construction being completed over 5 years. The Proposed Scheme will be delivered across two phases, with the first phase of construction commencing in Q3 2026 and completed by 2029 and the second phase completed by 2030 (the second phase construction is due to commence in Q2 2027). It is assumed that the Proposed Scheme will be fully operational in 2030.
- 4.46 Construction works are anticipated to comprise the following key stages, broadly in chronological order:
- Site securement;
 - Formation of construction access(s) and temporary construction compound (within the Site);
 - Site preparation works, including clearance works, demolition, utilities diversions (where appropriate), provision of retained features, etc.;
 - Works to the access junctions, including temporary closures/diversions (where required);
 - Excavation, earthworks, levels and material management;
 - Construction of buildings and associated infrastructure (i.e. services and plant); and
 - Implementation of proposed landscaping, lighting, internal and external finishing.
- 4.47 Where appropriate, these activities are discussed in further detail below. Where assumptions have been made these have been clearly stated.
- 4.48 A commitment has been made to a number of environmental mitigation measures (as set out within **Table 4.1**) to be adopted throughout the construction stage, intended to be secured and managed through a Construction Environmental Management Plan (CEMP).

Site Securement

- 4.49 Site securement will be achieved through a combination of secure fencing, barriers and 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 if appropriate.

Construction Access and Vehicle Movements

- 4.50 Access during the demolition, enabling and construction stage will be from Higher Chatham Street, where footway and road narrowing and/or lane closures may be required. Any highway or footway narrowing or closures will be agreed with MCC Highways in advance. Access to adjacent properties (i.e. St Augustine's Church, Business School and Cavendish Hall) will be maintained throughout the construction stage.
- 4.51 It has been estimated that during the construction stage that at the peak construction period a maximum of 25 HGVs will attend site with approximately 50 journeys per day. On average it is expected 18 HGVs will attend the Site with approximately 36 journeys per day.
- 4.52 A Construction Traffic Management Plan (CTMP) will be prepared by the principal contractor (when appointed) which will set out the proposed routing of construction traffic and measures to enforce such routing (i.e. signage). This will be agreed with MCC Highways.

Construction Compound

- 4.53 During construction, either a central compound and/or a number of satellite compounds will be required for the contractor and appointed subcontractors. The exact location of the construction compound(s) is unknown at this time, but it will be within the Site.
- 4.54 It is assumed that the principal contractor will identify the proposed compound locations within a Site Layout Plan as part of a CEMP (**Table 4.1**) for submission and approval by MCC prior to commencement of construction activities on-site.

Temporary Drainage Strategy

- 4.55 The Principal Contractor will be responsible for managing storm water run-off and foul water effluent generated during the temporary construction stage (including water arising from excavations, rainfall, exceedance and staff welfare). Management of this water may include the re-use of the existing channels, gullies and outlets, construction in part of the final development drainage system or by providing temporary connections into the existing public sewer network. All connections will require approval from MCC and the local sewerage undertaker prior to implementation.
- 4.56 A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)⁶ and BS8582:2013 Code of practice for surface water management for development sites⁷) will be required to be established on Site by the contractor to control and manage surface water run-off. This will include the installation of a temporary drainage system to collect and contain run-off including any discharge agreements with the local sewer authority. It may also be necessary to

introduce perimeter cut off drains to prevent overland run-off and additional interceptors for pollution and debris collection.

Utilities Strategy

- 4.57 Given the existing use of the Site, the existing utilities will be utilised to serve the Proposed Scheme. Utilities may require upgrading and re-routing to facilitate the increase in massing of the Proposed Scheme. Any diversion or reinforcement of utilities will happen as part of the enabling works and any off-site works will be the responsibility of the utility provider.
- 4.58 Any utilities requiring diversion, stopping up or temporary relocation will be undertaken in line with an agreed strategy with the relevant district network operators.

Features for Retention / Removal

- 4.59 The existing Cambridge Halls student accommodation is currently on the Site and therefore demolition and site clearance works will be required for the Site. All buildings on the Site will be demolished with all other features to be removed. Utilities (where applicable) and below-ground services / structures (where applicable) will be retained.
- 4.60 The demolition of the buildings will likely comprise the following general practices:
- Internal 'soft-strip' exercise, with all waste arisings removed from the building and segregated into allocated skips for appropriate processing/recycling/disposal;
 - Any hazardous materials (including asbestos, if present) will be removed, handled and disposed of in line with appropriate guidance and regulations;
 - Demolition works will be undertaken using mechanical demolition techniques (i.e. no form of explosive demolition will be required) from the highest point downward. All waste arisings will be separated into allocated skips to maximise material recycling;
 - Where required appropriate fencing/exclusion zones will be identified and implemented by the appointed contractor;
 - Removal of all site vegetation; and
 - Removal of floor slabs, foundations, and other areas of hardstanding.

Earthworks, Levels and Material Management

- 4.61 To obtain appropriate development plateau levels, it is anticipated there will be both areas where levels will reduce (areas of cut) and areas where level will increase (area of fill). Given the existing built form it is assumed that there will be no requirement for significant cut and fill to create development plateau levels. The Proposed Scheme includes for a small basement area under Phase 2, which will be 4m below ground level. Given the demolition proposed, there is likely to be a net exportation of waste off Site.

- 4.62 Local excavation and trenching works will be required to install services, drainage runs and foundations for structures. Any diversion or reinforcement of utilities will happen as part of the enabling works and any off-site works will be the responsibility of the utility provider.
- 4.63 All waste arisings during construction are to be controlled through the implementation of a CEMP and a best practice waste management strategy (described further in **Table 4.1** below).

Remediation Strategy

- 4.64 In the event that contamination is identified, a programme of mitigation or remediation work will be carried out as part of the enabling works in line with a Remediation Strategy approved by the regulators and MCC.
- 4.65 If contaminated, risks to human health during construction will be managed under the Health and Safety at Work Act (1974) and are typically mitigated by applying good working practices set out in a Code of Construction Practice (CoCP)/Construction Environmental Management Plan (CEMP) and Health and Safety Plan.
- 4.66 The requirement for clean cover soils over any contaminated ground will be assessed within the contamination risk assessment and implemented through a remediation strategy.
- 4.67 If asbestos risk registers are not available, then an asbestos survey will be conducted prior to the demolition works and any recommended mitigation implemented.

Unexploded Ordnance

- 4.68 In the event that a risk assessment by UXO specialists is required and conducted, the necessary tertiary mitigation measures will present within the risk assessment.
- 4.69 Tertiary mitigation measures (at medium risk of UXO areas) include a UXO specialist on-Site and Site-specific Unexploded Ordnance awareness briefings to all personnel conducting intrusive works.

Foundations Solution

- 4.70 As a worst case, it is assumed that construction of the Proposed Scheme will require piled foundations.
- 4.71 The Proposed Scheme will be designed in accordance with current guidance and best practice, and this will include the consideration of changing climate on stability of the ground conditions, influencing foundation design as necessary.
- 4.72 If significant ground or groundwater contamination is encountered during the ground investigation (for the creation of piled foundations), a Foundation Works Risk Assessment (FWRA) will be prepared and implemented through the planning process.

Cranes

- 4.73 The use of a tower crane/s will be required to facilitate the construction of the Proposed Scheme. The tower crane/s will be braced back to the structure/s, where

necessary. These will be used to move load out materials, erect the superstructure, façade and roofing.

Working Hours

- 4.74 Construction working hours⁸ (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC.

Site Security

- 4.75 The site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided.

Construction Waste Arisings and Strategy

- 4.76 Sources of waste during the construction stage are assumed to relate to demolition waste materials and construction materials (including packaging). The remedial solution may include the removal of soil (which may be contaminated). Such waste will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.
- 4.77 It is estimated there is 17,035m² GEA of buildings/structures to be demolished. Based on a standard working calculation which takes the assumed building/structure area and multiplies this by 0.3 to estimate the likely demolition waste, the demolition of these buildings/structures is expected to give rise to approximately 5,110.72m³ of waste arisings.
- 4.78 Using the anticipated total floorspace (73,865.1m² GEA) multiplied by industry benchmarks⁹ for construction waste arisings^a (10 tonnes per 100m² gross area for residential buildings, it is anticipated that 7,386.51 tonnes of waste will be generated from the construction stage.
- 4.79 It is anticipated that generic waste produced during construction would be controlled through the implementation of a CEMP, secured by planning condition. The CEMP will be informed by the waste provisions of the Environmental Protection Act 1990¹⁰ and the Environmental Protection (Duty of Care) Regulations 1991¹¹ and will set out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-site for disposal.
- 4.80 Any waste considered to be hazardous, arising from demolition or remedial activities, will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.
- 4.81 The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going

^a This has been established using professional judgement and is based on good practice principles developed within the Home Quality Mark.

management responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste.

Construction Environmental Management Commitments

- 4.82 A commitment has been made to a number of management practices during the construction stage. These will be secured by a Construction Environmental Management Plan (CEMP), as set out within the Environmental Management Plan (**Volume 3: Environmental Management Plan**).
- 4.83 The Environmental Management Plan (**Volume 3: Environmental Management Plan**) defines the actions needed to manage environmental effects during the construction and operational stages of the Proposed Scheme and should be used as a mechanism to secure the mitigation considered within the ES, largely through appropriate conditions and/or S106 agreements.
- 4.84 A summary of the CEMP measures which are integral to the description of the Proposed Scheme are provided in **Table 4.1**.

Table 4.1: Construction Environmental Management Commitments

Construction Environmental Management Commitments	
General	
(a)	The proposed construction works will be carried out by a competent contractor that will comply with current legislation ¹² .
(b)	The site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 ¹³ and appropriate levels of security (personnel / CCTV) will be provided.
(c)	Temporary fencing / hoarding will be erected around the perimeter of the Site at the outset of construction.
(d)	All construction activities will be in accordance with the Considerate Constructors Scheme.
(e)	The principal contractor will identify the proposed compound locations within a Site Layout Plan as part of a CEMP.
(f)	Climate change adaptation and measures will reduce risks to human health from overheating such as provision of shaded refuges and potable water supplies during construction.
(g)	Construction working hours ¹⁴ (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC.
Traffic and Access	

Construction Environmental Management Commitments

- (h) Access to adjacent properties (i.e. St Augustine's Church, Business School and Cavendish Hall) will be maintained throughout the construction stage.
- (i) A Construction Traffic Management plan will be delivered as part of the CEMP and will be agreed with the Highway Authority that will set out construction routing, access and working arrangements. The CEMP will manage construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems.
- (j) The CEMP will detail outcomes of application(s) for temporary closure of roads and footways, hoarding licenses, legislative processes, etc. along with the satisfaction and discharge of planning conditions appropriate to site working.
- (k) Provision for suitable signage (where appropriate) for pedestrian and cyclists, to minimise disruption.
- (l) Construction traffic will be routed away from sensitive receptors where practicable, and site access points will be located to minimise noise intrusion into residential areas.

Air Quality

- (m) The CEMP will be informed by the Institute of Air Quality Management (IAQM) guidance and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring. It also sets out requirements for ongoing monitoring and liaison with the local community, and MCC.
- (n) Dust and particulate matter emissions produced during demolition and construction activities would be controlled through the implementation of a Dust Management Plan (DMP) that would form part of the CEMP.

Noise and Vibration

- (o) Incorporation of Best Practicable Means (BPM) in accordance with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 to control noise and vibration at source during demolition and construction activities. Key measures include but are not limited to:
- (p) Use of quieter equipment and methods where practicable;
- (q) Erection of acoustic barriers or temporary screens around the Site perimeter and near sensitive receptors to reduce airborne noise emissions;
- (r) Phasing of high-noise activities to minimise their duration and ensure sensitive receptors are not exposed to prolonged periods of intrusive noise;

Construction Environmental Management Commitments

- (s) Adoption of vibration-reducing techniques for piling, compaction, and other high-vibration activities where feasible; and
- (t) Regular servicing and maintenance of construction plant and equipment to reduce noise emissions.
- (u) Continuous noise and vibration monitoring at key sensitive receptor locations during high-impact activities, such as piling or demolition, to ensure compliance with agreed thresholds.
- (v) Implementation of a Community Liaison Strategy to maintain open communication with residents and stakeholders. This will include advance notifications of noisy activities, complaints management processes, and the establishment of a contact point for concerns.

Biodiversity

- (w) Inspections prior to demolition and/or as a result in any change in conditions or delay beyond 12 months and supervision by Ecological Clerk of Works as appropriate will be implemented.

Lighting

- (x) Lighting will be controlled through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129¹⁵ and BS EN 12464-2:2014¹⁶.
- (y) The following measures are proposed in order to control Light Spill, Glare and Sky Glow effects and thus manage light pollution:

Construction Environmental Management Commitments

- Where practicable, construction lighting in the Site would be designed to comply with Environmental Zone E4 in accordance with the ILP Guidance Note GN01¹⁷;
- Illuminance levels arising from temporary lighting to be designed in accordance with BS EN 12464-2: 2014 and CIE 129;
- Placement of temporary lighting required to ensure safe working conditions and to maintain security, to have due regard of sensitive receptors (i.e. occupied residential premises);
- Lighting to be directed so as avoid unnecessary Light Spill outside of construction areas and to ensure that the light distribution is toward the task area;
- Lighting to be switched off when not required for safe working conditions and Site security;
- Use of light shields/baffles to control upward light to within the maximum 15% set out in the ILP Guidance Note GN01, where possible;
- Lighting to be kept at 0° tilt to avoid Sky Glow, where practicable; and
- Light dimming and automatic switch off would be used (where appropriate).

Waste

-
- (z) The remedial solution during demolition works will include the removal of hazardous substances¹⁸ (including asbestos¹⁹, heavy metals, PAHs, sulphate, hydrocarbons, other organic/inorganic contaminants and gas - carbon dioxide and methane) which will require specialist removal. All such works will be undertaken by an appointed contractor and disposed of by the contractor in line with relevant regulations and legislation requirements.
-
- (aa) Any waste considered to be hazardous, arising from demolition or remedial activities, will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.
-
- (bb) The CEMP will be informed by the waste provisions of the Environmental Protection Act 1990²⁰ and the Environmental Protection (Duty of Care) Regulations 1991²¹ and will set out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-Site for disposal.
-
- (cc) The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives
-

Construction Environmental Management Commitments

and on-going management responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste.

Ground and Earthworks

- (dd) The management of waste and potential pollutants used on Site will be controlled through the CEMP, which will detail the required mitigation measures. This will include best practice measures, including (where applicable): bunded storage; designated wheel washing areas; settling basins; covering stockpiles of materials to prevent dust and runoff; dampening exposed soils as appropriate; and set out requirements for ongoing monitoring and liaison (with the local community, the Environment Agency and MCC as appropriate).
- (ee) Risks to human health during construction are required to be managed under the Health and Safety at Work Act (1974) and are typically mitigated by applying good working practices set out in a Code of Construction Practice (CoCP)/Construction Environmental Management Plan (CEMP) and Health and Safety Plan.
- (ff) The Principal Contractor will ensure all necessary groundworks are implemented in order to provide suitable construction platform(s) (i.e. removal of any compressible/unstable ground encountered) during enabling works and/or construction, in line with relevant standards and building regulations including CIRIA Report C572: Treated ground engineering properties and performance; British Research Establishment document FB75: Building on Fill – Geotechnical Aspects²² and British Standard 6031:2009: Code of Practice for Earthworks²³. This will include the consideration of changing climate on stability of the ground conditions, influencing foundation design as necessary.

Flood Risk and Drainage

- (gg) A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)²⁴ and BS8582:2013 Code of practice for surface water management for development sites²⁵) will be required to be established on Site by the contractor to control and manage surface water runoff.
 - (hh) A temporary drainage strategy will be in place as part of the Contractors Site Management Plan, and the appropriate control measures will be addressed as part of the responsibilities under CDM 2015.
-

- 4.85 The measures (including any monitoring) will be set out and agreed as part of the CEMP and agreed with MCC following liaison with the local community and the Environment Agency (where relevant). The CEMP will be in accordance with the following structure:

- Programme and phasing details of proposed construction works;
- A plan of site preparation and construction works, highlighting the various stages and their context within the project, including a full schedule of materials, manpower resources, and plant and equipment schedules;
- Detailed Site layout arrangements, plans for storage, accommodation, vehicular movements, delivery and access;
- Prohibition or restricted operations;
- Details of plant used;
- Identification of roles and responsibilities of key staff in relation to environmental management of the Site;
- Details of operations that are likely to result in disturbance, with an indication of the expected duration of each phase with key dates; and
- A mechanism for the public to register complaints and procedures for handling complaints and requirements for monitoring and record-keeping.

References

¹ United Utilities (2019). Water Resources Management Plan. Available at: [Water Resources Management Plan \(unitedutilities.com\)](https://www.unitedutilities.com/water-resources-management-plan)

² British Standard BS 5906:2005 Waste Management in buildings – Code of practice. Available at <https://www.rbkc.gov.uk/pdf/BS5906-2005.pdf>

³

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

⁴ <http://publications.naturalengland.org.uk/publication/5679197848862720>

⁵ <https://www.gov.uk/government/publications/overheating-approved-document-0>

⁶ CIRIA (2015). The SuDS Manual (C753).

⁷ BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: [BS 8582:2013 | 30 Nov 2013 | BSI Knowledge \(bsigroup.com\)](https://www.bsigroup.com/BS-8582-2013)

⁸ Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](https://www.manchester.gov.uk/tackle-a-noise-problem)

⁹ BRE (2018). Home Quality Mark ONE, Technical Manual England. Available at: Home Quality Mark ONE

¹⁰ Environmental Protection Act 1990 No. 43 Available at:

<https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed: 08/08/2024].

¹¹ Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at:

<https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons,person%20or%20to%20a%20person> [Accessed: 08/08/2024].

¹² This includes the Health and Safety at Work etc. Act 1974; the Control of Pollution Act 1974; and Construction (Design and Management) Regulations 2015.

¹³ Secretary of State (2015). Construction (Design and Management) Regulations 2015.

-
- ¹⁴ Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](#)
- ¹⁵ CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.
- ¹⁶ British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.
- ¹⁷ Institute of Lighting Professionals (ILP) (2021) Guidance Notes for the Reduction of Obtrusive Light (GN01).
- ¹⁸ The Hazardous Waste (England and Wales) Regulations 2005, No. 894.
- ¹⁹ The Control of Asbestos Regulations 2012, No. 632.
- ²⁰ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>
- ²¹ Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at: <https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons,person%20or%20to%20a%20person>
- ²² British Research Establishment (2015). FB75: Building on Fill - Geotechnical Aspects. 3rd Edition.
- ²³ British Standard (2009). 6031:2009: Code of Practice for Earthworks.
- ²⁴ CIRIA (2015). The SuDS Manual (C753).
- ²⁵ BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: [BS 8582:2013 | 30 Nov 2013 | BSI Knowledge \(bsigroup.com\)](#)

5. Consideration of Alternatives

Introduction

- 5.1 This Chapter reports the ‘reasonable alternatives’ considered with respect to the Proposed Scheme.
- 5.2 Paragraph 2, Schedule 4, of the EIA Regulations¹ states that an ES should include:
- “a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.*
- 5.3 Planning Practice Guidance (PPG)² indicates that where “...alternative approaches to development have been considered, the Environmental Statement should include a description of the reasonable alternatives studied which are relevant to the proposed development and its specific characteristics and provide an indication of the main reasons for the choice made, including a comparison of the environmental effects.”.
- 5.4 As such, in line with the EIA Regulations, if no alternatives have been studied the EIA does not necessarily need to report reasonable alternatives.
- 5.5 Neither the EIA Regulations, nor PPG identify a specific methodology for the reporting of alternatives, or the criteria to be used to inform the consideration of reasonable alternatives. Therefore, the methodology to be adopted for the purpose of the EIA is based on professional experience of similar projects and an understanding of the Proposed Scheme and its characteristics, as well as focus on delivery of a proportionate output, in line with PPG.
- 5.6 This Chapter therefore reports:
- Consideration of ‘factors’ that constitute reasonable alternatives; and
 - Qualitative appraisal of the ‘factors’ for which reasonable alternatives have been considered and, where appropriate, a comparison of the environmental effects.

Consideration of Alternatives

- 5.7 The common ‘factors’ considered with respect to reasonable alternatives, in line with Schedule 4, Paragraph 2 of the EIA Regulations are:
- Alternative sites;
 - Alternative design;
 - Alternative technology; and
 - ‘Do Nothing’ scenario.

- 5.8 As set out in the EIA Scoping Report (**Appendix 2.1**), the Applicant has not considered alternative sites (as the Site is already under the Applicant's control and already has an existing outdated PBSA on-Site) or alternative technologies (which are not considered applicable to this form of development) and therefore in line with the PPG, these factors will not be considered further within the EIA process or reported within the ES. The remaining factors for consideration are alternative design and the 'Do Nothing' scenario.

'Do Nothing' Scenario

- 5.9 At the EIA Scoping stage, the 'do nothing' scenario was not considered. The EIA (as reported within this ES) has assessed the likely significant effects based on a deviation from the baseline environment (see **Chapter 2: Approach to EIA**). However, **Technical Chapters 6 –13** have also stated a 'future baseline' in the absence of the Proposed Scheme coming forward (i.e. a 'do nothing' scenario) (albeit this has not informed the assessment of likely significant effects). Therefore, the future baseline from each Technical Chapter represents the 'do nothing' scenario, which is summarised below.
- 5.10 Broadly, the 'do nothing' scenario hypothesises that the likely significant effects identified and reported in this ES would not occur (i.e. no adverse or beneficial effects). However, the Site and surrounding area will continue to change regardless of the Proposed Scheme due to the following:
- Continued growth of existing trees around the perimeter of the Site;
 - Increase in total employment across Manchester and Greater Manchester, with a decrease in construction sector employment;
 - Continued decrease in air pollutant concentrations; and
 - Reduction in greenhouse gas emissions (carbon budgets reducing to achieve net zero).
- 5.11 The Proposed Scheme was chosen to be brought forward rather than a do nothing scenario due to the economic benefits and requirement for higher quality accommodation (the benefits of which are reported in **Chapter 11: Socio-Economics and Human Health**).

Alternative Design

- 5.12 The remaining factor identified above is the consideration of alternative design.
- 5.13 The design of the Proposed Scheme has developed to adapt to Site constraints (including the Site context – particularly the existing streetscape) as well as feedback from stakeholders (in particular during the pre-application meetings with MCC), with the evolution of the design being outlined below. Some requirements from the Applicant were also considered throughout the design evolution.

Form and Massing

- 5.14 The massing of the Proposed Scheme was developed in response to Site constraints and existing context, whilst also considering the impact it might have on the neighbouring buildings, streets, and residential areas. In addition, consideration was given to the area of Hulme, with requests for a design received through consultation which would avoid the sense of a 'wall' between the University campus to the east and Hulme to the west.

- 5.15 The initial footprint was set back from the existing pavement line, and was then split into two parts (Phase 1 and Phase 2). This allowed for a breakdown of the massing of the building, whilst adding an opportunity to have permeability through the Site. Variations of the heights of the blocks were then discussed to understand the deliverable quantum on-Site with the remaining footprint.
- 5.16 A two-tower scheme concept was discussed at the pre-application meetings, with building 'shoulders' (stepped, shorter elements) included to highlight the articulation of the 'tower' elements. In addition, the height of the taller elements of the Proposed Scheme were focused towards the comparatively higher elements of the University campus (i.e. placed to the north-east of the two proposed courtyards towards the Faculty of Business and Law building) and away from Hulme to avoid the feeling of a wall along Cambridge Street. Given this, the Cambridge Street elevation is a series of lower blocks in response to the local urban context to the west. Placing the taller elements at these corners overall reduced issues with overshadowing as well. The pushing and pulling of the massing along the primary facade creates visual interest and breaks down the massing – by breaking down the view of a long façade along both Cambridge Street (at the west) and Chatham Street (at the east).
- 5.17 Overall, the design of the Proposed Scheme redistributes the massing away from the residential area of Hulme, and placing the towers at the north-east corner, which better relates to the scale of the city. Pushing and pulling of the massing along primary facade creates visual interest and breaks down the massing, and was therefore noted to be the more favoured alternative in terms of visual effects.

Microclimate

- 5.18 Following an initial undertaking of a daylight-sunlight analysis, the southern corner of the two phases was dropped in height to allow for daylight into the central courtyards and reduce overshadowing. The reduced heights along Cambridge Street help with corresponding to the lower, residential scale of Hulme to the west. 'Tower' elements (the higher elements) were added, with height increases incorporated to the northern corners of the two phases – this has been designed to conform with the scale of the city and the taller University buildings located further north and east.
- 5.19 In addition, placing the higher 'tower' elements at the north-east corners also help with reducing issues of overshadowing and orienting them in such a way encourages prevailing winds to move around the tower elements, rather than down into the courtyard. The corners of the towers have also been rounded to encourage wind to flow around the towers at higher levels. Any increases to the massing of other elements (excluding the towers) from south to north and west to east has been limited to reduce impacts of downdraft winds at the courtyards and onto the surrounding streets. Following detailed analysis, wind comfort levels were also overall noted to be not significantly changed from the baseline (further details of the assessment and conclusions have been provided in **Chapter 8: Wind Microclimate**).

Materiality

- 5.20 Manchester Metropolitan University's All Saints Campus contains both historic listed buildings as well as modern buildings, with neoclassical and gothic styles in stone and brick being the main features of the historic buildings, whilst the contemporary buildings (which have been built in the last 15 years) reflect modern materials such as metal and glass.

Particular consideration was given to the colour context of several buildings in Hulme, with the buildings in the area predominantly utilising a mix of greens, greys, and reds / pinks.

- 5.21 Patterns / craft designs and decorative metal panels (inspired by the nearby local buildings), will be implemented at various points of the Proposed Scheme (e.g., on the ground floor façade, building corners, etc) to avoid the view of large expanses of concrete and to add visual interest at a human scale. This design element was an opportunity identified through the pre-application meeting and overall contributes to the design quality and visual interest of the Proposed Scheme.
- 5.22 The resulting proposed materials and palettes include pre-cast concrete (in shades of red and pink, green, and darker colours), highly durable PPC Aluminium (in silver, red and pink, and dark green) to complement the metalwork across various levels / blocks, as set out in **Chapter 4: Development Specification**. The use of pre-cast concrete in colour help with creating contrast and defining zones between the proposed blocks / phases, with the 'towers' (the higher elements) and 'shoulder blocks' (the shorter, stepped elements) in buff tones and the remaining blocks/elements in either red/pink or green precast depending on the phase, therefore creating a variation in materiality to help break up the massing of the Proposed Scheme. The cladding also reflects the internal uses and creates an architectural language so that the two separate plots are read as one. An overview of the selection of materials as a primary mitigation measure is also summarised within **Chapter 6: Townscape and Visual**.
- 5.23 Overall, the proposed use of pre-cast concrete (in various shades) was taken forward as part of the design of the Proposed Scheme instead of the use of stone / brick that was seen in more historic buildings in the University campus, as the modern, more recent buildings reflect the University's aspirations and growing student presence whilst also providing visual interest and contrast. The design follows some key characteristics and detailing (in particular the colour context) seen in nearby buildings in Hulme and the local area, and is therefore, the favoured option in terms of townscape and visual considerations.

Public Realm

- 5.24 As noted above, the wider masterplan aims to clearly define pedestrian and cycle routes and encourage their use within the University campus.
- 5.25 Following comments on the lack of ground floor activity, an active ground floor (that incorporates and merges with the wider public realm) was incorporated to both phases, which acts to unify the Site with the wider surrounding, whilst creating a more sympathetic street scale to the Proposed Scheme. 'Courtyards' were later added to each phase to improve on the ground floor use on-Site and whilst also creating a sense of character in the area.
- 5.26 Planting also plays a significant role in the courtyard spaces, offering a visual focus at podium level and for units that overlook the space. Along Cambridge Street, tree planting has been provided which softens the street character and improve the quality of streetscape, in particular near Hulme.
- 5.27 In order to ensure that the Proposed Scheme facilitated inclusive access, the gradient level accesses have been provided around the Site, with the main entrances (links/gated accesses)

to the two buildings also located on Chatham Street. This has been developed as opposed to a more restrictive, steeper-sloped design option.

- 5.28 In addition, the proposed roof terrace spaces have been developed with spaces proposed for sports and physical activity, in conjunction with the provision of indoor gym/wellness studio spaces. Further details of the public realm, landscaping, and access strategy has been provided in **Chapter 4: Development Specification**.
- 5.29 Therefore, this option was overall favoured in terms of visual amenity (with the provision of tree planting within and around the Site), whilst also providing a design and floorplan that provides human health benefits, largely due to the incorporation of a more inclusive design that provides a positive impact for the future users on-Site and the wider residential community.

Pedestrian and Cyclist links

- 5.30 As part of the design proposals, the existing public pedestrian and cycle link through the centre of the Site will be rerouted. Given the objective to further prioritise pedestrians within the campus, the central courtyard will retain a pedestrian link between Cambridge Street and Chatham Street whilst re-routing the cycle route.
- 5.31 Whilst feedback criticised the cycle route diversion criticised the proposal to make the through route pedestrian-only following the re-development at the Site, the current cycle route creates a conflict between pedestrians and cyclists at the junction of Higher Chatham Street and Higher Ormond Street, with an increased risk of cyclist and pedestrian collision. In addition, assessment work (undertaken as part of the Transport Assessment) has demonstrated that maintaining a cyclist and pedestrian route along Cavendish Street is not appropriate given the volume of pedestrians and cyclists currently moving and expected to move in each direction.
- 5.32 The alternative cycle route will deliver a number of benefits including improved safety for cyclists (using the alternative route) and pedestrians (utilising the existing route) and a more direct and safer crossing on Higher Cambridge Street, linking Boundary Street West more directly with the pedestrian route through to Hulme.

References

¹ The Town and Country Planning Act 1990. Available at: <http://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed: 12/02/2025].

² Ministry of Housing, Communities and Local Government (Online Resource). Planning Practice Guidance Environmental Impact Assessment. Available at: <https://www.gov.uk/guidance/environmental-impact-assessment> [Accessed: 12/02/2025].

6. Townscape and Visual

Introduction

- 6.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to townscape character and visual amenity.
- 6.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 6.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 6.4 This Chapter, and its associated **Figures 6.1 – 6.19** and **Appendix 6.1**), is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**), as well as **Chapter 7: Built Heritage**.
- 6.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 6.6 **Table 6.1** provides an overview of the consultation that has been undertaken to inform the Proposed Scheme and EIA, including the consideration of likely significant effects and the methodology for assessment.

Table 6.1: Summary of Consultation

Body / Organisation	Contact	Date and Form of Consultation	Summary
Manchester City Council	Planning Officer	Email, 12 09 24	Clarification and confirmation of the 11 viewpoint locations.

Scope of the Assessment

- 6.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 2025 (**Appendix 2.2**). This section provides an update on the scope of the assessment presented within this Chapter following submission of the EIA Scoping Report.

Effects Not Considered to be Significant

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

- Changes to townscape and visual environment during demolition and construction [all townscape and visual receptors];
- Changes to townscape character of LTCA2 – Hulme Residential Area during operation;
- Changes to visual environment for visual receptors beyond 1km from the Site;
- Changes to visual environment for some visual receptors within 1km of the Site during operation, as listed below:
 - Open Space Users on the Pedestrianised area of Chatham Street;
 - Users of the Pedestrian Bridge over the Mancunian Way;
 - Users of the Pedestrian and Cycle Routes at the Medlock Street roundabout;
 - Users of the Pedestrian Bridge over the Princess Road;
 - Users of the routes travelling towards the Site from the east (Oxford Road and Grosvenor Street);
 - Users of the routes travelling towards the Site from the South (Princess Road);
 - Users of the routes travelling towards the Site from the west (Stretford Road, Bonsall Street, Loxford Street, and Boundary Lane);
 - Users of Cambridge Street;
 - Users of the Mancunian Way; and
- Private visual amenity of surrounding residential (with the exception of the Student Accommodation located adjacent the western Site boundary).

6.9 Supporting detailed assessment of all receptors is provided in the TVIA at **Appendix 6.1**.

Effects Considered Likely to be Significant

6.10 The following effects (**Table 6.2**) were considered likely to be significant and are reported within this Chapter:

Table 6.2: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Changes to local townscape character	LTCA1 – Universities Area ^a	Operation
Changes to visual amenity	1 ^b . Open Space Users in All Saints Park 10. Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W) ^c 11. Private visual amenity of residents of the Student Accommodation located adjacent the western Site boundary ^d	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

6.11 The following legislation and policy have informed the assessment of effects within this Chapter and is detailed further in **Appendix 6.1**:

- European Landscape Convention¹;
- National Planning Policy Framework²; and

6.12 Manchester City Council's Core Strategy Development Plan Document³.

6.13 The following guidance has informed the assessment of effects within this Chapter and is detailed further in **Appendix 6.1**:

^a Originally effects on this townscape receptor were scoped out of the assessment as not likely to result in significant effects but the TVIA (**Appendix 6.1**) has concluded significant effects and therefore this effect has been assessed within this Chapter.

^b Numbering relates to the receptor numbers as identified in **Appendix 6.1**

^c Additional visual receptors not included in the Scoping Report but have since been added to the TVIA (**Appendix 6.1**) and assessed, resulting in significant effects.

^d Originally effects on this townscape receptor were scoped out of the assessment as not likely to result in significant effects but the TVIA (**Appendix 6.1**) has concluded significant effects and therefore this effect has been assessed within this Chapter.

- Guidance for Landscape and Visual Impact Assessment, Third Edition (hereafter referred to as GLVIA3)⁴;
- Townscape Character Assessment⁵;
- Visual Representation of Development Proposals⁶;
- Guide to Development in Manchester Supplementary Planning Document⁷; and
- Strategic Level City-Wide Urban Characterisation for Core Strategy⁸.

Defining the Study Area

- 6.14 The study area for the assessment comprises the area within which it is considered that there is potential for the Proposed Scheme to result in significant townscape or visual effects. The extent of the Study Area was informed by a field study, a review of available mapping data and the production of a computer generated Zone of Theoretical Visibility (ZTV) which is set out in **Figure 6.5**.
- 6.15 The ZTV modelling used a simple 3D model of the Proposed Scheme (using height information for the Proposed Scheme) together with digital terrain modelling and 3D modelling of most existing built form and vegetation (available LiDar data) in the local area to identify the area from which the Proposed Scheme is likely to be visible. It is not entirely accurate, due to not all vegetation or some of the most recent development being included in the 3D model. Resultantly, the process tends to give a slightly larger extent of visibility of the proposals than would happen in reality. However, it is a useful starting point to help identify the key views likely to be affected.
- 6.16 The study area for the assessment includes both the Site and the surrounding wider context. The townscape character assessment considers the Site at a local level through the determination of local townscape character areas within a 500m radius from the centre of the Site and the identification of townscape features. The visual assessment considers the existing and potential views within a wider 1km study area. It is likely that the Proposed Scheme would be visible from some points beyond this area but the effects of this would be so limited to such an extent that detailed assessment is not warranted. (This approach is supported by GLVIA3 which states that the scale of assessment should be appropriate and proportional to the nature of the proposed development.)

Background Studies to Inform the ES / Establishing the Baseline

- 6.17 **Table 6.3** summarises all studies/surveys undertaken to inform the assessment presented within this Chapter.

Table 6.3: Background Studies / Surveys / Evaluations /Analysis

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Zone of Theoretical Visibility (ZTV)	Modelling of ZTV based on maximum anticipated height of Proposed Scheme	November 2024

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Initial desktop Baseline Townscape and Visual Appraisal	Initial desktop appraisal of Site and study area to identify baseline situation of townscape and visual receptors	June 2024
Site visit	The site visit recorded the Site and surrounding context's townscape features and verified the key visual receptors identified in the desk study. It involved travelling through the study area and producing a working photographic record of the area.	June 2024
Preparation of verified views	Capturing of surveyed photography and preparation of survey verified photomontage (rendered) and wireline visualisations (by specialist visualisation consultant – Virtual Planit). Included in Appendix 6.1	January 2025
Townscape and Visual Impact Assessment	A TVIA has been undertaken to ascertain and evaluate the likely effects of the Proposed Scheme on townscape character and visual amenity in accordance with GLVIA3. The findings are set out in the standalone TVIA at Appendix 6.1 , whereby those effects considered to be significant have been reported as part of this Chapter.	January 2025

Assessment Process

6.18 The following methodology was adopted:

- Assessment methodology is drawn from GLVIA3 and is set out in full in the standalone TVIA at **Appendix 6.1** and summarised below;
- The purpose of the standalone TVIA (**Appendix 6.1**) has been to establish all effects arising from the Proposed Scheme on townscape and visual receptors, to ascertain significant effects for reporting through the EIA and this Chapter. Such an approach aligns with **Chapter 2: Approach to EIA** and associated best practice regarding proportionality;
- The assessment of townscape character effects has been informed by the identification of Local Townscape Character areas (LTCAs), carried out in accordance

with the Landscape Institute's Technical Information Note 05/2017: Townscape Character Assessment; and

- Representative viewpoint photography and visualisations have been used to support and inform the standalone TVIA and therefore also this Chapter. All photography and visualisations have been prepared in accordance with the Landscape Institutes Technical Guidance Note 06/19: Visual Representations of Development Proposals⁹. The detailed methodology for producing the visual representations by specialist consultant Virtual Planit is set out in **Appendix 3 of Appendix 6.1**.

Reporting of the Environmental Effect and Significance Criteria

- 6.19 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the operational stage. 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 Sensitivity of Receptor

- 6.20 The sensitivity of affected receptors has been considered on a scale of **high, medium, low** or **negligible**.

Sensitivity of townscape receptors

- 6.21 The sensitivity of townscape receptors relates to the value attached to that receptor and the susceptibility of the receptor to the type of change or development proposed. GLVIA3 defines susceptibility as *'the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the Proposed Scheme without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies'* (GLVIA3, Para. 5.40).
- 6.22 The value of each of the identified townscape character receptors was assessed with reference to the following criteria and the definitions of level of value set out in **Table 6.4**:
- Any designations or policies (both national and local) which may be present; and
 - The presence or absence of other attributes which contribute to townscape value such as condition, scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects or associations e.g. with writers, artists or historic events.

Table 6.4: Value of Townscape Receptors

Value	Typical Level of Designation/ Rarity	Typical Examples
High	International, National, Regional	Townscape of notable character with unique or place-defining features and elements. Clearly coherent townscape character, with legible urban structure, a strong sense of architectural character and quality, and widespread use of high-quality materials. Minimal detracting elements and townscape features typically in good condition. High presence of good quality public realm or open space that contributes positively to the experience and usability of the townscape. No or limited potential for substitution.
Medium	Regional, Local	Townscape of some character, which is attractive, but with limited unique or place-defining features and elements. Recognisable urban structure with some variety in architectural quality and materials. Some detracting elements and variety in the condition of townscape features. Some presence of public realm or open space that makes a moderate contribution to the experience and usability of the townscape. Some potential for substitution.
Low	Local	Townscape of little scenic value or importance. Could include ordinary/commonplace or unremarkable areas of townscape. Disjointed urban structure and character or areas of coherent townscape that are commonplace and not locally distinctive. Presence of dominant detracting elements and townscape features in poor or declining condition. Areas that are vehicle focussed or dominated by industrial or commercial uses. Considerable potential for substitution.

6.23 Judgements on the susceptibility to change of each of the identified townscape receptors were made based on the scale set out in **Table 6.5**.

Table 6.5: Susceptibility to Change of Townscape Receptors

Susceptibility to change	Description
High	Townscape receptor ^e would be unlikely to accommodate the type of development proposed without unacceptable negative consequences for the maintenance of the baseline townscape character and/or the achievement of townscape planning policies and strategies. Townscape receptor has little or no relationship to the type of development proposed and/or would be difficult to replace or substitute if lost e.g. veteran trees, historic or unique buildings and parkland. Characteristics of the townscape, which contribute to the townscape character are highly sensitive and would be fundamentally altered by the type of development proposed.
Medium	Townscape receptor would be compromised by the type of development proposed and/or the achievement of townscape planning policies and strategies would be compromised. Townscape receptor has some relationship to the type of development proposed and/or could be partially replaced or substituted if lost. Townscape receptor is moderately sensitive and characteristics of the receptor would be altered by the type of development proposed. The general townscape character would remain but would be weakened by the type of development proposed.
Low	Townscape receptor would be likely to accommodate the type of development proposed without unacceptable negative consequences for the maintenance of the baseline townscape character and/or the achievement of townscape planning policies and strategies. Townscape receptor has a close relationship to the type of development proposed and could be easily replaced or substituted if lost. Townscape receptor is of low sensitivity and characteristics of the townscape would not be significantly altered by the type of development proposed. The general townscape character is resilient to change.

- 6.24 A judgement on the overall sensitivity of each townscape receptor was based on the combined evaluation of susceptibility and value attached to the receptor, together with informed professional judgement and guidance provided in GLVIA3. For example, a townscape receptor that has a high sensitivity is likely to have a high value and a high susceptibility to change. A townscape receptor that has a low sensitivity is likely to have a low value and a low susceptibility to change.

Sensitivity of visual receptors

- 6.25 The sensitivity of the visual receptor comprises a judgement on the value attached to the views and an assessment of the susceptibility of each receptor to the type of change proposed. In accordance with GLVIA3, this assessment was made as part of the assessment of effects rather than as part of the baseline assessment.

^e Includes townscape character areas, townscape elements or features and particular aesthetic or perceptual aspects of the townscape.

6.26 A judgement on the value attached to the views has been made with reference to the following criteria and the definitions of value set out in **Table 6.6**.

- Planning designations e.g. Designated Views or Protected Vistas identified in local or regional planning policy;
- Other designations relating to landscape features or heritage assets e.g. key views identified in conservation area appraisals or recorded in citations for listed buildings or registered parks and gardens; and
- Indicators of the value attached to views by visitors e.g. views identified in guidebooks or on tourist maps, official viewpoints (often with sign boards and interpretive material) or views referenced in literature or art.

Table 6.6: Value attached to Views

Value	Typical level of designation / Rarity	Attributes
High	International, National, Regional,	View or views experienced by the receptor identified or protected at international, national or regional level recognised through designation or planning documents. View or views experienced by the receptors having a designed relationship with wider townscape features of high importance, and/or having a high aesthetic/scenic quality.
Medium	Regional, Local	View or views experienced by the receptor that are identified or protected at local level e.g. identified in local planning policy or guidance. May also include views experienced by the receptors which are undesignated, but value perhaps expressed through non-official publications or its contribution to enjoyment of the significance of a heritage asset or public open space, or have some aesthetic quality.
Low	Local	The view or views experienced by the receptors is/are not related to designated, or non-designated, heritage assets, or a planning designation; and/or mentioned in guidebooks or on tourist maps; and/or referenced in art and literature. Typical or unremarkable view or views that contribute positively to the visual amenity experienced by the receptor.

6.27 The assessment of susceptibility of visual receptors has been based on the approach set out in para 6.32 of GLVIA3 which notes that:

- *‘the susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of:*
 - *The occupation or activity of people experiencing the view at particular locations: and*
 - *The extent to which their attention or interest may therefore be focussed on the views and the visual amenity they experience at particular locations’.*

6.28 Judgements on the susceptibility of a visual receptor to change have been broadly based on the descriptions of susceptibility set out in **Table 6.7**.

Table 6.7: Susceptibility to Change of Visual Receptors

Susceptibility	Description
High	Receptors for whom the view and visual amenity is of high importance to the experience or activity, including: people engaged in outdoor recreation whose attention or interest is likely to be focused on the townscape and on particular views e.g. waymarked walks through the townscape; and visitors to heritage assets or other attractions, where views of the surroundings are an important contributor to the experience.
Medium	Receptors for whom the view and visual amenity is of moderate importance to the experience or activity, including: travellers on most road or rail routes.
Low	Receptors for whom the view and visual amenity is of low importance to the experience or activity, including: people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the townscape; and, people at their place of work whose attention may be focussed on their work, not on their surroundings, and where the setting is not important to the quality of working life.

6.29 A judgement on the overall sensitivity of each visual receptor (ranging from High to Negligible) is made. This is based on the combined evaluation of susceptibility and value attached to the receptor, together with informed professional judgement and guidance provided in GLVIA3. For example, a visual receptor that has a High Sensitivity is likely to have a High Value and a High Susceptibility to change, a visual receptor that has a Low Sensitivity is likely to have a Low Value and a Low Susceptibility to change.

Determining the Magnitude of Change

- 6.30 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of **large, medium, small** or **negligible**.
- 6.31 The magnitude of townscape and visual effect has considered the size or scale of the effect, the geographical extent of the effect and the duration and reversibility of the effect.

Judgements on the magnitude of townscape and visual effect have been broadly based on the descriptions of magnitude set out in **Table 6.8** and **Table 6.9** respectively.

6.32 Consideration is also given to the Type of Effect in terms of whether it is Adverse, Beneficial or Neutral. Often, effects will include a combination of both beneficial and adverse effects. However, a judgement is made on the nature of the overall effect which is based on the following terms:

- Adverse: overall harm to the character/quality of the view and loss of visual amenity;
- Beneficial: overall improvement to the character/quality of the view and improvement of visual amenity; and
- Neutral: no overall harm or improvement to the view or visual amenity.

Table 6.8: Defining Magnitude of Change – Townscape Receptors

Magnitude of Change	Definition
Large	Substantial change to all or most of the key characteristics of a townscape receptor and/or addition of major new elements and townscape features. Changes would substantially alter the character of a large area.
Medium	Partial change to some of the key characteristics of a townscape receptor and/or addition of new elements, which would be notable features. Changes would result in a large change to the character of a small area or a noticeable change to a larger area.
Small	Limited or localised change to common characteristics of a townscape receptor and/or addition of new elements or features in keeping with the existing character. Changes would result in a small change to the character of a large area or a noticeable change to a small area. Also includes temporary and/or reversible changes of larger scale or extent.
Negligible	No, or barely discernible, change to townscape receptor

Table 6.9: Defining Magnitude of Change – Visual Receptors

Magnitude of Change	Definition
Large	Substantial change to the key characteristics of a view and/or addition of major new elements, which would be prominent features. Changes would substantially alter the character and appearance of the view experienced by the receptor.
Medium	Partial change to some of the key characteristics of the view and/or addition of new elements, which would be notable features. Changes would result in a large change to the character and appearance of a small part of the view or a noticeable change to a larger part of the view experienced by the receptor.
Small	Limited or localised change to a view and/or addition of new elements, which would be noticeable features but largely in keeping with the existing character and appearance of the view. Changes would result in a small change to the character and appearance of a large part of the view or a noticeable change to a small part of the view. Also includes temporary and/or reversible changes of larger scale or extent within the view experienced by the receptor.
Negligible	No, or barely discernible, change to the view experienced by the receptor.

Determining the Level of Effect

- 6.33 The level of effect has been informed by the magnitude of change 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 6.10** has been a tool which has assisted with this process.
- 6.34 Whilst **Table 6.10** 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*' or '*neutral*'.

Table 6.10: Matrix to Support Determining the Level of Effect

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

6.35 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.

6.36 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

6.37 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.

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

Baseline Conditions

- 6.39 A detailed analysis of the baseline townscape and visual conditions is provided in the TVIA (**Appendix 6.1**). Sufficient information on key baseline conditions which relate to the receptors with significant effects is provided below.

Summary of Townscape Baseline

- 6.40 The Site is located to the south of Manchester City Centre, within the All-Saints Campus of Manchester Metropolitan University. The Site is bound by Cambridge Street to the west, Higher Chatham Street to the east, Boundary Street to the south, and a service road to the Faculty of Business and Law to the north.
- 6.41 The Site is not located within an area covered by a townscape designation, nor does it lie within or near to any conservation areas. The nearest conservation area is the Whitworth Conservation Area which lies approximately 490m to the southeast of the Site beyond the Mancunian Way. A number of listed buildings are located in relatively close proximity to the Site, including Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building, Righton Building, Grosvenor Building and Former Town Hall Façade to Mabel Tylecote Building. These listed buildings are generally focused to the east of the Site and set around the edge of All Saints Park, a key area of public open space within the university campus. The full extent of designations, relevant to townscape value in the local area are illustrated on the Designations Plan provided at **Figure 6.2**.
- 6.42 The Site and its study area are identified by Natural England as lying within National Character Area (NCA) 55 – The Manchester Conurbation. The NCA covers a vast expanse of urban areas and includes a number of settlements which have grown and come together to form the Manchester conurbation including Manchester City Centre, Salford, Stockport, Sale, Ashton-under Lyne, Swinton, Altrincham, Stretford, Prestwich, Cheadle Hulme, Denton and Droylsden.
- 6.43 The Site lies within an urban townscape setting and reflects the identity of the urban characteristics described above. The Site and its immediate setting are urban, and PBSA uses are typical of this character area. As part of the evidence base to the Local Development Framework, MCC prepared an urban characterisation study to identify the varied character across the city. The study sets out the historical evolution of the city, identifies broad character areas before describing the underlying natural form, urban form as well as use, activity and movement for each area. The Site is situated within the ‘Central Area for Change’ Strategic Character Area and within the northwestern portion of the “Higher Education Precinct (HEP)”.
- 6.44 Two local townscape character areas were identified within the Study Area as illustrated on **Figure 6.3**. In this process, local level changes in characteristics that relate to physical elements or features and historic development, alongside how a place is experienced, have been considered. The LTCAs also take account of conservation area boundaries and recent changes in this evolving part of the City. The Site is located within LTCA1 – Universities Area and adjacent to: LTCA2 – Hulme Residential Area.

- 6.45 Of the LTCAAs identified only LTCA1 – Universities Area was considered to be subject to significant effects arising from the Proposed Scheme, confirmed through analysis within **Appendix 6.1**. Therefore, for the purpose of proportionality only the baseline conditions for LTCA 1, have been provided below. Baseline conditions for all remaining LTAs are set out in detail within **Appendix 6.1**.
- 6.46 This townscape character area includes the Site and the streets which extend east across Oxford Road and north past the Manchurian Way towards the City Centre. The character area covers the various university buildings including lecture halls and the library.
- 6.47 The key characteristics of LTCA1 include:
- Gently falling topography, north, towards the River Medlock.
 - Oxford Road is a primary link through the area with two lanes for traffic, a bus lane, as well as generous wide footpaths and segregated cycle lanes on both sides of the route; this is a popular and well-known link between the City Centre and universities.
 - Built form is laid out on a fragmented grid street pattern.
 - A city centre fringe area, the buildings are predominantly formed by institutional buildings associated with the universities.
 - Built form generally has large footprints, interspersed with smaller scale buildings of student accommodation.
 - Some Grade II listed buildings are located within the area.
 - Recent development has introduced height to character area, with development at Circle Square reaching up to 36 storeys.
 - Areas of public realm include All Saints Park (which has recently been revamped) at the heart of the university campus within interconnecting recently pedestrianised routes that traverse the area at Higher Chatham Street and Lower Ormond St and Cavendish Street and the lawned areas at Circle Square.
- 6.48 TCA1 is considered to be of Medium Value contains some isolated townscape features which relate to designated heritage assets and the universities; generally an unremarkable/ordinary townscape, some recent regeneration has introduced vibrancy and a sense of place to the area.

Summary of Visual Baseline

- 6.49 A baseline assessment of the local visual context and visual amenity was undertaken to understand the existing extent of visibility of the Site, key views in the vicinity of the Site (including protected views) and key visual receptors likely to be affected by the Proposed Scheme.
- 6.50 Key ‘representative views’ (RVs) were identified which reflect the character and quality of typical views from the key visual receptors, and to inform the baseline against which the visual effect of the Proposed Scheme could be assessed. The selection of RVs to be included within this TVIA were discussed and agreed with officers at MCC (**Table 6.1**).

- 6.51 The Site itself is unremarkable, the development is dated but in use; the pedestrian link and trees that flank this thoroughfare provide some visual amenity. The closed off areas of planting to the perimeter of the Site mainly comprise of small lawn areas with hedgerows set behind iron railings adding limited visual amenity to the development.
- 6.52 Key positive contributors to the visual amenity of the area surrounding the Site include: the listed buildings located to the east of the Site, All Saints Park, and the pedestrianized routes that traverse the area at Higher Chatham Street and Lower Ormond St and Cavendish Street.
- 6.53 Due to the existing built-up area and the relatively low rise built form within the Site, views of the Site are limited to the immediate vicinity. The principal views of the Site are currently experienced from the roads that directly border the Site and the Cavendish Street that tracks centrally through the Site.
- 6.54 Zone of Theoretical Visibility (ZTV) mapping of the Proposed Scheme has been undertaken to understand the potential future extent of visibility of the Proposed Scheme and to identify visual receptors with potential to be affected by the proposals.
- 6.55 The ZTV mapping for the Proposed Scheme is included at **Figure 6.5** and has been used to identify the key visual receptors with potential to be affected by the proposals which are set out below.
- 6.56 Visual receptors are defined as the groups of people who may be affected by changes in views and visual amenity. They include people passing through publicly accessible places e.g. by foot, car, bicycle or public transport, people working in an area and people visiting or engaged in recreational activities.
- 6.57 The key visual receptors which have been identified within the Study Area with the potential to have significant effects as a result of the Proposed Scheme are set out in **Table 6.11** below.
- 6.58 Key RVs (located in **Figure 6.6**) were identified which reflect the character and quality of typical views experienced by the key visual receptors, and to inform the baseline against which the visual effect of the Proposed Scheme could be assessed.
- 6.59 Each of the visual receptors would experience varying views of the Site as they travel along the indicated routes. This range of effects is considered and described in its entirety for the visual receptors. The RVs (baseline photography and wider context panoramas are provided within **Figures 6.8 – 6.18**) demonstrate a snapshot of this experience and have been used to inform the overall assessment. Where significant effects are expected to be experienced by the visual receptors, the baseline characteristics are summarised in **Table 6.11** with reference to the RVs.

Table 6.11: Visual Receptor Baseline Commentary

Receptor	Commentary
1. Open Space Users in All Saints Park	Area of public open space, central to the All-Saints campus, is located to the northeast of the site. It is somewhat enclosed by the built form on the perimeter and the mature trees within the space.

Receptor	Commentary
	In the central seating area of the park, there are views across the campus, including listed buildings in the middle distance, with taller university buildings beyond forming a backdrop. The views from within this space are often enclosed by mature trees and built form, in some view's taller buildings and large institutional buildings dominant the skyline.
10. Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W)	These routes consist of tertiary streets that run along the immediate edges of the Site to the east and south, as well as directly through the centre of the site. Cavendish Street is pedestrianized and serves as a key link through the All Saints campus for pedestrians. There are unobstructed views of the Site from these streets. The views through the pedestrianised spaces are pleasant, traffic is less dominant. The views are urban in character and contained by built form, in some locations listed buildings are present in the view providing visual interest.
11. Residents of the Student Accommodation located adjacent the western Site boundary	To the west of the Site, there is a series of PBSA developments ranging from five to seven storeys. The residents of the apartments facing the Site (to the east) look directly across Cambridge Street towards the site. Some of the upper storeys would have open views over the Site towards the university campus and surrounding buildings. In certain views, residents would also have oblique views towards the detracting Mancunian Way. The views looking out from these apartments are somewhat enclosed on the ground floor by existing development, whereas the upper floors will experience more open views towards the city centre and the Mancunian Way; all views from within these buildings are urban in character.

Future Baseline

- 6.60 Without the implementation of the Proposed Scheme, the baseline conditions would continue to evolve with key changes being the continued growth of existing trees around the perimeter of the Site, with the Site currently occupied by a 4 storey PBSA development of limited architectural merit.

Primary and Tertiary Mitigation

Construction Stage

- 6.61 The following primary mitigation which has been evaluated as part of the construction stage assessment is outlined below.

- Use of site hoardings, management of construction traffic, control of working hours and other appropriate housekeeping on the Site in accordance with the CEMP (further details provided within **Chapter 4: Development Specification**).

Operational Stage

6.62 The following primary mitigation which has been evaluated as part of the operational stage assessment is outlined below.

6.63 Effects on the identified townscape and visual receptors have been mitigated through the design and layout of the Proposed Scheme as defined in **Chapter 4: Development Specification** of the ES. Key primary mitigation elements which have been evaluated as part of the operational stage assessment are summarised below.

- High architectural and design quality of the new buildings and landscape, as set out in the submitted plans and elevations, which would contribute positively to the immediate townscape through elevation articulation, detailing, material choice, roofline, and hard and soft landscaping.
- Height and massing of the built form within the Site are designed to integrate with the surroundings. The two tall towers are positioned to the east of the Site, closest to the city centre, while the buildings that complete the blocks are sited to the west to relate to the local scale of the residential area of Hulme. This creates a logical stepping down in height towards Hulme from the city centre.
- The western elevation of the proposed building is set back from the street edge along Cambridge Street to allow for tree-planted verges and rain gardens, improving the environment along the road and softening the appearance of the development.
- The pedestrian route through the centre of the Site is maintained and enhanced for pedestrian safety, with areas of seating and planters. The route would also benefit from a more vibrant and active front, with semi-private spill-out spaces from the new building onto the route.
- Entrances into the two development plots would be from Chatham Street, and retail units and a community facility will front onto Cambridge Street, creating a positive frontage to Hulme and the university campus, making the development less inward-facing than the current building.
- The southern plot would benefit from a ground-level semi-private courtyard space, while the northern plot would include a raised courtyard at level 1. Both areas include outdoor spaces for studying, relaxing, and congregating.
- The Proposed Scheme also include a series of semi-private terraces at level 7, which would feature MUGA pitches, table tennis tables, an outdoor running track, wellness spaces, and a facility for growing food. These spaces provide opportunities for tree planting and shrub planting at the upper levels, which would be visible from the ground floor, softening views of the development and breaking up the massing.
- The four outer corners of the development are curved to soften the development and add visual interest at the gateways to the Site.

- The selection of materials for the external facades has been informed by the local context, using a colour palette drawn from the heritage assets within the All Saints campus and the wider setting of Hulme. The variation in materiality helps to break up the massing of the development. The cladding reflects the internal uses and creates an architectural language so that the two separate plots are read as one. The upper floors are clad in blast precast concrete, and the lower floors in polished concrete for easier maintenance. Decorative metal panels, inspired by local buildings such as the Hippodrome and the Salutation Pub, are used at the ground level, on horizontal panels on the window frames of the lower storeys, and at the curved nodes and entrances, contributing to the design quality and visual interest of the scheme. A decorative parapet enclosed the roof plant in order to maintain visual amenity.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

- 6.64 **Appendix 6.1** sets out the assessment of sensitivity for the LTCAs identified within the townscape study area (including LTCAs which have been scoped out as outlined above). This includes an assessment of the value of the LTCAs and the susceptibility to change which is based on the criteria set out in the methodology, **Tables 6.4** and **6.5** respectively.

Changes to townscape character

TCA 1 – Universities area

- 6.65 The Proposed Scheme would directly affect the characteristics of LTCA1. The change would involve the introduction of a large, PBSA development with some commercial and retail use at ground floor level and improved public realm, on a Site which currently contains PBSA of limited architecture and townscape merit.
- 6.66 The change to townscape character would generally be beneficial, the proposed buildings would be large scale and form prominent features in the townscape but would be high quality design and set within high quality landscaped areas.
- 6.67 Whilst all the existing mature trees within Site which contribute to the character of surrounding streetscapes would be lost the proposals includes for compensatory tree and shrub planting, both within the Site and along Cambridge Street to the west.
- 6.68 The proposed buildings would introduce further height and massing, but this has been appropriately designed to the Site's position adjacent to the City Centre and shows due regard to the neighbouring residential development. With the taller built form closest to the city centre in the north and east of the Site, and lower buildings to the west, stepping down to the lower level in the context of Hulme.
- 6.69 The Proposed Scheme would maintain the existing permeability for pedestrians through the Site, within an improved environment, that discourages cyclist from tracking through the area at speed.
- 6.70 The proposed mixed uses across the Site are reflective of the local context and are considered appropriate to the local character, with a community use that would meet an unmet need in the area. The uses would generate more activity and footfall in the area. This, together with the introduction of active frontages at ground level, which would front the

adjacent streets, would result in increased activity levels and greater sense of vibrancy within the local area.

- 6.71 Within the wider context of the LTCA effects on the local townscape character would be smaller scale. In much of the area the proposed scheme would be visible in the background of views but would be seen in the context of other large scale and tall built developments.
- 6.72 Overall, the Proposed Scheme would result in a noticeable change to the character of the LTCA1 area which would be an improvement to the existing baseline situation; the type of effect is considered beneficial with the Proposed Scheme resulting in an improvement to the prevailing character of the area.
- 6.73 The sensitivity of LTCA 1 – Universities area is considered to be medium. The magnitude of change is considered to be medium. Therefore, there is likely to be a direct permanent long-term beneficial or effect which is considered to be moderate.

Secondary Mitigation or Enhancement

- 6.74 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

- 6.75 In the absence of secondary mitigation, the residual effects for LTCA1 is the same as that reported in the pre-mitigation scenario.

Significance

- 6.76 This effect is considered to be **Significant**.

Changes to Visual Amenity

- 6.77 **Appendix 6.1** sets out the sensitivity of the identified visual receptors that have been scoped in to this assessment. This is based on the value attached to the view by the receptor group (based on the criteria set out in **Table 6.8**) and the susceptibility to change of the receptor group (based on the criteria set out in **Table 6.9**).
- 6.78 This assessment should be read in conjunction with the visual representations set out at **Appendix 3 of Appendix 6.1**. The assessment follows the methodology set out in full in **Appendix 6.1**.
- 6.79 A ZTV (**Figure 6.5**) was produced to demonstrate the potential extent of visibility of the Site with the Proposed Scheme in place. The blue area on the ZTV plans indicates the area from which it is anticipated that the Proposed Scheme would be visible. The grey areas indicate where the Proposed Scheme is likely to be obscured and the gradation of blue demonstrates the reduction in visibility due to intervening features in the townscape. The ZTV doesn't account for the inevitable reduction in the perceived scale of the proposals due to distance away from the Site.
- 6.80 The area which would experience the greatest level of change in views arising from the Proposed Scheme is that of the roads in the immediate context of the Site, particularly from the central pedestrian link through the Site, and the roads that directly abut the Site boundary. Due to the scale of the Proposed Scheme, the immediate streets surrounding the Site are likely to experience prominent changes to views, with a marked increase in the visibility of built form when compared to the existing situation. In the wider townscape, the Proposed Scheme would also become visible on the skyline from areas of public open space,

streets orientated towards the Site and other streets where the new built form would be seen above lower rooflines. This increase in development is likely to bring about both positive and negative changes to views which are described in greater detail within the assessment of effects on visual receptors below.

Open Space Users in All Saints Park (Representative View RV1.0)

- 6.81 The Proposed Scheme would be visible from the majority of the of the open space in views looking southwest towards the Site.
- 6.82 The existing built form that flanks the open space, which includes Grade II listed buildings, would screen the majority of the development.
- 6.83 As represented in RV 1.0 the upper storeys of the development on the eastern side of the Site, and the two towers would be visible rising above the existing building in the middle distance.
- 6.84 The mature trees within the park would filter these views during the winter months.
- 6.85 Whilst the Proposed Scheme would introduce further built form in the view and loss of sky, the Proposed Scheme would provide further articulation on the skyline. The change in height and gaps in the proposed built form break up the massing of the development to avoid the building being dominant and overbearing on the space. The slender two towers within curved corners provides visual interest. A decorative parapet is utilised to screen the rooftop plant.
- 6.86 The Proposed Scheme would introduce a new townscape feature providing visual interest and further articulation on the skyline. The Proposed Scheme would be a detracting feature viewed in the as a backdrop to the listed buildings but in the context other faculty buildings and taller buildings on the skyline. Given the balance of adverse and beneficial effects the nature of effect is considered to be Neutral.
- 6.87 The sensitivity of Open Space Users in All Saints Park area is considered to be medium - high. The magnitude of change is considered to be medium. Therefore, there is likely to be a direct permanent long-term neutral effect which is considered to be moderate - major.

Secondary Mitigation or Enhancement

- 6.88 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

- 6.89 In the absence of secondary mitigation, the residual effects for Open Space Users in All Saints Park is the same as that reported in the pre-mitigation scenario.

Significance

- 6.90 This effect is considered to be **Significant**.

Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W) (Representative Viewpoint 10 RV10)

- 6.91 There would be direct largely unobstructed views of the Proposed Scheme from these routes.

- 6.92 The changes would comprise of frontage of the proposed building and the improved public realm through the centre of the Site.
- 6.93 The increase of scale and massing of the development would result in an increased sense of enclosure and a reduction of visible open sky in views from these streets. However the introduction of contemporary architecture which is well constructed, and the improvements to public realm including new tree planting, landscaping and an improved interface between the Site building and street through the introduction of a new entrance directly from the street.
- 6.94 The Proposed Scheme would provide visual interest in close range views, where the detail on the buildings and the proposed landscape improvement can be appreciated, the effects in these locations would be beneficial.
- 6.95 The sensitivity of users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W) area is considered to be medium - high. The magnitude of change is considered to be medium - high. Therefore, there is likely to be a direct permanent long-term beneficial effect which is considered to be moderate - major.

Secondary Mitigation or Enhancement

- 6.96 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

- 6.97 In the absence of secondary mitigation, the residual effects for Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W) is the same as that reported in the pre-mitigation scenario.

Significance

- 6.98 This effect is considered to be **Significant**.

Residents of the Student Accommodation located adjacent the western Site boundary (Representative Viewpoint 11 RV11)

- 6.99 The greatest change would be experienced in views from the existing PBSA that are located directly opposite the Site (those which face onto Cambridge Street, where habitable rooms face the western elevation of the development). These residents would have direct, unobstructed views of the Proposed Scheme (with a c. 22m separation distance at its closest point).
- 6.100 The Proposed Scheme would introduce further massing and height in the views to that of the existing building. The massing of the Proposed Scheme steps down along this elevation to eight storeys with some shorter sections of twelve and thirteen, as opposed to the four storeys currently experienced.
- 6.101 The proposed building would be pulled back, in places, from the existing building line along Cambridge Street and tree planting introduced which would filter some views between the existing residential units and the Proposed Scheme.
- 6.102 The change in view would consist of the introduction of taller buildings and a reduction in the amount of open sky visible but with improvements to the street elevations, public realm and new, well considered, contemporary architecture.

- 6.103 Residents in the apartments facing on to the Site would experience the most change, although the development is set back at an appropriate distance of between 19m, and 24m which is appropriate in this environment. The change would be from views of a PBSA development with limited architectural quality to a taller but higher-quality PBSA development. The nature of this change will be perceived differently by different individuals. Adopting a precautionary approach, it has been identified as an adverse effect in this assessment.
- 6.104 The sensitivity of residents of the student accommodation located adjacent the western Site boundary area is considered to be medium. The magnitude of change is considered to be medium. Therefore, there is likely to be a direct permanent long-term adverse effect which is considered to be moderate.

Secondary Mitigation or Enhancement

- 6.105 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

- 6.106 In the absence of secondary mitigation, the residual effects for Residents of the Student Accommodation located adjacent the western Site boundary is the same as that reported in the pre-mitigation scenario.

Significance

- 6.107 This effect is considered to be **Significant**.

Limitations and Assumptions

- 6.108 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.
- In considering the effects of the Proposed Scheme upon the townscape character areas and visual receptors, the assessment has been based on the Proposed Scheme contained within **Chapter 4: Development Specification** (including the Plans, Elevations and Sections) which includes the details on demolition and tree removal;
 - In regard to the visual assessment, the assessment does not attempt to predict the visual effects of seasonal changes throughout the year, or the difference between day and night time effects, but describes the 'worst case' position in terms of the view when the Proposed Scheme would be most visible i.e. daytime views in the winter (when trees would have lost their leaves); and
 - Whilst a selection of RVs and supporting visual representations have been provided and the evaluation of the kinetic experience of visual receptors has been undertaken, not every available view within the study area has been illustrated or described and professional judgement has been used to assess the effects of the Proposed Scheme and when defining effects which are and are not significant.

Summary

- 6.109 **Table 6.12** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

- 6.110 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 6.12: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Operational Stage			
Changes to local townscape character	LTCA1 – Universities Area	Moderate beneficial	Yes
Changes to visual amenity	1. Open Space Users in All Saints Park	Moderate – Major neutral	Yes
	10. Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W)	Moderate – Major beneficial	Yes
	11. Residents of the Student Accommodation located adjacent the western Site boundary	Moderate adverse	Yes

References

- ¹ European Council (2007) European Landscape Convention
- ² Department for Levelling Up, Housing and Communities (2024) National Planning Policy Framework: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Date accessed: 17.03.25]
- ³ Manchester's Local Development Framework: Core Strategy Development Plan Document (11 July 2012) Manchester City Council
- ⁴ Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment (GLVIA), 3rd Edition
- ⁵ Landscape Institute (2017) Townscape Character Assessment: Landscape Institute Technical Information Note 05/2017
- ⁶ Landscape Institute (2016) Landscape Character Assessment: Technical Information Note 08/2015. Available at: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2016/01/Landscape-Character-Assessment-TIN-08_15-20160216.pdf [Date accessed: 17.03.25]

⁷ Guide to Development in Manchester Supplementary Planning Document, Guide to Development in Manchester Supplementary Planning Document and Planning Guidance Adopted April 2007, April 2007, Manchester City Council

⁸ Local Development Framework: Strategic Level City – wide Urban Characterisation for Core Strategy, November 2010, Manchester City Council

⁹ Landscape Institute, September 2019 , [TGN 06/19 Visual Representation of development proposals](#)

7. Built Heritage

Introduction

- 7.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to built heritage.
- 7.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 7.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 7.4 This Chapter, and its associated **Figure 7.1** and **Appendix 7.1**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**). A Heritage Asset Plan ('HAP') is provided at **Figure 7.1** and illustrates the locations of identified heritage assets within the vicinity of the Site.
- 7.5 In addition, this Chapter should be read in conjunction with **Chapter 6: Townscape and Visual. Figure 6.5: Zone of Theoretical Visibility**, and **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 7.6 **Table 7.1** provides an overview of the consultation that has been undertaken to inform the Proposed Scheme and EIA, including the consideration of likely significant effects and the methodology for assessment.

Table 7.1: Summary of Consultation

Body / Organisation	Contact	Date and Form of Consultation	Summary
MCC	Planning Officer	Email, 20 th August 2024.	Agreement of viewpoint locations for assessment in the EIA and agreement of the presentation format of views.

Scope of the Assessment

- 7.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 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

- 7.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Change within the setting of designated heritage assets during construction and operation [Former Grosvenor Picture Palace; and Adult Deaf and Dumb Institute (Former)]

Effects Considered Likely to be Significant

- 7.9 The following effects (**Table 7.2**) were considered likely to be significant and are reported within this Chapter:

Table 7.2: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Change within the setting of a designated heritage asset	Former Manchester Ear Hospital (HAP no. 8); Roman Catholic Church of St Augustine (HAP no. 26); Ormond Building (HAP no. 15); Righton Building (HAP no. 6); Grosvenor Building (HAP no. 24); and Former Town Hall Façade to Mabel Tylecote Building (HAP no. 21) (all grade II listed buildings)	Construction / Operation
Change within the setting of a non-designated heritage asset	Salutation Public House (HAP no. 29)	Construction / Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

- 7.10 The following legislation and planning policy has informed the assessment of effects within this Chapter, and is detailed further in Appendix 1 of the Heritage Assessment (**Appendix 7.1**):
- The Planning (Listed Buildings and Conservation Areas) Act 1990¹;

- National Planning Policy Framework ('NPPF') Chapters 12 and 16²;
- Greater Manchester Combined Authority's Places For Everyone Joint Development Plan Document Policy JP-P2 (Heritage)³;
- Manchester Core Strategy Policies EN 3 (Heritage) and CC 9 (Design and Heritage)⁴; and
- Manchester Unitary Development Plan Policy DC19.1.(Listed Buildings)⁵.

7.11 The following guidance has informed the assessment of effects within this Chapter and is detailed further in Appendix 1 of the Heritage Assessment (**Appendix 7.1**):

- Design Manual for Roads and Bridges⁶;
- Principles of Cultural Heritage Impact Assessment in the UK⁷;
- Historic England Advice Note 12 – Statements of Heritage Significance⁸;
- Historic Environment GPA 2 – Managing Significance in Decision Taking in the Historic Environment⁹;
- Historic England GPA 3 – The Setting of Heritage Assets¹⁰; and
- Historic England Advice Note 4 – Tall Buildings¹¹.

Defining the Study Area

7.12 In defining an appropriate study area, best practice advice, a site visit, professional experience and judgement and a review of the potential effects of the Proposed Scheme on built heritage has been applied. Designated and non-designated heritage assets within a 500m study area from the Site boundary have been identified and the potential effects of the Proposed Scheme on these assets have been considered. The study area has been used as a guide, and has been identified by taking into consideration the following factors:

- The nature and scope of the Proposed Scheme;
- The proximity of heritage assets to the Site;
- The degree of intervisibility between the heritage assets and the Site, taking into consideration, for instance, changes in topography as well as interposing townscape and landscape features and seasonal changes; and
- The significance (in heritage terms) of the relevant heritage assets and the contribution made by their setting, including historic or functional relationships.

7.13 Heritage assets within the defined study area that will not be affected by the Proposed Scheme due to the nature and extent of their significance (including functional or historic connections and the contribution made by setting) and/or the lack of intervisibility are not considered as part of this Chapter. This aligns with the approach set out in the EIA Scoping Report (**Appendix 2.1**). Further details on the assets within the defined study area that are not considered as part of this chapter are contained in the Heritage Assessment (**Appendix 7.1**).

- 7.14 The potential for assets outside of the 500m study area to be affected by the Proposed Scheme was also considered and supported by the site visit. However, no such assets were identified as having the potential to experience significant environmental effects as a result of the Proposed Scheme.
- 7.15 Due to the scale, mass and height of the Proposed Scheme, it is possible that there would be intervisibility with other assets not included in the ES Chapter and Heritage Assessment. In accordance with the NPPF and Historic England guidance, judgements on impacts have been based on the effect of the Proposed Scheme on the heritage significance of the identified assets, rather than whether the Proposed Scheme would be visible from them, although this is also a consideration. In relation to assets at a greater distance from the Site, the Proposed Scheme will form part of a varied urban context and will not diminish the overall character and contribution of their setting.
- 7.16 Only those heritage assets with potential to experience significant environmental effects (**Table 7.2**) are assessed in this Chapter. The Heritage Assessment (**Appendix 7.1**) provides an assessment of all assets where potential effects have been identified.

Background Studies to Inform the ES / Establishing the Baseline

- 7.17 **Table 7.3** summarises all studies/surveys undertaken to inform the assessment presented within this Chapter.

Table 7.3: Background Studies/Surveys

Study/Survey	Overview	Date of Completion
Heritage Assessment (Appendix 7.1)	Detailed assessment of the heritage significance of designated and non-designated heritage assets within a 500m study area with the potential to be affected by the Proposed Scheme and assessment of the potential impacts of the Proposed Scheme on their heritage significance.	February 2025
Zone of Theoretical Visibility – 1km (ZTV) (Figure 6.5)	ZTV mapping prepared within a 1km radius taken from the Site boundary to provide an understanding of the potential visibility of the Proposed Scheme.	November 2024
Site visit	Site visit to inspect the local heritage context and inform the understanding of the heritage significance and setting of the identified	May 2024

Study/Survey	Overview	Date of Completion
	heritage assets and to support the heritage impact assessment.	
Accurate Visual Representations (AVRs)	Third party preparation of AVRs from agreed townscape and heritage viewpoints informed by the ZTV to support the heritage impact assessment.	February 2025

Assessment Process

- 7.18 In the absence of specific prescribed criteria for assessment of impacts on built heritage for an ES, the methodology for informing judgements on the relative value of heritage assets, the magnitude of change and the significance of effect is drawn from the Design Manual for Roads and Bridges (DMRB), and supported by guidance from Historic England, IEMA, IHBC and ClfA.

Reporting of the Environmental Effect and Significance Criteria

- 7.19 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. 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 Sensitivity of Receptor

- 7.20 The sensitivity of affected receptors has been considered on a scale of **high, medium, low** or **negligible**.
- 7.21 The heritage significance (value or importance) of the heritage assets (receptors) has been defined on the basis of **Table 7.4** which has been informed by the DMRB and a clear understanding and appreciation of heritage significance as set out in the Heritage Assessment (**Appendix 7.1**). This has been undertaken in accordance with Historic England guidance and informed by a site visit, research and professional judgement. As there are no heritage assets within the 'very high' category (e.g. World Heritage Sites), this category has been omitted from the methodology.

Table 7.4: Criteria for Determining the Sensitivity of the Receptor

Sensitivity	DMRB Definition	Asset Type
High	High importance and rarity, national scale and limited potential for substitution	Scheduled monuments with standing remains Registered battlefields Grade I and II* listed buildings Other listed buildings that can be shown to have exceptional qualities in their fabric or historical association not adequately reflected in the listing grade Grade I and II* registered parks and gardens Conservation areas containing very important buildings
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution	Grade II listed buildings Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical association Grade II registered parks and gardens Conservation areas containing important buildings Historic townscape or built-up areas with historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)
Low	Low or medium importance and rarity, local scale	‘Locally listed’ buildings and landscapes Historic (unlisted) buildings of modest quality in their fabric or historical association Historic townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)

Sensitivity	DMRB Definition	Asset Type
Negligible	Very low importance and rarity, local scale	Assets of no architectural or historic note; buildings of an intrusive character

Determining the Magnitude of Change

- 7.22 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of **large, medium, small** or **negligible**.
- 7.23 The criteria for determining the magnitude of change draws upon Table 3.4N of the DMRB and is set out in **Table 7.5** below.

Table 7.5: Criteria for Determining the Magnitude of Change to Heritage Assets

Magnitude of Change (ES/DMRB Terminology)		DMRB Definition	Application to the Historic Built Environment
Large / Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.	Change to key elements of the heritage asset, such that the asset is totally altered and much of its heritage significance is lost or enhanced.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.	Substantial change within the setting of a heritage asset leading to considerable loss or enhancement of heritage significance of the asset.
Medium / Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.	Change to many key elements of the heritage asset, such that the asset is clearly modified and there is some loss or enhancement of heritage significance.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements, improvement of attribute quality.	Change within the setting of a heritage asset leading to some loss or enhancement of heritage significance of the asset.

Magnitude of Change (ES/DMRB Terminology)		DMRB Definition	Application to the Historic Built Environment
Small / Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.	Changes to key elements of the heritage asset, such that the asset is slightly altered and there is some loss or enhancement of heritage significance. Change within the setting of a heritage asset leading to a slight loss or enhancement of heritage significance of the heritage asset.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.	
Negligible / Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.	Slight changes to elements of a heritage asset or within its setting that hardly affect the heritage significance of the asset.
	Beneficial	Very minor benefit or positive addition to one or more characteristics, features or elements.	

Determining the Level of Effect

- 7.24 The level of effect has been assessed based on the sensitivity of the affected receptor and the magnitude of changes due to the Proposed Scheme. The level of effect has been determined using professional judgement and **Table 7.6** has been a tool which has assisted with this process.
- 7.25 Whilst **Table 7.6** 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*'.
- 7.26 **Table 7.6** is informed by the Significance Matrix at Table 3.8.1 in the DMRB. The DMRB terminology is provided in brackets after the ES methodology.

Table 7.6: Matrix to Support Determining the Level of Effect

Magnitude of change (or impact)	Sensitivity (or value, importance, etc.)			
	High	Medium	Low	Negligible
Large (Major)	Major (Large or very large)	Moderate to major (Moderate or large)	Minor to moderate (Slight to moderate)	Negligible (Slight)
Medium (Moderate)	Moderate to major (Moderate or large)	Moderate (Moderate)	Minor (Slight)	Negligible (Neutral or slight)
Small (Minor)	Minor to moderate (Slight or moderate)	Minor (Slight)	Negligible to minor (Neutral or slight)	Negligible (Neutral or slight)
Negligible	Negligible (Slight)	Negligible (Neutral or slight)	Negligible (Neutral or slight)	Negligible (Neutral)

- 7.27 The following terms, defined in **Table 7.7** have been used to define the level of the effects identified and these can be ‘beneficial’ or ‘adverse.’ The standardised significance criteria are not an exact equivalence with the DMRB five-point significance categories. However, professional judgement would be used in determining the category of significance for the effect on each asset:

Table 7.7: Level of Effect Categories and Definitions

Level of Effect (ES Terminology/DMRB)	DMRB Definition	ES Definition
Major/Very Large	Effects at this level are material in the decision-making process.	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.
Major/Large	Effects at this level are likely to be material in the decision-making process.	
Moderate/Moderate	Effects at this level can be considered to be material decision-making factors.	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

Level of Effect (ES Terminology/DMRB)	DMRB Definition	ES Definition
		that has limited adaptability, tolerance or recoverability.
Minor/Slight	Effects at this level are not material in the decision-making process.	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.
Negligible/Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.	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.

- 7.28 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

- 7.29 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 informed by an understanding of the heritage significance of these assets and having regard to the DMRB which advises that the effect on the cultural heritage resource is not significant when the impact does not substantially diminish the heritage interest of the cultural heritage resource.
- 7.30 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

Summary of Historic Context

- 7.31 The Site is located in Chorlton on Medlock, an urban area to the south of Manchester City Centre. The area has medieval origins and principally comprised open farmland around the River Medlock until the late 18th century. From this time and into the 19th century, the area became a focus for intense residential development in the form of terraced rows arranged

on a grid plan. The centrepiece of the newly developed area was Grosvenor Square (located to the east of the Site) and, within it, All Saints Church.

- 7.32 The Site was occupied by rows of terraced housing in the 19th century, during which time Cavendish Street, which bisects the centre of the Site, became a key arterial route. The terraces in the southern half of the Site were demolished and replaced by Paulden's Department Store in 1879. Other larger public buildings were also built in the vicinity of the Site in the late 19th century, replacing earlier terraced housing, including the Ormond and Grosvenor Buildings.
- 7.33 The area suffered extensive bomb damage during the Second World War resulting in the loss of several buildings on Grosvenor Square and many further buildings were demolished during the Postwar period as part of a central programme of slum clearance. The Mancunian Way, part of the Manchester and Salford Inner Ring Road system, was constructed to the north of the Site in 1965, disrupting the prevailing street pattern and marking the beginning of widespread redevelopment of this part of the city. The area since became a focus for development in connection with the Manchester Metropolitan University, with existing buildings being converted alongside the construction of new faculty and accommodation buildings. The Site itself was cleared to make way for the construction of the extant Cambridge Halls student accommodation building in the 1990s.
- 7.34 The character of the area surrounding the Site has experienced extensive change since the 19th century, though remnants of the historic townscape survive in a fragmentary form. The historic gridded street pattern has been disrupted by modern development and remains only partially legible. The importance of Cavendish Street has also diminished following the construction of the Mancunian Way and there is no longer vehicular access through the Site along this route.

Summary of Heritage Assets

- 7.35 The technical baseline is informed by a 500m study area taken from the boundary of the Site. This represents a proportionate study area in relation to the scale and nature of the Proposed Scheme and the potential for effects on built heritage receptors. Within the study area, there are 28 designated heritage assets (comprising 27 listed buildings and 1 conservation area) and 3 non-designated heritage assets, as shown in the Heritage Asset Plan (**Figure 7.1**).
- 7.36 The identified heritage assets include former industrial buildings and structures; offices and other commercial buildings; ecclesiastical buildings; educational buildings; public buildings; public houses; statues; railway stations and associated infrastructure; and historic areas. The assets draw significance from their high quality architectural design and detailing; scale, form and stature; and their ability to illustrate the historic use of the area and historical associations to prominent individuals, groups, events and movements. Most of the assets have a varied, urban setting, are distanced from the Site and separated by intervening built form such that the Site makes no contribution to their significance as part of setting. Those assets for which the Site makes no contribution to significance and there is no potential for significance to be affected (a total of 22 assets) do not form part of the technical baseline.
- 7.37 The 9 remaining heritage assets forming part of the technical baseline are:
- Former Manchester Ear Hospital (grade II listed building, HAP no. 8);

- Roman Catholic Church of St Augustine (grade II listed building, HAP no. 26);
- Ormond Building, Manchester Metropolitan University (formerly Municipal Offices) (grade II listed building, HAP no. 15);
- Righton Building (grade II listed building, HAP no. 6);
- Grosvenor Building, Manchester Metropolitan University Faculty of Art and Design (grade II listed building, HAP no. 24);
- Former Town Hall Façade to Mabel Tylecote Building, Manchester Metropolitan University (grade II listed building, HAP no. 21);
- Former Grosvenor Picture Palace (grade II listed building, HAP no. 13);
- Adult Deaf and Dumb Institute (former) (grade II listed building, HAP no. 9); and
- Salutation Public House (non-designated heritage asset, HAP no. 29).

7.38 These heritage assets draw a degree of (heritage) significance from their relationship with remnants of the surrounding historic townscape and neighbouring historic buildings and spaces. The Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building, Righton Building, Grosvenor Building and the Former Town Hall Façade to Mabel Tylecote Building draw a degree of significance from their relationship with All Saints Park which formed an integral part of the early development of the area. In all cases, the Site is concluded to make a neutral contribution to the significance of the heritage assets as part of their setting.

Future Baseline

7.39 The Site and identified heritage assets are located within a highly developed and varied urban context which comprises a mixture of historic and modern buildings and spaces. In the absence of the Proposed Scheme or other planned development, it is anticipated that there would be limited change to the baseline in the future and the overall varied, urban character of the locality is unlikely to be changed as a result.

Primary and Tertiary Mitigation

Construction Stage

The following primary and tertiary mitigation which has been evaluated as part of the construction stage assessment is outlined below.

- All construction activity will be subject to a Construction Environmental Management Plan (CEMP), which will include a series of measures to reduce and avoid environmental effects, such as the use of temporary fencing / hoarding around the perimeter of the Site.
- Construction working hours (noisy work) would also be limited to 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays, with operations outside of these hours to be agreed with MCC.

Operational Stage

7.40 The following primary and tertiary mitigation which has been evaluated as part of the operational stage assessment is outlined below.

- Areas of open space – The Proposed Scheme will create a central area of public realm accessible from Higher Chatham Street to the west and Cambridge Street to the east of the Site. An open courtyard would also be provided at the centre of Phase 1.
- Scale, height and massing – The Proposed Scheme will be across two distinct plots of buildings, the massing and height of which would vary between 8 and 30 storeys above plinth, stepping up to the north east corner in each building plot. The maximum building height on Site will be up to 111.725m AOD for Phase 1 and 129.275m for Phase 2. The scale, height and massing of the Proposed Scheme is a contextual response to the existing and emerging scale and massing of buildings within the surrounding area. The conceptual form of the Proposed Scheme as two distinct plots of buildings which step up to corner towers will break down their perceived massing and provide visual interest;
- Materials, finishes and colours – The Proposed Scheme will utilise a contemporary material palette comprising a mixture of precast concrete, PPC aluminium and glazing to provide visual interest and contrast with the prevailing sandstone and brick materials present in historic buildings in the vicinity.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

7.41 The effects of the construction stage will be temporary and medium-term. There are several forms of temporary effects that may affect the heritage assets during this stage. This includes the temporary diminution in the quality of the setting of the heritage assets, as a result of the following factors:

- Site securement, formation of construction access(s) and temporary construction compound;
- Site preparation works, including clearance works and demolition;
- Excavation, earthworks, levels and material management;
- Construction of buildings and associated infrastructure (i.e. services and plant), including the erection of construction infrastructure, e.g. scaffolds, fixed tower crane and hoarding; and
- Implementation of proposed landscaping, lighting, internal and external finishing.

7.42 The above factors will result in change in the setting of heritage assets and increased visual and audial intrusion. The risk of such effects will be partly mitigated in the context of the phasing of the Proposed Scheme and the implementation of a CEMP. However, overall, such changes could detract from the heritage significance of the identified heritage assets within the study area.

Change within the setting of a designated heritage asset [Former Manchester Ear Hospital; Roman Catholic Church of St Augustine; Ormond Building; Righton Building; Grosvenor Building; and Former Town Hall Façade to Mabel Tylecote Building]

Listed Buildings to the west of Lower and Higher Ormond Street – Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building and Righton Building (grade II listed building group)

- 7.43 The effects of the construction stage are temporary in nature and expected to be medium-term, lasting only for the duration of the anticipated construction programme.
- 7.44 Taking account of the proximity of the Site to the group of listed buildings to the west of Lower and Higher Ormond Street, construction activity affecting the receptors relates both to the visual impact of the Proposed Scheme while under construction together with the associated construction infrastructure and equipment, as well as other experiential effects including associated noise from construction and vehicular activity.
- 7.45 During the construction stage, the incomplete structures of the Proposed Scheme and associated construction infrastructure and equipment would be experienced within the setting of, and in combination with, the listed buildings, particularly in regard to views from Lower and Higher Ormond Street, All Saints Park and its environs. While under construction, the Proposed Scheme has the potential to be an unsightly distracting element within the setting of the receptors and affecting the ability to appreciate their significance. The gradual introduction of new buildings of up to 24 and 30 storeys (above ground) in height on the Site would also diminish the townscape prominence of the heritage assets and increase the visual complexity of a section of townscape which is otherwise unified by its consistent scale and materials. The distracting nature of the Proposed Scheme would be reduced in the latter stages of the construction programme, after the external envelope of the Proposed Scheme has been completed.
- 7.46 The sensitivity of the listed buildings to the west of Lower and Higher Ormond Street is considered to be medium. The magnitude of change is considered to be small. Therefore, there are likely to be indirect, temporary, medium-term, adverse effects which are considered to be minor.

Listed Buildings to the south of Cavendish Street – Grosvenor Building and Former Town Hall Façade to Mabel Tylecote Building (grade II listed building group)

- 7.47 The effects of the construction stage are temporary in nature and expected to be medium-term, lasting only for the duration of the anticipated construction programme.
- 7.48 Taking account of the proximity of the Site to the listed buildings to the south of Cavendish Street, construction activity affecting the receptors relates both to the visual impact of the Proposed Scheme while under construction together with the associated construction infrastructure and equipment, as well as other experiential effects including associated noise from construction and vehicular activity.
- 7.49 During the construction stage, the incomplete structures of the Proposed Scheme and associated construction infrastructure and equipment would be experienced within the setting of, and in combination with, the listed buildings to the south of Cavendish Street, principally in views from along Cavendish Street and from within All Saints Park and its

environs. While under construction, the Proposed Scheme will form an unsightly element within the setting of the receptors, albeit as a peripheral element within key views of the principal elevations as a result of their northerly orientation. The gradual introduction of new buildings of up to 24 and 30 storeys (above ground) in height on the Site would also slightly diminish the townscape prominence of the heritage assets. The distracting nature of the Proposed Scheme would be reduced in the latter stages of the construction programme, after the external envelope of the Proposed Scheme has been completed.

- 7.50 The sensitivity of the listed buildings to the south of Cavendish Street is considered to be medium. The magnitude of change is considered to be small. Therefore, there are likely to be indirect, temporary, medium-term, adverse effects which are considered to be minor.

Secondary Mitigation or Enhancement

- 7.51 No secondary mitigation or enhancement is required over and above that which has been evaluated as part of the Proposed Scheme.

Residual Effect

- 7.52 In the absence of secondary mitigation, the residual effects for the Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building, Righton Building, Grosvenor Building and Former Town Hall Façade to Mabel Tylecote Building are the same as those reported in the pre-mitigation scenario.

Significance

- 7.53 This effect is considered to be **Not Significant**.

Change within the setting of a non-designated heritage asset [Salutation Public House]

- 7.54 The effects of the construction stage are temporary in nature and expected to be medium-term, lasting only for the duration of the anticipated construction programme.
- 7.55 Taking account of the proximity of the Site to the Salutation Public House, construction activity affecting the receptor relates both to the visual impact of the Proposed Scheme while under construction together with the associated construction infrastructure and equipment, as well as other experiential effects including associated noise from construction and vehicular activity.
- 7.56 During the construction stage, the incomplete structures of the Proposed Scheme and associated construction infrastructure and equipment would be experienced within the setting of, and in combination with, the non-designated heritage asset, most notably in views from Boundary Street West. While under construction, the Proposed Scheme has the potential to be an unsightly distracting element within the setting of the receptor and affecting the ability to appreciate its significance. The distracting nature of the Proposed Scheme would be reduced in the latter stages of the construction programme, after the external envelope of the Proposed Scheme has been completed.
- 7.57 The sensitivity of the Salutation Public House is considered to be low. The magnitude of change is considered to be negligible. Therefore, there is likely to be an indirect, temporary, medium-term, adverse effect which is considered to be negligible.

Secondary Mitigation or Enhancement

- 7.58 No secondary mitigation or enhancement is required over and above that which has been evaluated as part of the Proposed Scheme.

Residual Effect

- 7.59 In the absence of secondary mitigation, the residual effect for the Salutation Public House is the same as reported in the pre-mitigation scenario.

Significance

- 7.60 This effect is considered to be **Not Significant**.

Operational Stage

- 7.61 The effects of the operational stage will be permanent. These include change in the character of the setting of the heritage assets from the presence of new buildings and associated areas of public realm, as well as the intensification of use of the Site. These may result in change to the setting of heritage assets including but not limited to increased visual presence of development on the Site. Such effects would be partially mitigated by primary mitigation described earlier in this Chapter and set out in **Chapter 4: Development Specification**. However, overall, such changes could affect the experience and appreciation of the heritage significance of assets within the study area.

Change within the setting of a designated heritage asset [Former Manchester Ear Hospital; Roman Catholic Church of St Augustine; Ormond Building; Righton Building; Grosvenor Building; and Former Town Hall Façade to Mabel Tylecote Building]

Listed Buildings to the west of Lower and Higher Ormond Street – Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building and Righton Building (grade II listed building group)

- 7.62 The Proposed Scheme would introduce new buildings of up to 24 and 30 storeys in height (above ground) approximately 30-50 metres to the west of the listed buildings to the west of Lower and Higher Ormond Street. As a result of its scale and height, the Proposed Scheme would extend the visual relationship between the Site and the heritage assets, particularly in regard to views from the east on Lower and Higher Ormond Street and within All Saints Park and its environs where the Proposed Scheme would be visible in the background, reducing the open sky beyond the assets. In these views, the Proposed Scheme would have prominence due to its comparative scale, massing and height but would be experienced as a separate layer and phase of development distinct from the historic townscape fronting the square which will remain unified and legible by its consistent scale and materials.
- 7.63 The impacts are limited by a number of factors, including the existing varied, urban character of the setting of the heritage assets and the design quality, architectural character and materiality of the Proposed Scheme. The Proposed Scheme would sustain identified positive aspects of the setting of the heritage assets, as well as their historic interest which is primarily derived from the legibility of their historic use and associations. The impacts relate solely to the experience of the assets within their setting and should be considered within the context of the limited degree to which setting contributes to their significance, taking account of the historic evolution of the surrounding area.

- 7.64 The sensitivity of the listed buildings to the west of Lower and Higher Ormond Street is considered to be medium. The magnitude of change is considered to be small. Therefore, there is likely to be an indirect, permanent, long-term, adverse effect which is considered to be minor.

Listed Buildings to the south of Cavendish Street – Grosvenor Building and Former Town Hall Façade to Mabel Tylecote Building (grade II listed building group)

- 7.65 The Proposed Scheme would introduce new buildings of up to 24 and 30 storeys in height (above ground) approximately 80-140 metres to the west of the listed buildings to the south of Cavendish Street. As a result of its scale and height, the Proposed Scheme would extend the visual relationship between the Site and the heritage assets, principally in terms of views from Cavendish Street and All Saints Park and its environs. In respect of these views, the townscape prominence of the assets would be marginally reduced to their proximity to the Proposed Scheme and comparatively lower scale and height.
- 7.66 The impacts are limited by a number of factors, including the northerly orientation of the assets which would ensure that the Proposed Scheme is experienced as a peripheral element in key views of the principal elevations, as well as the aspects of architectural interest that would be sustained by the Proposed Scheme. The impacts relate solely to the experience of the assets within their setting and should be considered within the context of the existing character of the setting of the heritage assets, which is varied and includes taller, modern buildings, as well as the limited overall contribution that setting makes to their significance. The Proposed Scheme would not affect the ability to appreciate the relationship between the assets and All Saints Park (Grosvenor Square) which is a key aspect of their setting, or the group value which is derived from the presence of other historic buildings and fragments of townscape.
- 7.67 The sensitivity of the listed buildings to the south of Cavendish Street is considered to be medium. The magnitude of change is considered to be negligible. Therefore, there is likely to be an indirect, permanent, long-term, adverse effect which is considered to be negligible.

Secondary Mitigation or Enhancement

- 7.68 No secondary mitigation or enhancement is required over and above that which has been evaluated as part of the Proposed Scheme.

Residual Effect

- 7.69 In the absence of secondary mitigation, the residual effects for the Former Manchester Ear Hospital, Roman Catholic Church of St Augustine, Ormond Building, Righton Building, Grosvenor Building and Former Town Hall Façade to Mabel Tylecote Building are the same as those reported in the pre-mitigation scenario.

Significance

This effect is considered to be **Not Significant**.

Change within the setting of a non-designated heritage asset [Salutation Public House]

- 7.70 The Proposed Scheme would introduce new buildings of up to 24 and 30 storeys in height (above ground) to the immediate north of the Salutation Public House and on the opposite side of Boundary Street West. The Proposed Scheme would reinforce the existing and predominantly modern, urban character of the setting of the asset by introducing contemporary buildings of increased scale and mass within its immediate context. The

Proposed Scheme would enhance the quality of the built environment within the immediate context of the asset, including in key views taken from Boundary Street West. Taking account of the existing varied character of the setting of the asset, which includes taller, modern buildings, and the limited contribution that setting makes to significance, it is concluded that the Proposed Scheme would sustain the local heritage significance of the asset.

- 7.71 The sensitivity of the Salutation Public House is considered to be low. The magnitude of change is considered to be negligible. Therefore, there is likely to be an indirect, permanent, long-term, beneficial effect which is considered to be negligible.

Secondary Mitigation or Enhancement

- 7.72 No secondary mitigation or enhancement is required over and above that which has been evaluated as part of the Proposed Scheme.

Residual Effect

- 7.73 In the absence of secondary mitigation, the residual effect for the Salutation Public House is the same as reported in the pre-mitigation scenario.

Significance

- 7.74 This effect is considered to be **Not Significant**.

Limitations and Assumptions

- 7.75 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.
- The assessment of effects has been undertaken on the basis of the information supplied on the construction period, design of the Proposed Scheme and estimated phased construction programme and completion date;
 - The baseline assessment relies on the accuracy of the data provided by secondary and archive sources. It is assumed that information on the HER database was accurate, as of July 2024;
 - Not all views to and from heritage assets have been modelled and assessed. A series of views were agreed with MCC as being representative for the purposes of the assessment, and professional judgement, informed by those representative views and supported by a site visit, has been used to assess visual impacts on the heritage significance and setting of receptors; and
 - There has been no access to the interiors of the relevant heritage assets, with an external inspection sufficient for the purposes of assessing the impacts of the Proposed Scheme on their particular heritage significance through change in part of the assets' setting.

Summary

- 7.76 **Table 7.8** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

7.77 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 7.8: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Change within the setting of a designated heritage asset	Former Manchester Ear Hospital Roman Catholic Church of St Augustine Ormond Building Righton Building Grosvenor Building Former Town Hall Façade to Mabel Tylecote Building	Minor adverse	NO
Change within the setting of a non-designated heritage asset	Salutation Public House	Negligible adverse	NO
Operational Stage			
Change within the setting of a designated heritage asset	Former Manchester Ear Hospital Roman Catholic Church of St Augustine Ormond Building Righton Building Grosvenor Building Former Town Hall Façade to Mabel Tylecote Building	Minor adverse Negligible adverse	NO
Change within the setting of a non-designated heritage asset	Salutation Public House	Negligible beneficial	NO

References

-
- ¹ Planning (Listed Buildings and Conservation Areas) Act 1990. Available at: <https://www.legislation.gov.uk/ukpga/1990/9/contents> [Date accessed: 10/03/25].
- ² MHCLG (2024). National Planning Policy Framework. Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf [Date accessed: 10/03/25].
- ³ Greater Manchester Combined Authority (2024). Places for Everyone. Available at: <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/strategic-planning/places-for-everyone/pfe-adoption/> [Date accessed: 10/03/25].
- ⁴ Manchester City Council (2012). Core Strategy Development Plan Document. Available at: https://www.manchester.gov.uk/info/200074/planning/3301/core_strategy [Date accessed: 10/03/25].
- ⁵ Manchester City Council (1995). Unitary Development Plan. Available at: https://www.manchester.gov.uk/info/500207/planning_and_regeneration/2148/unitary_development_plan_udp [Date accessed: 10/03/25].
- ⁶ Highways England (2020). The 'Design Manual for Roads and Bridges' ((LA 104 Environmental Assessment and Monitoring) and (LA 106 Cultural Heritage Assessment)). Available at: <https://www.standardsforhighways.co.uk/dmrb>. [Date accessed: 05/09/24].
- ⁷ IEMA, IHBC and ClfA (2021). Principles of Cultural Heritage Impact Assessment in the UK. Available at: https://www.archaeologists.net/sites/default/files/j30361_iema_principlesofchia_v8.pdf. [Date accessed: 05/09/24].
- ⁸ Historic England (2019). Advice Note 12, Statements of Heritage Significance: Analysing Significance in Heritage Assets. Available at: <https://historicengland.org.uk/images-books/publications/statements-heritage-significance-advice-note-12/heag279-statements-heritage-significance/>. [Date accessed: 05/09/24].
- ⁹ Historic England (2015). Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment. Available at: <https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/gpa2/>. [Date accessed: 05/09/24].
- ¹⁰ Historic England (2017). Historic Environment Good Practice Advice in Planning Note 3 (Second Edition) 'The Setting of Heritage Assets'. Available at: <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/>. [Date accessed: 05/09/24].
- ¹¹ Historic England (2017). Historic England Advice Note 4: Tall Buildings. Available at: <https://historicengland.org.uk/images-books/publications/tall-buildings-advice-note-4/heag037-tall-buildings-v2/>. [Date accessed: 05/09/24].

8. Wind Microclimate

Introduction

- 8.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Wind Microclimate.
- 8.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 8.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 8.4 This Chapter, and its associated **Figures 8.1 - 8.20** and **Appendix 8.1: CFD Methodology**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 8.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 8.6 No consultation has been undertaken to inform the Wind Microclimate assessment beyond the EIA Scoping Report.

Scope of the Assessment

- 8.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 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

- 8.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Effects on neighbouring private balconies, terraces, or roof spaces as these are optional spaces that are expected to be used in 'fair weather' i.e. optimal temperature, daylight, precipitation, etc.

Effects Considered Likely to be Significant

- 8.9 The following effects (**Table 8.1**) were considered likely to be significant and are reported within this Chapter:

Table 8.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Altered wind safety conditions	Pedestrians and cyclists in external public areas on-Site and in the immediate surroundings	Operation
Altered wind comfort conditions	Pedestrians and cyclists in external public areas on-Site and in the immediate surroundings	Operation

- 8.10 The construction stage effects will not be modelled as a separate scenario within the ES as the operational stage is considered to be a worst cast proxy (i.e. when the massing is at it's maximum form). Therefore, the construction stage effects are considered to be less than or on parity with the operational stage effects.

Assessment Methodology

Legislative Framework, Policy and Guidance

- 8.11 The following legislation and policy has informed the assessment of effects within this Chapter,

- The National Planning Policy Framework (NPPF), 2024.

- 8.12 The following guidance has informed the assessment of effects within this Chapter,

- National Design Guide (2021)¹ and National Model Design Code (2021)²;
- Manchester Local Plan³;
- Guide to Development in Manchester Supplementary Planning Document and Planning Guidance⁴; and
- London Docklands Development Corporation 'The evaluation of the windiness of a building complex before construction', (T.V. Lawson, 1990) (the 'Lawson LDDC criteria')⁵.

Defining the Study Area

- 8.13 The study area used for the wind microclimate assessment includes the accessible external public realm within the Site and immediate surroundings within a ~300m radius, as shown in **Figure 8.1**. The assessment also assesses the conditions on accessible upper terraces on the Proposed Scheme (see **Figure 8.8-8.11**). No landscaping was modelled, and no other terraces or balconies were assessed.

Background Studies to Inform the ES / Establishing the Baseline

8.14 **Table 8.2** summarises all studies/surveys/analysis/evaluations undertaken to inform the assessment presented within this Chapter.

Table 8.2: Background Studies / Surveys / Evaluations /Analysis

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Site Visit	External walk around the existing site to understand existing wind climate.	20th June 2024
Review of local wind climate	Collection, review and processing of latest historic wind data from Manchester Airport.	Autumn 2024

Assessment Process

Assessment Scenarios

8.15 The following scenarios were assessed for wind microclimate conditions using Computational Fluid Dynamics (CFD):

- Baseline;
- Baseline + Proposed Scheme; and
- Baseline + Proposed Scheme + Cumulative Projects (Cumulative Projects within a 500m radius).

8.16 Note: The Cumulative projects listed in **Table 14.1** which are at a greater distance than 300m have been reviewed using professional judgement and will not have significant cumulative effect. The assessment of cumulative effects is reported in **Chapter 14: Assessment of Cumulative Effects**.

Computational Fluid Dynamics

8.17 The assessment of wind conditions is supported by a CFD study to confirm and quantify pedestrian level wind conditions. The CFD analysis has been carried out for 16 equally spaced wind directions (in 22.5° intervals).

8.18 A detailed 3D representation of the assessment scenarios has been produced (see **Figures 8.4, 8.11, and 8.17**). Building surroundings within a distance of at least 500m from the centre of the Site have been modelled for each assessment scenario. This distance has been extended from the ~300m study area to account for wind effects from significant tall buildings (e.g. Deansgate Square) based on professional judgement.

8.19 Small building details of less than 0.5m have not been modelled, as they will not be expected to impact the local wind conditions.

- 8.20 Conservatively, landscaping, such as trees and other planting, has not been modelled on- or off-Site for the assessments. Landscaping is likely to provide a beneficial impact on the wind environment by dissipating local windiness and therefore its exclusion means that a 'worst-case' has been modelled.
- 8.21 Details of the mesh including cell count, prism layers, and refinement zones are included in the **Appendix 8.2**
- 8.22 A steady-state Reynolds-Averaged Navier Stokes (RANS) based modelling approach has been used for each of the 16 wind directions and for each assessment scenario. Simulations were run to convergence, determined through monitoring of probes located within the Site.
- 8.23 Results are presented as Lawson contour plots, representing comfort and safety wind speeds at pedestrian-chest level (1.5m above ground) for the 'worst' (winter) season and summer season. The Lawson comfort and safety contour are obtained by combining the directional wind speed-up ratios with the Weibull statistics as obtained from the wind climate study.

Reporting of the Environmental Effect and Significance Criteria

- 8.24 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the operational stage. 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 Sensitivity of Receptor

- 8.25 The sensitivity of affected receptors has been considered on a scale of **high, medium, low or negligible**.
- 8.26 Receptors in the wind microclimate assessment are defined as regular users of the accessible external spaces on-Site and in the immediate surroundings within the Site. Users include regular pedestrians and cyclists. Accessible external spaces include thoroughfares, cycle routes, cross walks, areas of outdoor amenity, entrances, bus stops, external seating areas, etc.
- 8.27 The sensitivity of receptors is related to the intended use at each location, as the key consideration is whether the wind conditions experienced at a particular receptor location are suitable for the intended use (in terms of pedestrian comfort and distress thresholds).
- 8.28 **Table 8.3** describes some of the types of receptors and their sensitivity. **Figure 8.8-8.10** also shows areas of sensitive receptors, including the locations of main entrances which are areas of high wind sensitivity for users.

Table 8.3: Examples of receptors (i.e. pedestrians/cyclists) and their expected sensitivity.

Receptor	Likely sensitivity Scale
Users of a Main Entrance	High
Users of a secondary Entrance (including fire exits)	Medium

Receptor	Likely sensitivity Scale
Users of a public thoroughfare or cycle path	Low
Users of restricted areas (i.e. places where people do not need to be all at all times, such as those used for maintenance and where discretion can be used when accessing).	Negligible

- 8.29 This is not an exhaustive list. Additional receptors and their likely sensitivity will be determined using professional judgment.
- 8.30 The environmental wind assessment will be based on the 'worst season' (typically the winter season) for areas that will be accessible all year round, and summer season for areas typically only used in summer (i.e. flexible amenity/student terrace spaces).

Determining the Wind Conditions

- 8.31 Magnitude of wind conditions have been considered on a scale of **large, medium, small** or **negligible** for this EIA assessment.
- 8.32 The criteria used to describe the wind conditions in this assessment are the Lawson criteria developed for the London Docklands Development Corporation (Lawson LDDC). The Lawson LDDC criteria are used widely throughout the UK. These criteria are useful to describe windiness in terms of acceptability for particular activities.
- 8.33 Acceptable comfort conditions for various activities in order of increasing windiness are described in **Table 8.4**.
- 8.34 The conditions described below are the limiting tolerable criteria for comfort. For ideal conditions, the windiness in an area with a known activity will be a category better (i.e. tolerable conditions at an entrance will be in the 'Standing' range but ideal conditions will be in the 'Occasional Sitting' range). For more sensitive activities, such as regular use for external sitting and eating, conditions should be well within the 'Frequent Sitting' category.

Table 8.4: Table of City Lawson Comfort Criteria/Condition

Lawson Criteria/ Conditions	5% Seasonal Exceedance Upper Threshold Speed	Description	Likely Magnitude scale*	Plot Colour
‘Sitting’	4m/s	Acceptable for occasional outdoor seating, e.g. general public outdoor spaces, etc.	Negligible	Blue
‘Standing’	6m/s	Acceptable for entrances, bus stops, covered walkways or passageways beneath buildings, and terraces intended for occasional use.	Small	Green
‘Strolling’	8m/s	Acceptable for external pavements, walkways.	Medium	Yellow
‘Business Walking’	>8m/s	Not comfortable for regular pedestrian access	Large	Orange

*The likely magnitude in this table is a guide but final magnitude in the assessment will be based on professional judgment.

8.35 In the assessment, the words ‘Frequent Sitting’, ‘Occasional Sitting’, ‘Standing’, ‘Strolling’, and ‘Business Walking’ are used to describe comfort levels of windiness as described in **Table 8.4**.

8.36 As shown in **Table 8.5**, there are also distress criteria. The distress criterion for ‘Pedestrian Safety Limit’ is equivalent to a mean speed of over 15 m/s and a gust speed of 28 m/s (62 mph), to be exceeded less than once a year. This is intended to identify wind conditions which individuals or cyclists may find physically difficult, especially if they are less able-bodied.

Table 8.5: Table of Lawson City Distress criteria

Criteria	Annual Hourly-Average Exceedance Speed (once a year)	Description	Likely Magnitude scale*	Plot Colour
'General Public Access'	N/A	Members of the general public and cyclists are expected to be able to access the area safely in normal windy weather	Negligible - Small	No markings
'Pedestrian Safety Limit'	>15m/s	Presents a safety risk for pedestrians, especially to more vulnerable members of the public.	Medium - Large	Orange
'Able-Bodied Safety Limit'	>20m/s	Presents a safety risk for all pedestrians.	Large	Red

*The likely magnitude in this table is a guide but final magnitude in the assessment will be based on professional judgment.

Determining the Level of Effect

- 8.37 The level of effect has been informed by the magnitude of wind conditions 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 8.6** has been a tool which has assisted with this process.
- 8.38 Whilst **Table 8.6** 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 '*negligible*' or '*adverse*'.

Table 8.6: Matrix to Support Determining the Level of Effect

		Sensitivity			
		High	Medium	Low	Negligible
Wind Condition	Large	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Small	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

8.39 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.
- Conditions may also be considered negligible when the baseline condition is above a threshold for an activity and those conditions persist in the presence of the Proposed Scheme (i.e. conditions located in a public thoroughfare are above the safety limit for general public in the baseline and with the Proposed Scheme).

- 8.40 The duration of the effect has been assessed as 'long-term' and is considered to be greater than 10 years.

Determining Significance

- 8.41 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.
- 8.42 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

- 8.43 The baseline conditions are presented in **Figure 8.5 - Figure 8.7**. The baseline conditions within the study area are all within 'Sitting' conditions in the summer and within 'Sitting' to 'Standing' conditions in the worst-case. These conditions are negligible to small wind impacts and are acceptable for all existing uses including main entrances, secondary entrances, and thoroughfares.

Future Baseline

- 8.44 A qualitative assessment of the future baseline has been undertaken using professional judgment.

Natural Changes

- 8.45 Natural changes within the wind environment are not expected in the scenario without the Proposed Scheme or other cumulative developments.
- 8.46 Wind metrics projections over the UK are published in the UKC18 Factsheet: Wind Climate⁶. This indicates that,

"[...] there are no compelling trends in storminess as determined by the gust wind speeds, from the UK wind network over the last four decades.

The global projections over the UK show:

- An increase in near surface wind speeds over the UK for the second half of the 21st century for the winter season when more significant impacts of wind are experienced. This is accompanied by an increase in frequency of winter storms over the UK. However, the increase in wind speeds is modest compared to interannual variability for the PPE-15⁷.*
- [Therefore,] No trend in wind speed over the UK for the mean of the CMIP5-13⁸"*

- 8.47 Although these trends can be seen on a broad geographical scale over decades, it is much more difficult to identify how site-specific wind conditions would be affected over shorter timescales. It should also be noted that the acceptability of environmental wind conditions varies to some extent depending on the general climate – small changes are not significant. As such, the effects of climate change have not been considered within the scope of this assessment.

Cumulative Impact

8.48 Cumulative Projects identified as potentially having an impact are listed below and were included as they were fully within 500m of the centre of the Site and included massing changes.

- Plot 11 Block C, First Street South (138831/FO/2023);
- Land bounded by River St. to the North, Plot 10B to the east (136043/FO/2023);
- Plot 10A of the First St Masterplan (136170/FO/2023);
- Plot 11, First Street (125573/FO/2019);
- No.3 Circle Square (134288/FO/2019); and
- The Former Gamecock Public House, Boundary Lane (130387/FO/2023).

8.49 Cumulative Projects north-west of the Site (i.e. the First Street Masterplan) are mostly new towers and are expected to provide some shelter from oncoming winds. However, winds from this direction are not very common (prevailing winds arrive from the south and west). Therefore, Cumulative Projects to the north-west are only expected to have a marginal improvement on wind conditions across the existing Site.

8.50 Cumulative Projects in other directions (south-west and north-east) are low-rise and do not substantially alter the urban massing/form. Therefore, Cumulative Projects in these areas are not expected to have any impact on the wind conditions on the existing Site.

8.51 Overall, some marginal sheltering may occur from the north-west winds but that is not expected to alter the wind conditions.

Primary and Tertiary Mitigation

Operational Stage

8.52 The following primary and tertiary mitigation which has been evaluated as part of the operational stage assessment is outlined below.

- The building massing has been refined during the design stage to minimise downdraft into the internal courtyards and the underpasses on the east side of the Site through the following:
 - The towers are located on the north-east corners of each courtyard and orientated with their corner facing south-south-west to encourage prevailing winds to move around the tower, rather than down into the courtyard.
 - Increases in massing height from south to north and west to east (excluding the towers) has been kept to a minimum to reduce impacts of downdraft in the courtyard and onto the surrounding streets.
 - The tower corners are slightly rounded which encourages wind to flow around the towers at high level.

- A canopy/roof has also been included in the courtyard to Phase 01 (southern building block) to help shelter users from any down draft and disrupt a wind mechanism forming between the courtyard, through the underpass in the east massing, to the east side of the Site.
- On the podium (level 07) porous walls/screens/netting is placed around the Multi Use Game Areas (MUGA).

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

Altered Wind Comfort Conditions

- 8.53 Plots showing the wind conditions around the Proposed Scheme are shown in **Figures 8.12-8.15**.
- 8.54 These show that wind conditions on Site do increase with the presence of the Proposed Scheme, mostly around Phase 02 (i.e. the northern building block). Conditions are mostly in the calm 'Sitting' category in both summer and winter but some areas increase to 'Strolling' in the winter.
- 8.55 Prevailing winds are downdrafted into the courtyards of Phase 01 and 02 and then sucked through the underpass in the eastern blocks to connect with the area of low pressure on the east side of the Site. This produces 'Strolling' conditions in the winter within areas of the underpass and may impact the use of the secondary doors into the security Lobby. It is noted that conditions at the main doors in the eastern face are much calmer and these doors could be used instead if necessary.
- 8.56 Conditions on the level 07 podium are mostly in the 'Sitting' to 'Standing' ranges in summer. Throughout the year, wind conditions are expected to fluctuate up to 'Strolling' in some areas but the use of the space will be determined by a broader range of climatic factors, such as temperature, precipitation and daylight.
- 8.57 Given the above and conclusions of the CFD modelling, the corresponding level effects of these comfort conditions on each relevant receptor are discussed below. Safety conditions are discussed in a separate section later within this chapter.

Users of main entrances on ground floor and Level 01

- 8.58 The sensitivity of users of the main entrances at ground level and level 01 are considered to be **high**. The wind condition at all main entrances on the ground level and level 01 are in the 'Sitting' to 'Standing' range and are considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **negligible**.

Users of secondary entrances on ground floor and Level 01

- 8.59 The sensitivity of users of secondary entrances is considered to be **medium**.
- 8.60 The wind comfort conditions at the secondary entrances to the security lobby in the underpass in Phase 01 are 'Strolling' and are considered to be **medium**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **moderate**.

- 8.61 The wind comfort conditions at all other secondary entrances on the ground level and level 01 (other than those in the underpasses, discussed above) are considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **negligible**.

Users of thoroughfares on ground floor and Level 01

- 8.62 The sensitivity of users of thoroughfares at ground level is considered to be **low**. The wind comfort condition at all thoroughfares on the ground level and level 01 are in the 'Sitting' to 'Strolling' range and are considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **negligible**.

Users of main entrances on level 07 podium

- 8.63 The sensitivity of users of the main entrances on level 07 podium is considered to be **high**. The wind condition at all main entrances on the ground level and level 07 is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **negligible**.

Users of recreational/fair-weather leisure space on level 07 podium

- 8.64 The sensitivity of users of the level 07 podium is considered to be **medium**. The wind condition at all main entrances on the ground level and level 07 is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **negligible**.

Secondary Mitigation or Enhancement

- 8.65 Mitigation will focus on reducing the impact of wind conditions within the underpasses in both Phase 01 and 02.
- 8.66 It is noted that conditions at the main doors in the eastern face are much calmer and these doors could be used instead if necessary. Active mitigation would include locking the doors on windy days at the discretion of the users. This could be secured through an on-site management plan and training.
- 8.67 Passive mitigation could include one or a combination of the following types of interventions:
- Further development of the canopy design in the courtyard of Phase 01 and the introduction of a canopy in Phase 02.
 - Detailed design of hard and soft landscaping such as artwork, wayfinding or information signs, planting mounds, shrubs, and/or trees to dissipate the winds energy within the courtyard before it reaches the underpass.
- 8.68 Mitigation can be secured via Condition with details of the additional mitigation (including location, size, porosity and orientation) tested, verified and documented before occupation of the Proposed Scheme.

Residual Effect

- 8.69 The impact and changes in residual effects has been conducted using professional judgment.

Users of main entrances on ground floor and Level 01

- 8.70 No mitigation is recommended for main entrances on the ground floor and level 01. Therefore, residual effects for all main entrances, is that same as that reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Users of secondary entrances on ground floor and Level 01

- 8.71 The sensitivity of users of secondary entrances is considered to be **medium**.
- 8.72 The wind conditions at the secondary entrances to the security lobby in the underpass in Phase 01 following secondary mitigation, are expected to be 'Standing' which are considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse residual effect** which is considered to be **negligible**.
- 8.73 No mitigation is recommended for any other secondary entrances on the ground floor and level 01. Therefore, the residual effects for all other secondary entrances at ground level and level 01 is that same as that reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Users of thoroughfares on ground floor and Level 01

- 8.74 The sensitivity of users and thoroughfare in the underpass in Phase 02 considered to be **low**. The wind conditions, following secondary mitigation, is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse residual effect** which is considered to be **negligible**.
- 8.75 No mitigation is recommended for any other thoroughfares on the ground floor and level 01. Therefore, the residual effects for all other thoroughfares at ground level and level 01 is that same as that reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Users of main entrances on level 07 podium

- 8.76 No mitigation is recommended for main entrances on level 07 podium. Therefore, residual effects for all main entrances, is that same as that reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Users of recreational/fair-weather leisure space on level 07 podium

- 8.77 No mitigation is recommended for recreational/fair-weather leisure space on level 07 podium. Therefore, residual effects for recreational/fair-weather leisure space on level 07 podium, is that same as that reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Significance

- 8.78 With the inclusion of all secondary mitigation measures, all comfort effects on all levels are **Not Significant**.

Altered Wind Safety Conditions

- 8.79 Without the benefits of a canopy in the courtyard, the suction through the underpass in Phase 02 is strong, producing conditions that exceed the safety threshold for 'General Public Access'. This may impact the safe use of the secondary doors into the security Lobbies. The effects of these conditions on receptors are discussed below.

Users in the underpass to Phase 02

- 8.80 The sensitivity of users of the secondary entrances to the security lobby in the underpass in Phase 02 is considered to be **medium** and the sensitivity of users of the thoroughfare in the same space is considered **low**. The wind condition is considered to be **large**. Therefore, there

is likely to be a **direct, permanent, long-term, adverse effect** which is considered to be **major**.

Users of all other areas both on-and-off Site and all levels

- 8.81 The sensitivity of users of main entrance, secondary entrance, and thoroughfares in all other areas is considered to be **high-low**. The wind safety conditions, following secondary mitigation, is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, negligible residual effect** which is considered to be **negligible**.

Secondary Mitigation or Enhancement

- 8.82 Secondary mitigation recommended for safety conditions are the same as those in recommended for comfort conditions above (i.e. **Paragraphs 8.65 to 8.68**).

Residual Effect

- 8.83 The impact and changes in residual effects has been conducted using professional judgment.
- 8.84 The sensitivity of users of the secondary entrances to the security lobby in the underpass in Phase 02 is considered to be **medium** and the sensitivity of users of the thoroughfare in the same space is considered **low**. The wind conditions, following secondary mitigation, is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse residual effect** which is considered to be **negligible**.
- 8.85 No mitigation is recommended for any other main entrances, secondary entrances, and thoroughfares in any other areas on all floors. Therefore, the residual effects for all other areas are the same as those reported in the pre-mitigation scenario, i.e. a **negligible effect**.

Significance

- 8.86 With the inclusion of all secondary mitigation measures, all safety effects on all levels are **Not Significant**.

Limitations and Assumptions

- 8.87 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.
- The CFD simulations provide an average expected wind speed in regard to pedestrian comfort, and typical forms of CFD do not have the ability to fully predict the gusty nature of wind. Areas which would have uncomfortable wind conditions would be likely to have instances of strong winds. As such, professional judgement incorporating Arup's experience of a large number of similar projects both within the UK and internationally has been applied, informed by the CFD results to identify areas of the Proposed Scheme likely to have instances of strong winds.
 - The judgement on whether the wind conditions for a particular public area (e.g., amenity space) are acceptable for the intended use is based on professional judgement and the expected usage in poor weather (i.e. rain or cold temperatures).
 - Effects of hard and soft landscaping and detailed mitigation development are not accounted for within the initial assessment.

- The 3D model used in the CFD was undertaken with a model that included a 4.8m tall screen around both tower roofs with 50% porosity on top of the roof height of 87m (~92m total).
- The impact of secondary mitigation/enhancements on effects has been qualitatively assessed using professional judgment.

Summary

- 8.88 **Table 8.7** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.
- 8.89 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 8.7: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Operational Stage			
Altered Wind Comfort Conditions	Users of main entrances at ground level and level 01	Negligible	NO
	Users of secondary entrances	Negligible	NO
	Users of thoroughfares at ground level and level 01	Negligible	NO
	Users of main entrances on level 07 podium	Negligible	NO
	Users of recreational/fair-weather leisure space on level 07 podium	Negligible	NO
Altered Wind Safety Conditions	Users of main entrances, secondary entrances, thoroughfares, and recreational/fair-weather leisure space on all levels	Negligible	NO

References

¹ DLUHC and MHCLG, Online, National Design Guide (2021) <https://www.gov.uk/government/publications/national-design-guide>.

² DLUHC and MHCLG, Online, National Model Design Code (2021) <https://www.gov.uk/government/publications/national-model-design-code>.

³ Manchester City Council, Places for Everyone Joint Development Plan 2022 to 2039 (2024) <https://www.greatermanchester-ca.gov.uk/media/9578/places-for-everyone-joint-development-plan-document.pdf>

⁴ Manchester City Council, The Guide to Development in Manchester (2007) https://www.manchester.gov.uk/info/200074/planning/1528/the_guide_to_development_in_manchester

⁵ London Docklands Development Corporation (1990) The evaluation of the windiness of a building complex before construction.

⁶ Fung F, Bett P, Maisey P, Lowe J, McSweeney C, Mitchell JFB Murphy J, Rostron J, Sexton D and Yamazaki K. UKCP18 Factsheet: Wind. Met Office Hadley Centre, Exeter.

⁷ Global (60km) climate model projections including 15 from the Met Office Hadley Centre.

⁸ Global (60km) climate model projections including 13 models from international climate modelling centres, other than the Met Office Hadley Centre

9. Daylight, Sunlight and Overshadowing

Introduction

- 9.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to daylight, sunlight and overshadowing.
- 9.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 9.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 9.4 This Chapter, and its associated **Figures 9.1** and **Appendices 9.1 – 9.7**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 9.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 9.6 There are no specialists within Manchester City Council (MCC) or other statutory consultees relevant to the area of daylight and sunlight. As such, no consultation has been undertaken.

Scope of the Assessment

- 9.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 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

- 9.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Increased solar glare to neighbouring junctions and slip roads; and
 - Availability of internal daylight and sunlight levels (this is covered in a separate standalone planning report).

Effects Considered Likely to be Significant

- 9.9 The following effects (**Table 9.1**) were considered likely to be significant and are reported within this Chapter:

Table 9.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Reduced daylight and sunlight amenity	Cavendish Hall of Residence (part Ormand Building) Victoria Hall Needham Court Manchester House 44 Cavendish Street 2-28 Dalesman Walk 84 Cambridge Street Cambridge House 2-12 Elmdale Walk 2-12 Broomwood Walk 2-12 Maltham Walk 2-24 Knowles Place 60-70 Loxford Street	Construction / Operation
Increased overshadowing	Loxford Gardens Manchester Metropolitan University Cavendish Hall of Residence	Construction / Operation

- 9.10 The construction stage effects have not been modelled as a separate scenario within this ES Chapter as the operational stage is considered to be a worst cast proxy (i.e. when the massing is at it's maximum form). Therefore, the construction stage effects are considered to be less than or on parity with the operational stage effects.

Assessment Methodology

Legislative Framework, Policy and Guidance

- 9.11 The following legislation and policy have informed the assessment of effects within this Chapter, and is detailed further in **Appendix 9.1**:

- National:
 - National Planning Policy Framework¹ - December 2024;
 - Planning Practice Guidance, Effect use of land² - July 2019; and
 - Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets³ - March 2018.
- Regional:

- Greater Manchester Places For Everyone Joint Development Plan 2022 to 2023⁴ - March 2024.
- Local:
 - Manchester’s Core Strategy 2012 - 2027⁵ - Updated March 2024; and
 - Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (SPD) ⁶ - April 2007.

9.12 The following guidance has informed the assessment of effects within this Chapter and is detailed further in **Appendix 9.1**.

- Site layout planning for daylight and sunlight - A guide to good practice’ (BR 209)⁷ – ‘the BRE guide’ Building Research Establishment - 2022 (3rd edition); and
- Daylighting and Sunlighting, RICS Professional Standard⁸ Royal Institution of Chartered Surveyors, October 2012, reissued October 2023.

Defining the Study Area

9.13 The study area (as previously set out in the EIA Scoping Report (**Appendix 2.1**)) has been set having regard for the recommendations in ‘Site layout planning for daylight and sunlight – A guide to good practice’ (BR 209, 2022), hereafter referred to as the BRE guide.

9.14 The principal recommendations in the BRE guide for assessing the potential effects of development on daylight and sunlight to existing surrounding relate to residential buildings. Consequently, the daylight and sunlight assessments were principally scoped to include nearby residential buildings, or residential parts of mixed-use buildings, surrounding the Site.

9.15 The scope has been derived from a site inspection and research into the relevant neighbouring properties adjacent to the Site. The study area is the same as that used at EIA Scoping stage, which is listed below and the location shown on **Figure 9.1**.

9.16 The following 13 existing surrounding buildings (working clockwise around the Site from the east) were scoped into the study and are labelled and highlighted in orange on the location plan at **Appendix 9.2**:

- 1) Cavendish Hall of Residence (part Ormond Building)
- 2) Victoria Hall to the southwest across Higher Cambridge Street
- 3) Needham Court to the west across Higher Cambridge Street
- 4) Manchester House to the west across Higher Cambridge Street
- 5) 44 Cavendish Street to the west of the Site on the north side of Cavendish Street
- 6) 2-28 Dalesman Walk to the west of the Site on the north side of Cavendish Street
- 7) 84 Cambridge Street to the west across Higher Cambridge Street
- 8) Cambridge House to the west across Higher Cambridge Street

- 9) 2-12 Elmdale Walk to the west across Higher Cambridge Street
 - 10) 2-12 Broomwood Walk to the west across Higher Cambridge Street
 - 11) 2-12 Matham Walk to the west across Higher Cambridge Street
 - 12) 2-24 Knowles Place to the west across Higher Cambridge Street
 - 13) 60-70 Loxford Street to the northwest of the site across Higher Cambridge Street
- 9.17 The BRE guide recommends assessing sunlight to main back gardens of houses, allotments, parks and playing fields, children’s playgrounds, outdoor swimming pools, sitting-out areas such as in public squares, and focal points for views, such as a group of monuments or fountains. Consequently, the following neighbouring amenity area highlighted in yellow on the location plan at **Appendix 9.2**:
- 1) Loxford Gardens located to the north west of the site across Higher Cambridge Road
 - 2) Manchester Metropolitan University amenity areas located directly to the north of the site
 - 3) Cavendish Hall of Residence courtyard to the east of the site across Higher Chatham Street
- 9.18 Window location drawings of the existing surrounding buildings are attached in **Appendix 9.4**.

Background Studies to Inform the ES / Establishing the Baseline

- 9.19 **Table 9.2** summarises all background studies and surveys undertaken to inform the assessment presented within this Chapter.

Table 9.2: Background Studies and Surveys

Survey	Overview	Date of Completion
Point Cloud Survey to relevant neighbouring properties	Laser survey of neighbouring sensitive receptors to be used for the detailed model.	19 July 2024

Assessment Process

- 9.20 The technical assessments that underpin this daylight and sunlight study have been carried out in accordance with the assessment methodology recommended in the BRE Guide.
- 9.21 The principal assessments and numerical criteria are summarised below. A fuller explanation of the assessment methodology is given in **Appendix 9.1**.

Daylight to neighbouring buildings

- 9.22 The BRE guidelines are intended for use for rooms in adjoining dwellings where daylight is required. Living rooms, dining rooms and kitchens have a greater requirement for daylight.

Bedrooms should also be analysed but are less important. Bathrooms, stairwells and other areas without a requirement for daylight need not be assessed

- 9.23 If the head of the new development subtends an angle of more than 25° measured from the centre of the lowest affected window in an existing neighbouring building in a plane perpendicular to the window wall, then a more detailed check is needed to find the loss of skylight.
- 9.24 The more detailed tests are:
- (i) vertical sky component (**VSC**) at the centre of each main window, which measures the total amount of skylight available; and
 - (ii) no-sky line (**NSL**) on the working plane inside a room, where room layouts are known, which measures the area that can receive direct skylight and assesses the distribution of daylight around the room.
- 9.25 The test need only be run where room layouts are known, for example if floor plans are available from the local planning authority's portal. For completeness, we have tested NSL where floor plans are unknown using assumed layouts based on external inspection.
- 9.26 Loss of daylight resulting from development will be noticeable if either:
- the VSC at the centre of the window will be reduced to both less than 27% and less than 0.80 times its former value, or
 - the area of the working plane in a room that is enclosed by the no-sky line (NSL) and can receive direct skylight will be reduced to less than 0.80 times its former value.
- 9.27 For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation.
- 9.28 If there would be a significant loss of light to the main window but the room has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its window.
- 9.29 It is important to note that these numerical guidelines are purely advisory. The BRE guide (paragraph 2.2.3) states:

Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.

Sunlight to neighbouring building

- 9.30 In designing new development, care should be taken to safeguard the access to sunlight for existing dwellings and any nearby non-domestic buildings where there is a particular requirement for sunlight.
- 9.31 Obstruction to sunlight may become an issue if part of the development is situated within 90° of due south of a main window wall of an existing building, and in the section drawn perpendicular to this existing window wall, the new development subtends an angle greater

than 25° to the horizontal measured from the centre of the lowest window to a main living room.

- 9.32 In housing, the main requirement for sunlight is in living rooms and it is also required in conservatories, but it is viewed as less important in bedrooms and in kitchens. 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 those that also comprise a living space. (See BRE paragraphs 3.1.2 and 3.2.3). Nevertheless, we have included kitchens and bedrooms in our sunlight assessment, but less weight should be applied to such results.
- 9.33 The amount of sunlight reaching a room is measured by calculating the percentage of annual probable sunlight hours (APSH) at the centre of its windows.
- 9.34 If, following development, the APSH will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight.
- 9.35 Sunlight will be adversely affected if the centre of the window will:
- receive less than 25% APSH or less than 5% APSH during the winter months (21 September to 21 March); and
 - less than 0.80 times its former sunlight hours during either period; and
 - the reduction in sunlight over the whole year will be greater than 4% APSH.

Sunlight to neighbouring gardens and amenity spaces

- 9.36 Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas such as in public squares, and focal points for views, such as a group of monuments or fountains.
- 9.37 The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March – the two-hours sun-on-ground (SOG) test.
- 9.38 If, following development, the area of the garden or other amenity space that can receive two hours of direct sunlight on 21 March is reduced to both less than 50% of its total area and less than 0.80 times its former value, the loss of sunlight is likely to be noticeable and the space will tend to look more heavily overshadowed.
- 9.39 The assessment normally excludes sunlight at an altitude of 10° or less and ignores fences or walls less than 1.5 metres high, and trees and shrubs. Front gardens, driveways and hard standings for cars need not be assessed.
- 9.40 Where a large building is proposed which may affect a number of gardens or open spaces, it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. Mid-summer (21 June) is an optional addition date when there would be greater sunlight availability and reduced overshadowing.

Flexible application and alternative target values

9.41 The BRE guidelines should be interpreted flexibly. The guide states:

“1.6 The guide is intended for building designers and their clients, consultants, and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design... In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings... The calculation methods ... are entirely flexible in this respect.

2.2.3 Note that numerical values given here [for daylight] are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.

3.2.10 In certain situations care needs to be taken in applying these [sunlight] guidelines... The guidelines are purely advisory. Planning authorities may wish to use different criteria based on the requirements for sunlight in particular types of developments in particular areas. Sometimes a larger reduction in sunlight may be necessary if new development is to match the height and proportion of existing buildings nearby.

4.5.10 Note that numerical values given here [for sunlight to photovoltaic panels] are purely advisory. Different criteria may be used based on the requirements for solar energy in an area viewed against other site layout constraints.”

9.42 The Site is situated within the city centre in a suitable location for the consideration of high-density buildings and commercially led mixed-use schemes, as noted in Manchester’s Core Strategy. As such, it sits within an area earmarked for growth and change, where a higher degree of obstruction is to be expected. An appropriate level of deviation from the BRE numerical guidelines is therefore to be expected.

9.43 It is therefore appropriate to consider applying alternative target values for daylight and sunlight if the development potential of the Site is to be realised.

Alternative VSC targets used in key planning decisions

9.44 In a number of key planning decisions, use of a mid-teen VSC benchmark has been held to be appropriate in denser, more built-up urban areas.

9.45 When the Mayor of London granted planning permission on 1 April 2016 for a development of Monmouth House and Speedfix House, London, the GLA representation hearing report stated:⁹

“When considering the findings of the assessment, GLA officers have had regard to the site’s central urban context and BRE’s advice that the numerical guidelines it provides are not mandatory, and should be interpreted with a reasonable degree of flexibility – taking into account site context and the nature of the situation in which they are being applied.

For general guidance, whilst the BRE guidelines recommend a target value of 27% VSC when measured on an absolute scale, that value is derived from a low density suburban housing model. In an inner city urban environment, VSC values in excess of 20% should be considered as reasonably good, and VSC in the mid-teens should be acceptable.

GLA officers acknowledge that it can be difficult to meet the recommended daylight and sunlight standards for all residential units in the centre of London where there is a strong demand for accommodation of all types and where high density development is encouraged by local and national planning policies. When considering the information available, including the site context, policy-led development aspirations, and having reference to BRE guidelines that are intended to be applied flexibly to help rather than constrain design, on balance the predicted impacts are acceptable.”

9.46 Another example of this approach is the Whitechapel Estate Appeal.¹⁰ There the Inspector noted that development that resulted in a proportion of residual VSC values in the mid-teens, with a smaller proportion in the bands below 15% VSC, have been found acceptable in major developments across London. He stated:

“The BRE document offers guidance on generally acceptable standards of daylight and sunlight, but advises that numerical values are not to be rigidly applied and recognises the importance of the specific circumstances of each case. Inner city development is one of the examples where a different approach might be justified. This is specifically endorsed by the [Mayor of London’s] Housing SPG, which calls for guidelines to be applied sensitively to higher density developments, especially in (among others) opportunity areas and accessible locations, taking into account local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time. ... I agree with the appellants that blanket application of the BRE guide optimum standards, which are best achieved in relatively low-rise well spaced layouts, is not appropriate in this instance.

The SPG advises that the daylight impact on adjacent properties should be assessed drawing on “broadly comparable residential typologies within the area and of a similar nature across London”...

The figures [from comparable typologies from a range of example sites across Central London analysed by the appellants, comprising both traditional urban streets and recently permitted areas of significant development] show that a proportion of residual Vertical Sky Component (‘VSC’) values in the mid-teens have been found acceptable in major

developments across London. This echoes the Mayor's endorsement in the preSPG decision at Monmouth House, Islington that VSC values in the mid-teens are acceptable in an inner urban environment. They also show a smaller proportion in the bands below 15%...

I acknowledge that a focus on overall residual levels could risk losing sight of individual problem areas. It is accepted that light is only one factor in assessing overall levels of amenity, but I consider that the trade-off with other factors, such as access to public transport or green space, is likely to be of more relevance to an occupier of new development than to an existing neighbour whose long-enjoyed living conditions would be adversely affected by new buildings. However, I also consider that Inner London is an area where there should generally be a high expectation of development taking place. This is particularly so in the case of the appeal site, where the Whitechapel Vision Masterplan and the City Fringe Opportunity Area Planning Framework have flagged the desirability of high density development. Existing residents would in my view be prepared for change and would not necessarily expect existing standards of daylight and sunlight to persist after development."

- 9.47 At a more recent Appeal for a development at Goldsworth Road, Woking, the Inspector noted:¹¹

"Retaining a VSC level of 27% in neighbouring properties is unrealistic; as has been recognised in many appeal decisions and other documents. Even retaining 20% VSC is considered, generally, to be reasonably good, and in urban areas retaining around mid-teen % VSC is considered to be acceptable."

- 9.48 Therefore, it could be argued that a reasonable alternative VSC target for a development of the Site would generally be 15% VSC, with a smaller proportion of windows in the bands below 15%.

- 9.49 There are examples of developments in Manchester where this type of approach was taken within daylight and sunlight reports submitted to MCC and where planning permission was granted. Application of an alternative target value for VSC in the mid-teens will therefore be familiar to the local planning authority. Examples include:

- One Medlock Street, Manchester, M15 5FJ
Application reference: 135419/FO/2022
Proposal: Demolition of the existing hotel building and structures and redevelopment of the site to comprise two separate buildings: one 13 storey office building with commercial unit (Use Class E) at ground floor; a part 11, part 38 storey building comprising 1,014 purpose built student accommodation units (sui generis) with ground floor office/community uses (Use Class E, F1 or F2); and associated ancillary internal and external amenity space, hard and soft landscaping and associated highway works.
Approved: 7 November 2023
- Port Street, Manchester, M1 2EQ
Application reference: 132489/FO/2021
Proposal: Erection of a part-33, part-11, part 9 part 7 storey residential building above semi-basement level, with associated residents' amenity space including gym (Use Class C3) (comprising 481 dwellings), commercial space (Use Class E), basement car parking (47 spaces), cycle parking (481 spaces) landscaping, and other associated works.
Approved: 7 October 2022

- Victoria House, Great Ancoats Street, Manchester, M4 7AB
Application reference: 122000/FO/2018
Proposed: Erection of a part 25 part 3 storey residential tower (Use Class C3) for 177 apartments comprising 59 x 1 bed (34 x 1 bed 1 person and 25 1 bed 2 person), 113 x 2 bed (44 x 2 bed 3 person and 69 x 2 bed 4 person) and 5 x 3 bed (3 bed 5 person) with ground floor commercial space (Use Class A1, A2, A3, A4 and D1) above partial basement level associated shared amenity spaces at 3rd floor level, realm enhancements following demolition of existing buildings.
Approved: 26 Aug 2020
- 60 Charles Street, Manchester, M1 7DF
Application reference: 122644/FO/2019
Proposal: Erection of 16 storey building plus plant level comprising a 278 room hotel (Use Class C1) with ancillary ground floor bar and restaurant uses (Use Classes A3, A4) with associated works to facilitate access, servicing and other associated works following demolition of existing building on-site.
Approved: 31 May 2019

9.50 For the purpose of this Environmental Statement, the default BRE numerical guidelines have been applied. However, when considering the acceptability of the daylight effects, the local planning authority is invited to consider the level of adherence to an alternative target of 15% VSC.

Layout and use of affected property

- 9.51 The layout and use of the affected property was considered carefully by the Inspector in her report leading to the Secretary of State's call-in decision to grant planning permission for the redevelopment of the former London Television Centre, 60-72 Upper Ground, London SE1 in the London Borough of Lambeth in February 2024.¹² The Secretary of State agreed with the Inspector's conclusions that, despite numerous high-magnitude daylight impacts (greater than 40% reduction), the residents of an affected social housing block would not experience unacceptable levels of loss of daylight and the impact of the proposal would not be unreasonable.
- 9.52 In reaching that conclusion, the Inspector noted that the design of the social housing block addressed its dense urban environment, with many of the dwellings being dual aspect and having balconies and rooms overlooking a central private landscaped green space. Living/kitchen/dining rooms (LKDs) facing the development were well proportioned, had relatively large windows, and took borrowed light from the south-facing entrance halls via internal glazed doors. In other flats, the LKDs faced onto the central garden and their light would be unaffected.
- 9.53 The Inspector regarded the use of some bedrooms for studies or homeworking as a matter of personal choice for the occupiers, but mainly they were used for sleeping. Where desks were evident during her site visit, they were positioned close to a window to maximise the use of natural light and outlook.
- 9.54 The Inspector also noted there is no distinction made between social or private housing in planning terms to the application of the BRE Guide or planning policy.

- 9.55 The dual-aspect nature of an affected social housing block, and the small size of the affected kitchens (which disqualified them from habitable room status), were factors in the Inspector's decision to grant permission in an appeal at Graphite Square, London SE11 in the London Borough of Lambeth in September 2019.¹³

Self-obstructing balconies and other projections

- 9.56 The BRE guide gives another example when care should be taken in applying its numerical guidelines involving windows that sit beneath balconies or are blinkered by projecting parts of their own building. It states:

"2.2.11 Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large relative impact on the VSC, and on the area receiving direct skylight.

2.2.12 A larger relative reduction in VSC may also be unavoidable if the existing window has projecting wings on one or both sides of it or is recessed into the building so that it is obstructed on both sides as well as above.

3.2.9 Balconies and overhangs above an existing window tend to block sunlight, especially in summer. Even a modest obstruction opposite may result in a large relative impact on the sunlight received."

- 9.57 Clearly, projections from existing neighbouring buildings can be a factor in their relative light loss. In such instances it can be helpful to run a supplementary assessment with the projections removed, to understand the degree to which they contribute to the relative light loss.

Reporting of the Environmental Effect and Significance Criteria

- 9.58 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. 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 Sensitivity of Receptor

- 9.59 The sensitivity of affected receptors has been considered on a scale of **high, medium, low** or **negligible**.
- 9.60 It is assumed that 'importance' or 'value', as may be used in relevant guidance, can be referred to as sensitivity.
- 9.61 The receptors have different sensitivities according to their requirements, as defined in **Table 9.3**.

Table 9.3: Receptor sensitivity for daylight, sunlight and overshadowing

Sensitivity	Daylight receptor	Sunlight receptor	Overshadowing receptor
High	Main living rooms, and kitchens;	Main living rooms, back gardens, and shared or public amenity spaces	Back gardens, and shared or public amenity spaces
Medium	Bedrooms, and student bedrooms	Solar panels	-
Low	-	Kitchens and bedrooms	-
Negligible	Circulation spaces, bathrooms and other non-habitable rooms	Circulation spaces, bathrooms and other non-habitable rooms; school classrooms	

Determining the Magnitude of Change

9.62 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of **large**, **medium**, **small** or **negligible**.

9.63 The magnitudes of impact on daylight, sunlight and overshadowing have been classified as set out in **Table 9.4**.

Table 9.4: Magnitude of Impact

Magnitude of impact*	Daylight, sunlight, and sun on ground numerical criteria	
Large		<0.60 times former value (>40% loss)
Medium	Impact is outside BRE guidelines	0.60-0.69 times former value (31% to 40% loss)
Small		0.70-0.79 times former value (21% to 30% loss)
Negligible	Impact is inside BRE guidelines	≥0.80 times former value (<20% loss)

*The BRE guides does not include a standard scale of impact. We have counted the number of impacts inside and outside the BRE guidelines and categorised the latter according to their magnitude of impact as documented in **Table 9.4**.

Determining the Level of Effect

- 9.64 The guidance in Appendix H of the BRE guide in respect of EIA was followed when ascribing significance to the daylight, sunlight and overshadowing effects identified in this assessment. The guide states:

“The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.

Where the loss of skylight or sunlight fully meets the guidelines, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.

Where the loss of skylight or sunlight does not meet the guidelines, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- *only a small number of windows or limited area of open space are affected;*
- *the loss of light is only marginally outside the guidelines;*
- *an affected room has other sources of skylight or sunlight;*
- *the affected building or open space only has a low level requirement for skylight or sunlight; and*
- *there are particular reasons why an alternative, less stringent, guideline should be applied (see Appendix F).*

Factors tending towards a major adverse impact include:

- *a large number of windows or large area of open space are affected;*
- *the loss of light is substantially outside the guidelines;*
- *all the windows in a particular property are affected; and*
- *the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.”*

- 9.65 The level of effect has been informed by the magnitude of change 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 factoring in the flexible approach to applying the BRE guidelines which is recommended in the BRE guide and National Planning Policy and **Table 9.5** has been a tool which has assisted with this process.
- 9.66 Whilst **Table 9.5** 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’.

Table 9.5: Matrix to Support Determining the Level of Effect

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

9.67 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.

9.68 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

9.69 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.

- 9.70 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.
- 9.71 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

- 9.72 Baseline levels of daylight, sunlight and sun-on-ground to the existing surrounding receptors were calculated using the BRE assessment methodology described above.
- 9.73 As the baseline condition is currently a four-storey student building, the surrounding buildings and open spaces presently enjoy high levels of daylight and sunlight across the Site for a city centre location.
- 9.74 The surrounding existing buildings are a mix of uses including commercial/non-domestic, education and residential occupancy.

Daylight and sunlight to existing surrounding buildings

- 9.75 The baseline daylight and sunlight conditions for the 13 existing surrounding receptor buildings are set out in the detailed results tables in **Appendix 9.5** (columns headed “Exis.”). The level of adherence of these baseline daylight and sunlight levels to the BRE absolute numerical targets for achieving good daylight and sunlight in buildings, namely 27% VSC, 80% NSL, and 25% APSH of which 5% APSH in winter, are summarised in **Table 9.6**. This summarises how well lit the properties are in the baseline condition.

Table 9.6: Number of assessed windows/rooms meeting BRE recommendations in baseline condition

Property address	VSC		NSL		APSH (room)			
	No. of windows tested	No. inside VSC guideline	No. of rooms tested	No. inside NSL guideline	No. of rooms tested	No. inside annual & winter guidelines	No. inside annual guideline	No. inside winter guideline
Cavendish Hall of Residence	161	152	151	151	-	0	0	0
Victoria Hall	130	54	126	70	-	0	0	0
Needham Court	130	64	114	71	3	3	3	3
Manchester House	78	47	53	29	4	4	4	4
44 Cavendish Street	6	6	6	6	4	4	4	4

Property address	VSC		NSL		APSH (room)			
	No. of windows tested	No. inside VSC guideline	No. of rooms tested	No. inside NSL guideline	No. of rooms tested	No. inside annual & winter guidelines	No. inside annual guideline	No. inside winter guideline
2-28 Dalesman Walk	6	5	6	5	-	0	0	0
84 Cambridge Street	30	30	30	30	-	0	0	0
Cambridge House	39	27	29	28	5	0	0	0
2-12 Elmdale Walk	6	0	6	0	-	0	0	0
2-12 Broomwood Walk	6	6	6	6	-	0	0	0
2-24 Matham Walk	34	28	24	24	-	0	0	0
2-24 Knowles Place	32	27	24	24	-	0	0	0
60-70 Loxford Street	20	18	6	6	6	6	6	6
Totals:	678	464	581	450	22	17	17	17
		68%		77%		77%	77%	77%

- 9.76 In total, 678 windows serving 581 rooms in 13 properties were assessed for daylight, and 22 rooms in 5 properties were assessed for sunlight.
- 9.77 In the baseline condition, the BRE daylight recommendations (27% VSC and 80% NSL) are met for 464 (68%) and 450 (77%) respectively, and the sunlight recommendations (25% APSH including 5% APSH in winter) are met for 17 (77%).
- 9.78 The baseline levels of daylight and sunlight to the surrounding properties show a good level of adherence to the BRE recommendations, with the majority of windows and rooms being well lit. This is due to the relatively low-level existing building on the Site, which is lower than several of the recently constructed student and educational building in the immediate surrounding area.

Sunlight and overshadowing to existing surrounding amenity spaces

- 9.79 The baseline sunlight conditions for the five outdoor spaces surrounding the site have been assessed using the BRE two-hours sun-on-ground test on 21 March, are shown graphically and set out in the results table on the drawing at **Appendix 9.6**.
- 9.80 The numerical results are shown in **Table 9.7**. They show the proportion of each space that can receive at least two hours of sunlight on 21 March and whether this satisfies the BRE guidelines of at least 50%.

Table 9.7: Adherence of amenity space to BRE sun-on-ground recommendations in baseline condition

Amenity Space	Proportion sunlit >2hrs	Satisfies BRE guideline?
A1 – Loxford Gardens	100%	Yes
A2 – Loxford Gardens	100%	Yes
A3 – Manchester Metropolitan Uni	81%	Yes
A4 – Manchester Metropolitan Uni	93%	Yes
A5 – Cavendish Hall of Residence	5%	No

- 9.81 Of the 5 amenity areas tested, 4 (80%) meeting the BRE recommendations, only the internal courtyard within the Cavendish Hall of Residence currently receives low levels of direct sunlight.
- 9.82 Such high levels of sunlight in a city-centre location is due, in part, to the relatively low level of the existing buildings present on Site.
- 9.83 The baseline levels of overshadowing of the surrounding areas have been assessed on the spring equinox (21st March) and are shown on the hourly snapshot drawings at **Appendix 9.7** in the images in the left side of each drawing.

Future Baseline

- 9.84 If the Proposed Scheme was not to proceed (i.e. 'do-nothing' scenario), baseline levels of daylight and sunlight could change as other surrounding developments come forward. The daylight, sunlight and overshadowing effects of any such surrounding developments would typically be assessed and a report submitted with their respective planning applications. There are no natural changes anticipated that would influence the baseline conditions.

Primary and Tertiary Mitigation

- 9.85 No primary or tertiary mitigation methods are required to be considered as part of the daylight, sunlight and overshadowing assessments.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

Reduced daylight amenity

- 9.86 Due to the low-rise nature of the existing Site, daylight and sunlight the levels to the surrounding residential receptors are high for an urban location. In line with the development aspirations for the area, such low levels of existing obstruction would be contrary to the long-term vision for the area.

- 9.87 It is therefore considered inevitable that delivery of any meaningful and planning policy-compliant development on the Site would result in greater daylight/sunlight effects, with reductions beyond the default values in the BRE Guidelines. In that context, adverse effects are to be expected and it would not be appropriate to apply the BRE's default criteria mechanically.
- 9.88 The daylight conditions for the 13 existing surrounding receptor buildings have been assessed with the Proposed Scheme in place and quantified in the detailed results tables in **Appendix 9.5** (columns headed "Prop.").
- 9.89 The values with the Proposed Scheme in place were then compared with those in the baseline and the differences, i.e. impacts, were quantified both on an absolute scale (column headed "Loss") and a relative scale (column headed "Pro/Ex").
- 9.90 The impacts were categorised and counted to the scale of magnitude of impact in **Table 9.7** above and summarised in **Table 9.8** and **9.9**. In total, 678 windows serving 581 rooms in 13 properties were assessed for daylight.

Table 9.8: Existing Baseline v Proposed: VSC Summary

Property address	No. of windows tested	Windows inside VSC guidelines		Windows outside VSC guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
Cavendish Hall of Residence	161	1	1%	2	1%	7	4%	151	94%
Victoria Hall	130	123	95%	7	5%	-	-	-	-
Needham Court	130	76	58%	2	2%	2	2%	50	38%
Manchester House	78	44	56%	3	4%	4	5%	27	35%
44 Cavendish Street	6	6	100%	-	-	-	-	-	-
2-28 Dalesman Walk	6	6	100%	-	-	-	-	-	-
84 Cambridge Street	30	0	0%	-	-	4	13%	26	87%
Cambridge House	39	10	26%	-	-	2	5%	27	69%
2-12 Elmdale Walk	6	6	100%	-	-	-	-	-	-
2-12 Broomwood Walk	6	6	100%	-	-	-	-	-	-
2-24 Matham Walk	34	31	91%	3	9%	-	-	-	-

Property address	No. of windows tested	Windows inside VSC guidelines		Windows outside VSC guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
2-24 Knowles Place	32	32	100%	-	-	-	-	-	-
60-70 Loxford Street	20	20	100%	-	-	-	-	-	-
Totals:	678	361	53%	17	3%	19	3%	281	41%

Table 9.9: Existing Baseline v Proposed NSL Summary

Property address	No. of rooms tested	Rooms inside NSL guidelines		Rooms outside NSL guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
Cavendish Hall of Residence	151	53	35%	13	9%	20	13%	65	43%
Victoria Hall	126	124	98%	1	1%	1	1%	-	-
Needham Court	114	78	68%	2	2%	6	5%	28	25%
Manchester House	53	37	70%	1	2%	2	4%	13	25%
44 Cavendish Street	6	6	100%	-	-	-	-	-	-

Property address	No. of rooms tested	Rooms inside NSL guidelines		Rooms outside NSL guidelines					
				Low reduction		Medium reduction		High reduction	
		No.	%	0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
2-28 Dalesman Walk	6	6	100%	-	-	-	-	-	-
84 Cambridge Street	30	13	43%	3	10%	1	3%	13	43%
Cambridge House	29	6	21%	1	3%	5	17%	17	59%
2-12 Elmdale Walk	6	6	100%	-	-	-	-	-	-
2-12 Broomwood Walk	6	6	100%	-	-	-	-	-	-
2-24 Matham Walk	24	24	100%	-	-	-	-	-	-
2-24 Knowles Place	24	24	100%	-	-	-	-	-	-
60-70 Loxford Street	6	6	100%	-	-	-	-	-	-
Totals:	581	389	67%	21	4%	35	6%	136	23%

9.91 In the Proposed Scheme scenario, the daylight impacts would be inside the BRE default numerical guidelines to 361 (53%) for VSC and, 389 (67%) for NSL.

9.92 For the following 6 properties, which appear in the rows shaded grey in summary **Table 9.9** and **9.10** above, all daylight impacts would be inside the BRE default numerical guidelines for both VSC and NSL and the effect would be **negligible** (not significant).

- 44 Cavendish Street;
- 2-28 Dalesman Walk;
- 2-12 Elmdale Walk;
- 2-12 Broomwood Walk;
- 2-24 Knowles Place; and
- 60-70 Loxford Street.

9.93 The remaining 7 properties would experience some VSC and/or NSL impacts outside the BRE guidelines. These are examined in more detailed below.

Cavendish Hall of Residence

- 9.94 This is the seven-storey building located directly to the east of the Site across Lower and Higher Chatham Street. The lower three floors are non-residential and have been discounted from the assessment. The upper four floors contain student accommodation, and the assessment has been based on floor plans obtained from the planning portal.
- 9.95 Daylight has been assessed to 161 windows serving 151 rooms in this property.
- 9.96 The VSC results indicate that of the 161 windows tested, 1 (1%) will satisfy the BRE guidelines, 2 (1%) will experience a low reduction, 7 (4%) a medium reduction, and 151 (94%) a high reduction.
- 9.97 All windows in this property currently have a largely unobstructed view over the low-level existing building and benefit from a high level of visible sky. So, a reduction beyond the BRE recommendation is inevitable as the property current benefits from very good VSC level due to the open outlook. The residual VSC values for the adversely affected windows would range from 5.5% to 25.2%, with an average of 13.8%.
- 9.98 The NSL results indicate that of the 151 rooms tested, 53 (35%) will satisfy the BRE guidelines, 13 (9%) will experience a low reduction beyond the BRE recommendations, 20 (13%) will experience a medium reduction, and the remaining 65 (43%) will experience a high reduction. The residual NSL values for the adversely affected rooms would range from 38% to 78%, with an average of 67%. The retained NSL levels could be considered acceptable for an urban context.
- 9.99 The sensitivity of Cavendish Hall of Residence is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Major**.

Victoria Hall

- 9.100 This is the four-storey building located to the southwest of the Site across Cambridge Street. The building contains student accommodation and has been based on notional room layouts based on external inspection.
- 9.101 Daylight has been assessed to 130 windows serving 126 rooms in this property.

- 9.102 The VSC results indicate that of the 130 windows tested, 123 (95%) satisfy the BRE guidelines, with the remaining 7 (5%) experiencing a low reduction. The residual VSC values for the adversely affected windows would range from 13.6% to 19.9%, with an average of 16.6%. The retained level of VSC to the isolated windows that experience a small reduction beyond the BRE guidelines could be considered acceptable for an urban context.
- 9.103 The NSL results indicate that of the 126 rooms tested, 124 (98%) satisfy the BRE guidelines, 1 (1%) will experience a low reduction beyond the BRE guidelines. The remaining 1 (1%) will experience a medium reduction with none of the rooms experiencing a high reduction. Generally, the scheme only has a negligible effect on NSL levels to this property.
- 9.104 The sensitivity of Victoria Hall is considered to be medium. The magnitude of change is considered to be small. Therefore, there is likely to be a direct, permanent, long-term adverse effect upon the property which is considered to be **Minor**.

Needham Court

- 9.105 This is the four-storey building located to the west of the Site on the corner Cambridge Street and Cavendish Street. The building contains student accommodation and has been based on notional room layouts based on external inspection.
- 9.106 Daylight has been assessed to 130 windows serving 114 rooms in this property.
- 9.107 The VSC results indicate that of the 130 windows tested, 76 (58%) will satisfy the BRE guidelines, 2 (2%) will experience a low reduction, 2 (2%) a medium reduction, and 50 (38%) a high reduction. This property currently benefits from very good VSC levels due to having a relatively open outlook across the low-level existing building. The residual VSC values for the adversely affected windows would range from 0.0% (this is to third floor windows which have their ability to see sky heavily obstructed by recesses and a large overhang above) to 16.5%, with an average of 11.6%.
- 9.108 The NSL results indicate that of the 114 rooms tested, 78 (68%) will satisfy the BRE guidelines, 2 (2%) will experience a low reduction beyond the BRE recommendations, 6 (5%) will experience a medium reduction, and the remaining 28 (25%) will experience a high reduction. The residual NSL values for the adversely affected rooms would range from 11% (isolated to the two rooms which have their ability to see sky heavily obstructed by the design of the building) to 66%, with an average of 35%.
- 9.109 The sensitivity of Needham Court is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Major**.

Manchester House

- 9.110 This is the five-storey building located to the west of the Site on the northern corner Cambridge Street and Cavendish Street. The building contains student accommodation and has been based on notional room layouts based on external inspection.
- 9.111 Daylight has been assessed to 78 windows serving 53 rooms in this property.
- 9.112 The VSC results indicate that of the 78 windows tested, 44 (56%) will satisfy the BRE guidelines, 3 (4%) will experience a low reduction, 4 (5%) a medium reduction, and 27 (35%) a high reduction. This property currently benefits from good VSC levels due to having a

relatively open outlook across the low-level existing buildings. Although there are some pinch points where the building is setback and has its ability to see sky obstructed by itself and the neighbouring building, which increases the burden on the development site as these windows have the potential to take more than their fair share of light over the site due to their constrained outlook. The residual VSC values for the adversely affected windows would range from 3.2% (this is to the ground floor set back windows) to 26.1%, with an average of 13.8%. Generally, all windows benefit from retained VSC levels which could be considered acceptable for an urban context.

- 9.113 The NSL results indicate that of the 53 rooms tested, 37 (70%) will satisfy the BRE guidelines, 1 (2%) will experience a low reduction beyond the BRE recommendations, 2 (4%) will experience a medium reduction, and the remaining 13 (25%) will experience a high reduction. The residual NSL values for the adversely affected rooms would range from 16% to 71%, with an average of 32%. The rooms which have the potential to experience a high reduction are all located in the setback and are heavily restricted by 84 Cambridge Street.
- 9.114 The sensitivity of Manchester House is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Moderate** due to the retained daylight levels.

84 Cambridge Street

- 9.115 This is the nine-storey building located to the west of the Site across Cambridge Street. The property was constructed in 2022 and contains student accommodation. The assessment has been based on floor plans obtained from the planning portal.
- 9.116 Daylight has been assessed to 30 windows serving 30 rooms in this property.
- 9.117 The VSC results indicate that of the 30 windows tested, 4 (13%) a medium reduction beyond the BRE guidelines, and the remaining 26 (87%) a high reduction. This property currently benefits from very good VSC levels due to having a relatively open outlook across the low-level existing building. The residual VSC values for the adversely affected windows would range from 11.8% to 23.4%, with an average of 17.7%. Generally, all windows benefit from retained VSC levels which could be considered acceptable for an urban context.
- 9.118 The NSL results indicate that of the 30 rooms tested, 13 (43%) will satisfy the BRE guidelines, 3 (10%) will experience a low reduction beyond the BRE recommendations, 1 (3%) will experience a medium reduction, and the remaining 13 (43%) will experience a high reduction. The residual NSL values for the adversely affected rooms would range from 35% to 72%, with an average of 49%.
- 9.119 The sensitivity of 84 Cambridge Street is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Moderate** given extent of the retained daylight levels.

Cambridge House

- 9.120 This is the five-storey building located to the west of the Site across Cambridge Street. The building contains student accommodation, and the assessment has been based on floor plans obtained from the planning archive.

- 9.121 Daylight has been assessed to 39 windows serving 29 rooms in this property.
- 9.122 The VSC results indicate that of the 39 windows tested, 10 (26%) will satisfy the BRE guidelines, 2 (5%) will experience a medium reduction beyond the BRE recommendations, and the remaining 27 (69%) will experience a high reduction. With the exception of some secondary windows located in the flank wall facing 84 Cambridge Street, all windows currently benefit from good level of VSC due to the relatively open outlook. The residual VSC values for the adversely affected windows would range from 9.5% to 21.6%, with an average of 16.4%. Generally, all windows benefit from retained VSC levels which could be considered acceptable for an urban context.
- 9.123 The NSL results indicate that of the 29 rooms tested, 6 (21%) will satisfy the BRE guidelines, 1 (3%) will experience a low reduction beyond the BRE recommendations, 5 (17%) will experience a medium reduction, and the remaining 17 (59%) will experience a high reduction. The residual NSL values for the adversely affected rooms would range from 27% to 75%, with an average of 48%.
- 9.124 The sensitivity of Cambridge House is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Major**.

2-24 Matham Walk

- 9.125 This is the three-storey residential property located to the west of the Site across Cambridge Street. The assessment has been based on estate agency plans obtained from online searches.
- 9.126 Daylight has been assessed to 39 windows serving 29 rooms in this property.
- 9.127 The VSC results indicate that of the 34 windows tested, 31 (91%) satisfy the BRE guidelines, with the remaining 3 (9%) experiencing a low reduction beyond the BRE recommendations.
- 9.128 The NSL results indicate that all 29 (100%) rooms tested will satisfy the BRE guidelines.
- 9.129 The sensitivity of 2-24 Matham Walk is considered high. The magnitude of change is considered to be small. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Minor**.

Secondary Mitigation or Enhancement

- 9.130 No secondary mitigation or enhancement elements are required to be considered as part of the daylight, sunlight and overshadowing assessments.

Residual Effect

- 9.131 In the absence of secondary mitigation the residual effects for insert the receptor is that same as that reported in the pre-mitigation scenario.

Significance

- 9.132 This effect is considered to be **Significant** for:

- Cavendish Halls of Residence;
- Needham Court;

- Manchester House;
- 84 Cambridge Street; and
- Cambridge House.

9.133 The effect is **Not Significant** for all other receptors.

Reduction in sunlight amenity

9.134 The results of the APSH and Winter sunlight analysis of the neighbouring buildings/properties are summarised in **Tables 9.10** and **9.11**.

Table 9.10: Existing Baseline v Proposed: APSH Summary

Property address	No. of rooms tested	Rooms inside APSH annual guidelines		Rooms outside APSH annual guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
Cavendish Hall of Residence	-	-	-	-	-	-	-	-	-
Victoria Hall	-	-	-	-	-	-	-	-	-
Needham Court	3	3	100%	-	-	-	-	-	-
Manchester House	4	4	100%	-	-	-	-	-	-
44 Cavendish Street	4	4	100%	-	-	-	-	-	-
2-28 Dalesman Walk	-	-	-	-	-	-	-	-	-
84 Cambridge Street	-	-	-	-	-	-	-	-	-
Cambridge House	5	3	60%	-	-	-	-	2	40%

Property address	No. of rooms tested	Rooms inside APSH annual guidelines		Rooms outside APSH annual guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
2-12 Elmdale Walk	-	-	-	-	-	-	-	-	-
2-12 Broomwood Walk	-	-	-	-	-	-	-	-	-
2-24 Matham Walk	-	-	-	-	-	-	-	-	-
2-24 Knowles Place	-	-	-	-	-	-	-	-	-
60-70 Loxford Street	6	6	100%	-	-	-	-	-	-
Totals:	22	20	91%	0	0%	0	0%	2	9%

Table 9.11: Existing Baseline v Proposed: Winter Summary

Property address	No. of rooms tested	Rooms inside APSH winter guidelines		Rooms outside APSH winter guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
Cavendish Hall of Residence	-	-	-	-	-	-	-	-	-

Property address	No. of rooms tested	Rooms inside APSH winter guidelines		Rooms outside APSH winter guidelines					
				Low reduction		Medium reduction		High reduction	
				0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
Victoria Hall	-	-	-	-	-	-	-	-	-
Needham Court	3	3	100%	-	-	-	-	-	-
Manchester House	4	4	100%	-	-	-	-	-	-
44 Cavendish Street	4	4	100%	-	-	-	-	-	-
2-28 Dalesman Walk	-	-	-	-	-	-	-	-	-
84 Cambridge Street	-	-	-	-	-	-	-	-	-
Cambridge House	5	5	100%	-	-	-	-	-	-
2-12 Elmdale Walk	-	-	-	-	-	-	-	-	-
2-12 Broomwood Walk	-	-	-	-	-	-	-	-	-
2-24 Matham Walk	-	-	-	-	-	-	-	-	-
2-24 Knowles Place	-	-	-	-	-	-	-	-	-

Property address	No. of rooms tested	Rooms inside APSH winter guidelines		Rooms outside APSH winter guidelines					
				Low reduction		Medium reduction		High reduction	
		No.	%	0.79-0.70 x FV		0.69-0.60 x FV		<0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
60-70 Loxford Street	6	6	100%	-	-	-	-	-	-
Totals:	22	22	100%	0	0%	0	0%	0	0%

9.135 In the Proposed Scheme scenario, the sunlight impacts would be inside the BRE guidelines to 20 out of 22 rooms (91%) for both annual and winter sunlight. For the purposes of the assessment, all neighbouring rooms with at least one window that faces within 90° of due south has been tested.

9.136 Any sunlight impacts would be inside the BRE guidelines for both annual and winter sunlight for the following 12 properties and the impacts would be negligible.

- Cavendish Hall of Residence;
- Victoria Hall;
- Needham Court;
- Manchester House;
- 44 Cavendish Street;
- 2-28 Dalesman Walk;
- 84 Cambridge Street;
- 2-12 Elmdale Walk;
- 2-12 Broomwood Walk;
- 2-24 Matham Walk;
- 2-24 Knowles Place; and
- 60-70 Loxford Place.

Cambridge House

- 9.137 Sunlight has been assessed to 5 living rooms in this student building. The sunlight will be within the BRE guidelines to 3 rooms (60%) and outside the guidelines to 2 rooms.
- 9.138 The 2 (40%) rooms that would be outside the annual sunlight guidelines would experience high reduction beyond the BRE recommendations. Both rooms would satisfy the BRE guidelines for the winter months. The residual annual sunlight value for the adversely affected rooms would be 7%.
- 9.139 The sensitivity of Cambridge House is considered medium. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Moderate**.

Secondary Mitigation or Enhancement

- 9.140 No secondary mitigation or enhancement elements are required to be considered as part of the daylight, sunlight and overshadowing assessments.

Residual Effect

- 9.141 In the absence of secondary mitigation the residual effects for insert the receptor is that same as that reported in the pre-mitigation scenario.

Significance

- 9.142 The effect is considered to be **Significant** for Cambridge House and **Not Significant** for all other receptors.

Increased Overshadowing

- 9.143 The full two-hour sun-on-ground assessment is presented on drawings within **Appendix 9.6**. The areas of ground receiving the suggested levels of sun on ground) 2 hours or more on 21 March) are shaded in orange on the drawings provided. Each drawing contains a table showing the percentage of the neighbouring amenity areas tested that will receive the recommended levels of direct sunlight.
- 9.144 5 amenity areas have been considered for the sun-on-ground overshadowing assessment. The results of the assessment are summarised in **Table 9.12**.

Table 9.12: Existing Baseline v Proposed: SOG Overshadowing Analysis

Sensitive Receptor	Area Ref.	% Area Receiving		
		≥2hrs SHOG		
		Baseline	Proposed Development	% Relative Alteration
Loxford Gardens	A1	100%	99%	0%
Loxford Gardens	A2	100%	100%	0%
Manchester Metropolitan Uni	A3	81%	32%	60%

Sensitive Receptor	Area Ref.	% Area Receiving		
		≥2hrs SHOG		
		Baseline	Proposed Development	% Relative Alteration
Manchester Metropolitan Uni	A4	93%	87%	7%
Cavendish Hall of Residence	A5	5%	5%	0%

** <50% of SHOG area retained and >20% relative alteration*

9.145 The results indicate that 4 (80%) of the 5 amenity spaces tested will meet the BRE guidelines: either retaining at least 2 hours of sun in excess of 50% of their respective areas or, where already below this level in the existing condition, receiving minimal or no reductions whatsoever thus meeting the 20% relative reduction criteria.

9.146 Therefore, the overshadowing results for SOG show that the following 4 existing receptors tested would meet the BRE Guidelines and therefore, experience an effect which is considered to be direct, long term, local and **Negligible** (not significant).

- Loxford Gardens (A1);
- Loxford Gardens (A2);
- Manchester Metropolitan Uni (A4); and
- Cavendish Hall of Residence (A5).

9.147 The only neighbouring receptor that will not satisfy the BRE guidelines is the terraced amenity area to the south of the Manchester Metropolitan Uni building located directly to the north of the Site. This will maintain at least 2 hours of direct sunlight to 32% of the area tested.

9.148 The sensitivity of the amenity area at the Manchester Metropolitan Uni is considered high. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse daylight effect upon this property which is considered to be **Moderate**, based on the extent of the effects to the test area and the retained direct sunlight levels.

9.149 The transient overshadowing images show that additional overshadowing will occur to the properties to the east in the morning, to the north in the early afternoon and to the properties in the west later in the afternoon. Due to the shape and width of the proposed towers, the extent of the overshadowing will be limited and only isolated to small time periods as shadow moves from the east to west throughout the day.

Secondary Mitigation or Enhancement

9.150 No secondary mitigation or enhancement elements are required to be considered as part of the daylight, sunlight and overshadowing assessments.

Residual Effect

9.151 In the absence of secondary mitigation the residual effects for insert the receptor is that same as that reported in the pre-mitigation scenario.

Significance

9.152 This effect is considered to be **Not Significant** for Loxford Gardens ad Cavendish Halls of Residence and **Significant** for Manchester Metropolitan Uni.

Limitations and Assumptions

9.153 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- The contextual model supplied by AccuCities was produced from photogrammetry and updated with more accurate data from the 3D point cloud captured on site by high-definition laser scanner.
- Trusted computer software was used to run calculations: Waldram Tools for AutoCAD®.
- A 3D computer model of the massing of the Proposed Scheme was supplied by the architect, Cartwright Pickard.
- Access into the surrounding properties has not been obtained. However, full and partial floor plans for neighbouring properties have been obtained from public records where available.
- Where floor plan information and precise window locations could not be identified for the sensitive receptors, assumptions have been made based on information available and external observation e.g. site visit and online resources e.g. Google Maps, Apple Maps, Bing Maps etc. A list of neighbouring properties where floor plans have been used are listed in **Table 9.13** below.
- Surrounding trees and foliage have not been considered as part of the assessments as their size, shape, and density are impossible to accurately predict. However, the BRE recognise that trees can be obstructive in allowing light penetration, particularly dense belts of evergreens. There are mixture of large trees and thick shrubbery along parts of the site boundary, particularly to the south, which appear to be predominantly deciduous (thus lose their leaves during the winter months). These will inevitably block the view of the site and Proposed Scheme to varying degrees, such that the alterations recorded in the analysis will be more than experienced in reality. Without the inclusion of this vegetation, the assessment results presented within this report therefore represent a 'worst case'.

Table 9.13: Information on internal layouts of neighbouring properties

Plan ref.	Neighbouring building / property	Information used
1	Cavendish Hall of Residence (part Ormond Building)	Plans & elevations from planning consent ref. 112688/FO/2016
5	44 Cavendish Street	Plans & elevations from planning consent ref. 138812/FO/2023 and 1022062/FU/2013
6	2-28 Dalesman Walk	Estate agency plans
7	84 Cambridge Street	Plans and elevations from planning consent ref. 125654/FO/2019
8	Cambridge House	Partial plans from planning consent ref. 055859/FO/99
10	2-12 Broomwood Walk	Estate agency plans
11	2-12 Matham Walk	Estate agency plans
13	60-70 Loxford Gardens	Estate agency plans

Summary

- 9.154 **Table 9.14** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.
- 9.155 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 9.14: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Operational Stage			
Reduced daylight amenity	Cavendish Hall Residence	Major adverse	Significant
	Needham Court	Major adverse	Significant
	Victoria Hall	Minor adverse	Not Significant
	Manchester House	Moderate adverse	Significant
	44 Cavendish Street	Negligible	Not Significant
	2-28 Dalesman Walk	Negligible	Not Significant

Effect	Receptor	Residual Effect	Is the Effect Significant?
	84 Cambridge Street	Moderate adverse	Significant
	Cambridge House	Major adverse	Significant
	2-12 Elmdale Walk	Negligible	Not Significant
	2-12 Broomwood Walk	Negligible	Not Significant
	2-12 Matham Walk	Minor adverse	Not Significant
	2-24 Knowles Place	Negligible	Not Significant
	60-70 Loxford Street	Negligible	Not Significant
Reduced sunlight amenity	Cavendish Hall Residence	Negligible	Not Significant
	Needham Court	Negligible	Not Significant
	Victoria Hall	Negligible	Not Significant
	Manchester House	Negligible	Not Significant
	44 Cavendish Street	Negligible	Not Significant
	2-28 Dalesman Walk	Negligible	Not Significant
	84 Cambridge Street	Negligible	Not Significant
	Cambridge House	Moderate adverse	Significant
	2-12 Elmdale Walk	Negligible	Not Significant
	2-12 Broomwood Walk	Negligible	Not Significant
	2-12 Matham Walk	Negligible	Not Significant
	2-24 Knowles Place	Negligible	Not Significant
	60-70 Loxford Street	Negligible	Not Significant
Increased overshadowing	Loxford Gardens	Negligible	Not Significant
	Manchester Metropolitan Uni	Moderate adverse	Significant
	Cavendish Hall of Residence	Negligible	Not Significant

References

¹ National Planning Policy Framework - Guidance - GOV.UK (www.gov.uk)

² Planning practice guidance - GOV.UK (www.gov.uk)

³ <https://www.bailii.org/ew/cases/EWHC/Admin/2018/657.html>

⁴ <https://www.greatermanchester-ca.gov.uk/media/9578/places-for-everyone-joint-development-plan-document.pdf>

⁵ Core Strategy 2012-2027 | Core Strategy 2012-2027 | Manchester City Council

⁶

https://www.manchester.gov.uk/downloads/download/644/guide_to_development_in_manchester_-_supplementary_planning_document_and_guidance

⁷ <https://www.brebookshop.com/details.jsp?id=328056>

⁸ <https://www.rics.org/content/dam/ricsglobal/documents/standards/Daylighting-and-sunlighting.pdf>

10. Climate Change

Introduction

- 10.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Climate Change.
- 10.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 10.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 10.4 This Chapter is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 10.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 10.6 No statutory consultee exists in relation to climate change, and as a result no consultation has been undertaken beyond the EIA Scoping process.

Scope of the Assessment

- 10.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 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

- 10.8 The following effects in relation to Climate Adaptation and Resilience were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Increasing summer mean and daily maximum temperatures and influence on human health during construction;
 - Changing annual temperatures / rainfall patterns and changes to air quality during construction and water supply, flood risk during construction and operation;
 - Changes to future climate including temperature and rainfall and risk to building infrastructure and future occupants during operation;

- Changes to future climate and resilience of site habitats and species during operation; and
- Higher average summer temperatures and risk of building overheating during operation.

Effects Considered Likely to be Significant

10.9 The following effects (**Table 10.1**) were considered likely to be significant and are reported within this Chapter:

Table 10.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
GHG Emissions	Global climatic system	Construction / Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

10.10 The following legislation and policy has informed the assessment of effects within this Chapter:

- The Climate Change Act 2008¹ was revised in 2019 to set a 100% carbon reduction target (net zero) for the UK by 2050;
- Paragraph 8(c) of the National Planning Policy Framework (NPPF)² updated in December 2024 recognises the key role planning has to play in mitigating climate change and supporting the transition to a low carbon economy;
- Government's Net Zero Strategy (October 2021)³ recognises the importance of the planning system to combating climate change and supporting sustainable growth;
- The UK's Sixth Carbon Budget⁴ was implemented in April 2021, enshrining in law a new target to reduce GHG emissions by at least 78% by 2035;
- In February 2025 the Committee on Climate Change published the proposed Seventh Carbon Budget⁵ to further reduce emissions;
- On 15th June 2022, the Building Regulations were updated as an interim step towards part of the roadmap to the 'full' Future Homes and Buildings Standard, which comes into effect in 2025. The regulations aim to deliver buildings that are of a higher quality, with lower energy bills and reduce GHG emissions by around 30% for new homes and 27% for non-domestic buildings;
- The 2025 Future Homes Standard (FHS) and Future Buildings Standard (FBS) consultation⁶ was published in December 2023 which requires homes to achieve a 75% carbon reduction beyond Part L 2013, removing the use of fossil fuel and requiring increased fabric efficiency and use of low carbon renewable energy

generation. It is anticipated that from 2025 new non-residential buildings will be required to achieve a similar carbon reduction as proposed or the 2025 FHS;

- Places for Everyone (March 2024)⁷ is a long-term plan of nine Greater Manchester (GM) districts, including Manchester, which sets out how the nine boroughs should develop up until 2039. Key sustainability policies include:
 - *Policy JP-S2 Carbon and Energy*, which sets out Best Practice Thresholds for Reducing Energy Demand and Onsite Renewable Energy Generation within residential developments.
 - *Policy JP-S3 Heat and Energy Networks* requires new developments to connect to an existing or planned heat/energy network or install a site wide or communal heat/energy network solution.
 - *Policy JP-S6 Resource Efficiency*, which requires 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.
- Manchester's Core Strategy (2012)⁸ is the key document in the Manchester Local Plan, which sets out the long-term strategic policies for Manchester's future development, including the following key policies:
 - *Policy EN4 – Reducing CO₂ emissions by enabling low and zero Carbon Development*, which requires developments to be designed in accordance with the energy hierarchy to reduce energy demand through active and passive design measures meeting residual requirements through the use of zero carbon, renewable energy technologies.
 - *Policy EN6 – Target framework for CO₂ reductions from low or zero carbon energy supplies* sets out target CO₂ reduction targets for three development categories.
 - *Policy EN8 – Adaptation to Climate Change* requires all new developments to be adaptable to climate change and have consideration of a range of adaptation measures.

10.11 The following guidance has informed the assessment of effects within this Chapter together with professional judgement:

- IEMA's EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022)⁹ (IEMA's GHG Assessment Guidance) – provides guidance on the assessment of GHG emissions;
- RIBA 2030 Climate Challenge¹⁰ – provides good and best practice guidance on reducing energy demand and embodied carbon for residential and non-residential development; and
- LETI Climate Emergency Design Guide (2020)¹¹ and LETI's Embodied Carbon Target Alignment (2021)¹² – provides good and best practice upfront embodied carbon and operational energy for residential and non-residential buildings.

Defining the Study Area

- 10.12 The Site forms the principal study area for the assessment; however, the assessment includes off-site GHG emissions such as those associated with the manufacture and transportation of construction materials, and those associated with the off-site generation (e.g. at a power station) of grid electricity consumed by the completed and operational Proposed Scheme.

Background Studies to Inform the ES / Establishing the Baseline

- 10.13 **Table 10.2** summarises all studies undertaken to inform the assessment presented within this Chapter.

Table 10.2: Background Studies

Study	Overview	Date of Completion
RIBA Stage 3 Life Cycle Embodied Carbon Assessment prepared by ARUP	Estimation of the embodied (A1-C4) and upfront (A1-A5) carbon emissions associated with the Proposed Scheme.	March, 2025
WBS – Technical Design Note 20250303 (Part L and O Compliance) prepared by Waterman	Set out CO ₂ emissions and energy consumption (kilowatt hours per square metre per year [kWh/m ² /yr]) of the buildings.	March, 2025

Assessment Process

- 10.14 There is at present no single accepted methodology for the assessment of GHG emissions within EIA. The proposed assessment methodology outlined below is therefore based on application of IEMA's GHG Assessment Guidance, together with professional judgement.
- 10.15 Determining the magnitude, level of effect and significance of climate change (GHG emissions or savings) from new development remains an emerging practice and is complex given the local scale at which GHG emissions typically occur in contrast to the global and transboundary nature of climate change.
- 10.16 In line with IEMA's GHG Assessment guidance the approach taken in this assessment is to estimate GHG emissions resulting from the construction and operation stages of the Proposed Scheme and to evaluate these emissions in the context of baseline GHG emissions from the Site, local authority's (i.e. Manchester City Council (MCC)) administrative area), and UK region (i.e. North West of England), as well as the future carbon budgets proposed for Manchester and set for the UK.
- 10.17 Furthermore, and in accordance with IEMA's GHG Assessment guidance, consideration is also given to the contribution of the Proposed Scheme to a science-based net zero trajectory in line with the 2015 Paris Agreement's 1.5°C pathway. The IEMA GHG Assessment guidance states, *'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'.

10.18 In order to evaluate the contribution of the Proposed Scheme to this net zero pathway, its construction and operational stage performance is evaluated considering the mitigation proposed through construction and operation and how this aligns with good and best practice guidance and contributes to the UK Net Zero trajectory.

10.19 The applied methodology therefore comprises the following components:

- Establish national and local legislation, policy and guidance relating to climate change mitigation;
- Establish baseline conditions with respect to GHG emissions at the Site, MCC administrative area and North West of England;
- Establish future baseline conditions with respect to GHG emissions from future carbon budgets proposed for Manchester and set for the UK;
- Establish primary and tertiary GHG mitigation measures in place for the Proposed Scheme;
- Estimate GHG emissions resulting from the demolition and construction, and operation stages of the Proposed Scheme;
- Evaluate project's GHG emissions in the context of baseline emissions and future carbon budgets to establish their context and magnitude;
- Appraise the contribution of the Proposed Scheme to the UK's net zero trajectory;
- Establish whether secondary mitigation is required to reduce adverse effects or enhance beneficial effects; and
- Establish the level of effect in relation to GHG and whether it is significant or not.

10.20 The timescales used to assess the construction and operation stages of the Project are set out in **Table 10.3**.

Table 10.3: Assessed Project Timescales

Development Stage	First Year	Completion / Assessment period	Summary
Demolition and Construction	2026	2030	Demolition is anticipated to commence in Q4 2025*, with the construction being completed over 5 years. The Proposed Scheme will be delivered across two phases, with the first phase of construction commencing in Q3 2026 and completed by 2029 and the second phase completed by 2030 (the second phase of construction is due to commence in Q2 2027). For the purpose of this assessment, the 5 years construction period, and an equal split of floor area delivered each year is assumed.
Operation	2030	2042	The Proposed Scheme is anticipated to be fully operational from 2030. Operational GHG emissions are assessed from 2030 up to the end of 2042 to enable comparison with the UK carbon budgets ending 2042**.
* Demolition stage GHG emissions are excluded from the assessment. ** Seventh Carbon Budget (2038-2042) was published by the Committee on Climate Change in 2025 but not yet incorporated into law.			

Reporting of the Environmental Effect and Significance Criteria

10.21 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. 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 Sensitivity of Receptor

10.22 The sensitivity of affected receptors has been considered on a scale of **high, medium, low** or **negligible**.

10.23 GHG emissions affect the global climate system which, in accordance with IEMA's GHG Assessment guidance, is considered potentially sensitive to any additional GHG emissions. This sensitivity may, however, vary depending on the future global response to climate change, for example should a significant global reduction in GHG emissions (compared with

the currently increasing emissions) be achieved over time. IEMA’s latest EIA guide to climate change adaptation and resilience¹³ recommends the use of the Met Office UKCP18 high emissions scenarios (known as RCP8.5), unless the case can be made for using a different, lower emissions scenario. The RCP 8.5 scenario is considered most appropriate for this assessment and as a result the sensitivity of the global climate system is considered to be **high**.

Determining the Magnitude of Change

- 10.24 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of **large, medium, small** or **negligible**.
- 10.25 There are currently no published or agreed significance criteria for evaluating GHG emissions in EIA. Therefore, the magnitude of change of GHG emissions estimated from the Proposed Scheme is determined by establishing their scale relative to recent GHG emissions from the local area (MCC administrative area) and North West, and also to future Manchester and UK carbon budgets as presented in **Table 10.4**, together with professional judgement.

Table 10.4: Determining the Magnitude of Change

Magnitude of Change	Description of Change
Large	A large increase/decrease in GHG emissions (>10%) relative to baseline emissions and/or future carbon budgets
Medium	A medium increase/decrease in GHG emissions (5% – 10%) relative baseline emissions and/or future carbon budgets
Small	A small increase/decrease in GHG emissions (1% – 5%) relative to baseline emissions and/or future carbon budgets
Negligible	A negligible increase/decrease in GHG emissions (<1%) relative to baseline emissions and/or future carbon budgets

- 10.26 The magnitude of GHG emissions (or savings) from a project, how this effect changes (or otherwise) baseline conditions and/or future carbon budgets at the local, regional and national level are also important components when establishing the magnitude of change. However, how much the project contributes (or otherwise) to the UK’s net zero trajectory is a critical additional component as recognised by IEMA’s GHG Assessment Guidance. This is factored into determining the magnitude of change using professional judgement.

Determining the Level of Effect

- 10.27 The level of effect has been informed by the magnitude of change 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 10.5** has been a tool which has assisted with this process.
- 10.28 Whilst **Table 10.5** 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*'.

Table 10.5: Matrix to Support Determining the Level of Effect

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

- 10.29 The following terms (adapted from IEMA's GHG Assessment guidance) have been used to define the level of the effects:
- Major effect:** GHG mitigation measures are not in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a large increase (e.g. $\geq 10\%$) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with major adverse effects is locking in GHG emissions and does not make a meaningful contribution to the national trajectory to net zero;
 - Moderate effect:** GHG mitigation measures are partly in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a medium increase (e.g. $> 5\%$) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with moderate adverse effects complies with some up-to-date policy and good practice but is locking in some emissions and makes only a partial contribution to the national trajectory to net zero;
 - Minor effect:** GHG mitigation measures are in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a small increase (e.g. $< 5\%$) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with minor adverse effects complies with up-to-date

policy and good practice reduction measures and makes a contribution to the national trajectory to net zero;

- **Negligible:** GHG mitigation measures are in line with a science-based 1.5°C aligned transition to net zero for that project type, with minimal residual emissions. A project with negligible effects complies with up-to-date and emerging policy and best practice and plays a part in achieving the rate of transition required by nationally set policy e.g. net zero; and
- **Beneficial:** net GHG impacts are below zero and the project results in a reduction in atmospheric GHG concentrations, whether directly or indirectly, compared to the without-project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact. It should be noted that the latest IEMA guidance on GHGs in EIA does not seek to differentiate between different levels of beneficial effect (minor, moderate, major) or whether they would be 'Significant/Not Significant'.

10.30 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.

10.31 Carbon dioxide equivalency (CO₂e) is a quantity that describes, for a given mixture and amount of GHG, the amount of CO₂ that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). In view of this timescale and the findings of the Intergovernmental Panel on Climate Change (IPCC) 1.5°C Report¹⁴ that some effects from climate change may be long-lasting or irreversible, the duration of effect of the built elements of the Proposed Scheme is assumed to be **long-term**.

Determining Significance

10.32 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.

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

Baseline Conditions

10.34 The Site is currently occupied by the existing Cambridge Halls student accommodation. Whilst the existing Site may result in the release of GHG emissions, no data is currently available on energy demand and emissions, and the scale of such GHG emissions is considered likely to be limited. For the purposes of the GHG emissions assessment, baseline operational GHG emissions from the Site are assumed to be zero, an approach that helps ensure a reasonable 'worst-case' scenario regarding the GHG effect of the Proposed Scheme.

Local and Regional GHG Emissions

10.35 **Table 10.6** presents the most recent (2022) data on baseline GHG emissions for the MCC administrative area and North West of England as sourced from Government's UK Local Authority & Regional CO₂ Emissions Statistics¹⁵. Assumed baseline GHG emissions from the Site are also presented. This baseline data is used to contextualise GHG emissions from the Proposed Scheme and determine the magnitude of change.

Table 10.6: Baseline Local & Regional GHG Emissions

Geographical Area	2022 GHG Emissions (tonnes CO ₂ e)
The Site	0
MCC	2,141,357
North West	40,592,978

Future Baseline

UK Carbon Budgets

- 10.36 The UK carbon budgets are effectively a future baseline of national GHG emissions necessary to achieve net zero. The Climate Change Act 2008 sets a 100% carbon reduction target (net zero) by 2050. It is the duty of the Secretary of State to set for each succeeding period of five years (beginning with the period 2008 – 2012) an amount for the net UK carbon account (the ‘carbon budget’) and to ensure the net quantity of emissions does not exceed the carbon budget. For this reason, it is reasonable to use these targets as an indicator of likely future baseline GHG emissions.
- 10.37 The UK’s Sixth Carbon Budget was implemented in April 2021, enshrining in law a new target to reduce GHG emissions by at least 78% by 2035 and for the first time incorporating the UK’s share of international aviation and shipping emissions. In February 2025 the Committee on Climate Change published the proposed Seventh Carbon Budget to further reduce emissions, it is anticipated this will be approved by the Government.

Manchester Carbon Budgets

- 10.38 The Tyndall Centre has worked with MCC to set future carbon budgets for their administrative area. The ‘Setting Climate Commitments for Manchester’ (October 2024)¹⁶ report sets out proposed carbon budgets for Manchester up to the year 2100. It should be noted that these carbon budgets relate to emissions from the energy system only.
- 10.39 **Table 10.7** presents the future carbon budgets set for the UK and Manchester to date which, together with current baseline GHG emissions reported above, are used to help determine the context and magnitude of future GHG emissions resulting from the Proposed Scheme.

Table 10.7: UK and Manchester Carbon Budgets (tCO₂e)

Period	UK	Manchester
2018 – 2022	2,544,000,000	8,600,000
2023 – 2027	1,950,000,000	4,600,000
2028 – 2032	1,725,000,000	2,400,000
2033 – 2037	965,000,000	1,200,000
2038 – 2042	535,000,000*	600,000
2043 – 2047	Not yet set	300,000
2048 – 2100	Not yet set	300,000

Period	UK	Manchester
* Published by the Committee on Climate Change in February 2025 but not yet incorporated into law.		

Contribution to UK Net Zero Trajectory

- 10.40 In order to determine whether the Proposed Scheme is aligned with and makes an appropriate contribution to the UK's net zero trajectory, it is necessary to provide context for the magnitude of GHG emissions.
- 10.41 The RIBA 2030 Climate Challenge, LETI Climate Emergency Design Guide (2020) and LETI's Embodied Carbon Target Alignment (2021) provide benchmarks and targets for a range of good and best practice embodied carbon and operational energy use intensity (EUI) for buildings to ensure the construction industry delivers the significant reductions necessary to have a realistic prospect of achieving net zero by 2050.
- 10.42 Embodied carbon is the total GHG emissions and removals associated with materials and construction processes throughout the whole lifecycle of a building (RICS lifecycle modules A1-A5, B1-B5 and C1-C4). As such, embodied carbon comprises construction (or upfront) carbon (typically accounting for the large majority of embodied carbon), together with emissions during building use and end of life.
- 10.43 Upfront embodied carbon is the GHG emissions associated with materials and construction processes up to practical completion (RICS lifecycle modules A1-A5), excluding any biogenic carbon sequestered in construction products and materials (e.g. timber). As such upfront embodied carbon relates to emissions occurring during a buildings' construction stage and is the focus of this Chapter (alongside operational emissions).
- 10.44 **Table 10.8** sets out the RIBA 2030 and LETI 2020 Design targets for embodied carbon and operational EUI for new residential and non-residential buildings.

Table 10.8: RIBA 2030 and LETI 2020 embodied carbon and operational carbon targets

	Non-residential (Offices)	Residential
Embodied Carbon Target (kg CO₂e/m²)		
LETI – Current practice (A1-A5)	<950	<850
LETI 2020 - Upfront Embodied Carbon (A1-A5)	<600	<500
RIBA – Business as usual (A1-C4)	<1,400	<1,200
RIBA - 2025 target (A1-C4)	<970	<800
Operational Energy use Intensity (EUI) targets (kWh/m²/yr)		
LETI 2020	55	35
RIBA 2030 Climate Challenge	<75	<60

Primary and Tertiary Mitigation

Demolition and Construction Stage

10.45 The following primary and tertiary mitigation which has been evaluated as part of the construction stage assessment is outlined below.

- Prior to demolition, a demolition audit will be carried out to review opportunities for the reuse and recycling of materials from the existing buildings. It is anticipated that where possible materials will be reused or recycled which can help reduce GHG emissions.
- A RIBA Stage 3 Life Cycle Embodied Carbon Assessment of the Proposed Scheme has been undertaken to assess and where possible reduce construction carbon through consideration of scheme design (e.g. slab thickness), construction materials, specifications and suppliers, and with a particular focus on typical carbon 'hot spot' materials such as concrete and steel.
- A BREEAM Pre-Assessment of the Proposed Scheme was undertaken by Waterman Building Services Ltd in February 2025 predicting an "Excellent" rating, including credits for Man 03 - Responsible Construction Practices and Mat 03 - Responsible sourcing of construction products.

Operational Stage

10.46 The following primary and tertiary mitigation which has been evaluated as part of the operational stage assessment is outlined below.

- The buildings will be constructed to a high standard of fabric insulation and airtightness and will utilise a range of renewable and low carbon energy technologies such as roof mounted solar PV and Air Source Heat Pumps. The development will be all-electric, with no gas boilers, meaning that the carbon intensity of the buildings will reduce over time, ultimately reaching net zero in line with the decarbonisation of the grid.
- An Energy Strategy has been prepared for the Proposed Scheme demonstrating how buildings will comply with the requirements of the current Building Regulations Part L 2021 and the requirements of PfE policies JP-S1, JP-S2 and JP-S3, through incorporation of energy hierarchy principles.
- A BREEAM Pre-Assessment of the Proposed Scheme was undertaken in February 2025 predicting an "Excellent" rating, including credits for Ene 01 Energy Performance, Ene 02 Energy Monitoring and Ene 04 Low Carbon design.

Assessment of Effects, Secondary Mitigation and Residual Effects

Demolition and Construction Stage

GHG Emissions

10.47 The construction stage of the Proposed Scheme will result in GHG emissions both on- and off-site, from a range of activities including the manufacture of construction materials and products, the transport of materials and waste on- and off-site, the consumption of fossil

fuels and electricity by site plant and vehicles, and the treatment of residual construction waste.

- 10.48 Demolition stage GHG emissions are anticipated as a result of the demolition of the buildings and transport of materials offsite for processing. Prior to demolition, a demolition audit will be carried out to review opportunities for the reuse and recycling of materials from the existing buildings. It is anticipated that where possible materials will be reused or recycled which can help reduce GHG emissions. The direct GHG emissions associated with demolition stage are anticipated to be limited and are therefore excluded from the assessment.
- 10.49 Construction GHG emissions resulting from the proposed buildings are calculated based on the RIBA Stage 3 Life Cycle Embodied Carbon Assessment prepared by Arup. GHG emissions calculated across RICS lifecycle modules A1-A5, which include construction stage transport emissions, are used to establish construction-stage GHG emissions from the Proposed Scheme.
- 10.50 **Table 10.9** below presents annual and total construction stage GHG emissions calculated for the Proposed Scheme.

Table 10.9: Construction GHG emissions

	Total GIA (m ²)	Embodied Carbon Assessment Results (A1-A5, excl. sequestration) (kgCO ₂ e/m ²)	Total GHG Emissions (tCO ₂ e)	Annual GHG Emissions (tCO ₂ e)
Construction Stage (A1-A5)	66,247	789	52,269	10,454

- 10.51 The construction stage of the Proposed Scheme is estimated to result in total emissions of 52,269 tCO₂e, equating to annual construction emissions of circa 10,454 tCO₂e across the 5 year construction period.
- 10.52 **Table 10.10** presents construction emissions as a proportion of baseline emissions from MCC, North West, and also future Manchester and UK carbon budgets. In order to assess the worst-case scenario, annual average construction emissions are used for comparison with baseline MCC and North West emissions (given these are also annual emissions), whilst total construction emissions are compared with UK carbon budgets for that period.

Table 10.10: Contextualised Construction Stage GHG Emissions

Context	Construction Stage GHG Emissions (as a %)
Baseline emissions	
MCC	0.49%
North West England	0.03%
Carbon Budgets	

Context	Construction Stage GHG Emissions (as a %)
UK 4 th Carbon Budget (2023 – 2027)	<0.003%
UK 5 th Carbon Budget (2028 – 2032)	0.003%

- 10.53 Annual construction emissions of 10,454 tCO₂e equate to circa 0.49% of Manchester, and 0.03% of North West of England baseline emissions. Total construction emissions of 52,269 tCO₂e equate to c. 0.003% of the UK carbon budget for each carbon budget period.
- 10.54 It should be noted that Manchester carbon budgets proposed by Tyndall Centre relate to emissions from the energy system only, whereas construction emissions from the Proposed Scheme will largely comprise those from the manufacture and transport of construction products and materials. Construction GHG emissions are therefore not readily comparable given a significant proportion of these emissions are likely to occur outside the geographical and/or temporal boundary of Manchester carbon budget.
- 10.55 **Table 10.11** compares GHG emissions calculated for the Proposed Scheme within the Embodied Carbon assessment across RICS lifecycle modules A1-A5 (upfront carbon) with LETI upfront carbon benchmarks. Please note that although there are other proposed uses within the buildings such as commercial and community uses, as the residential use will be the predominant use of the Proposed Scheme, it has been assumed that the buildings will be constructed to comply with the residential use benchmark.

Table 10.11: Proposed Scheme and LETI Benchmark

	Residential	Proposed Scheme
LETI Current practice (A1-A5) (kg CO ₂ e/m ²)	<850	789
LETI 2020 – Design Target (A1-A5) (kg CO ₂ e/m ²)	<500	

- 10.56 Currently the Building Regulations set no requirement for the consideration of upfront embodied carbon. The upfront carbon of the Proposed Scheme, which consists predominantly of a PBSA, shows a c.7 % reduction in upfront embodied carbon against the LETI Business as Usual benchmarks for residential development. This therefore represents a form of good practice and the Proposed Scheme is considered to make an appropriate contribution to the UK net zero trajectory for this issue.
- 10.57 The sensitivity of the Global Climate System is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, temporary, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

- 10.58 No secondary mitigation or enhancement is required.

Residual Effect

- 10.59 In the absence of secondary mitigation the residual effect is the same as that reported within the pre-mitigation scenario.

Significance

- 10.60 This effect is considered to be **Not Significant**.

Operational Stage

GHG Emissions

- 10.61 The operation stage of the Proposed Scheme will result in GHG emissions from the generation of energy consumed by the proposed dwellings, commercial and communal space. For the purposes of the GHG emissions assessment, baseline operational GHG emissions from the Site are assumed to be zero, an approach that helps ensure a reasonable 'worst-case' approach regarding the GHG effect of the Proposed Scheme.
- 10.62 The Proposed Scheme will generate trips on the local road network as a result of its operation. The trips associated with the residential use are likely to already exist on the transport network and will be redistributed within the local area. In addition, it is expected that the majority of trips to and from the Site will be made by modes other than the private car. The Site is located within the city centre, in an accessible location for walking, cycling and public transport use. No parking spaces are proposed to be provided for the Proposed Scheme. Therefore, operational transport emissions are likely to be negligible and these have not been considered in the assessment.
- 10.63 GHG emissions from the operation of the Proposed Scheme are calculated based on the annual Energy Consumption by End Use of 47.4 kWh/m²/yr for Phase 1 and 41.8 kWh/m²/yr for Phase 2 provided within the Part L and O Compliance Technical Note prepared by Waterman as well as UK electricity grid factors published by the Department for Energy Security and Net Zero (DESNZ, November 2023)¹⁷ (commercial, consumption-based) which reflect the continued decarbonisation of the UK electricity grid from the ongoing uptake of renewables (especially offshore wind) and closure of coal-fired power stations.
- 10.64 **Table 10.12** presents estimated operational GHG emissions for the first year of assumed operation (2030), for the last year of the assessed period (2042) as well as emissions over the assessed operational period (2030 – 2042). As the assessment uses UK electricity grid factors which reflect the continued decarbonisation of the UK electricity grid, operational GHG emissions are anticipated to reduce over time, with emissions in year 1 of operations representing the peak/worst-case.

Table 10.12: Operational Stage GHG Emissions

Operational Stage GHG Emissions (tCO ₂ e/yr)	
Year 1 (2030)	144
Year 13 (2042)	41
Total (2032 -2042)	894

- 10.65 The Proposed Scheme is estimated to result in GHG emissions of 144 tCO₂e during the first year of operation (2030), dropping to 41 tCO₂e in 2042, and accumulating to 894 tCO₂e across the assessed operational stage (2030 – 2042).
- 10.66 **Table 10.13** reports the above operational stage emissions as a proportion of baseline (2022) emissions from MCC and North West, and also future Manchester and UK carbon budgets. Peak annual operational GHG emissions are compared with baseline emissions (given these are also annual data), whilst total operational GHG emissions are compared with Manchester and UK carbon budgets for the same 2030 – 2042 period.

Table 10.13: Contextualised Operational Stage GHG Emissions

Context	Operational Stage GHG Emissions (as a %)
Baseline emissions	
MCC	0.007%
North West England	<0.001%
Carbon Budgets	
UK 5 th Carbon Budget (2028 – 2032)	<0.001%
UK 6 th Carbon Budget (2033 – 2037)	<0.001%
UK 7 th Carbon Budget (2038 – 2042)	<0.001%
Manchester carbon budget (2028 – 2032)	0.025%
Manchester carbon budget (2033 – 2037)	0.025%
Manchester carbon budget (2038 – 2042)	0.039%

- 10.67 Peak annual operational emissions of 144 tCO₂e equate to circa 0.007% of MCC and less than 0.001% of the North West baseline emissions. Total operational emissions for the assessed period (2030 – 2042) of 894 tCO₂e equate to a maximum of 0.039% of Manchester carbon budgets (for 2038 – 2042) and less than 0.001% of UK carbon budgets.
- 10.68 **Table 10.14** presents operational GHG emissions for the Proposed Scheme within the context of LETI and RIBA climate challenge targets for operational energy. Please note that although there are other proposed uses within the buildings such as commercial and community uses, as the residential use will be the predominant use of the Proposed Scheme, it has been assumed that the buildings will be constructed to comply with the residential use benchmark.

Table 10.14: Operational GHG Emissions Benchmark Context

Operational Energy use Intensity (EUI) targets	Residential	Proposed Scheme	
		Phase 1	Phase 2
LETI 2020 (kWh/m ² /yr)	35		

Operational Energy use Intensity (EUI) targets	Residential	Proposed Scheme	
		Phase 1	Phase 2
RIBA 2030 Climate Challenge (kWh/m ² /yr)	<60	47.4	41.8

10.69 Annual operational energy demand of the Proposed Scheme of 47.4 kWh/m²/year (Phase 1) and 41.8 kWh/m²/year (Phase 2) is higher than LETI 2020 residential target, although below RIBA residential operational energy target for 2025. This performance is considered to make an appropriate contribution to the UK net zero trajectory through the provision of good practice mitigation.

10.70 The sensitivity of the Global Climate System is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, temporary, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

10.71 No secondary mitigation or enhancement is required.

Residual Effect

10.72 In the absence of secondary mitigation the residual effect is the same as that reported within the pre-mitigation scenario.

Significance

10.73 This effect is considered to be **Not Significant**.

Limitations and Assumptions

10.74 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- The assessment of the level of effect and whether the effect is 'significant' or not is based, in part, on professional judgement.
- It is expected that the majority of trips to and from the Site will be made by modes other than the private car. The Site is located within the city centre, in an accessible location for walking, cycling and public transport use. No parking spaces are proposed to be provided for the Proposed Scheme.
- The future UK electricity grid factors sourced from DESNZ are projections which may not reflect the actual emissions associated with grid electricity consumption in future. However, DESNZ projections have slightly underestimated the rate of grid decarbonisation in recent years, so any inaccuracy in these projections may serve to over-estimate as well as under-estimate GHG emissions associated with the Proposed Scheme's future electricity demand.

Summary

10.75 **Table 10.15** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

- 10.76 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 10.15: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
GHG Emissions	Global climate system	Minor adverse	NO
Operational Stage			
GHG Emissions	Global climate system	Minor adverse	NO

References

- ¹ Climate Change Act 2008 (2050 Target Amendment) Order 2019. Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>
- ² MHCLG (February 2025). National Planning Policy Framework (NPPF). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- ³ BEIS (2021). Net Zero Strategy: Build Back Greener. Available at: <https://www.gov.uk/government/publications/net-zero-strategy>
- ⁴ BEIS (2021). Press Release: UK enshrines new target in law to slash emissions by 78% by 2035. Available at: <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>
- ⁵ Climate Change Committee (2025) 7th carbon budget. Available at: [The Seventh Carbon Budget - Climate Change Committee](#)
- ⁶ Department for Levelling Up, Housing and Communities (2023). Available at: <https://www.gov.uk/government/consultations/the-future-homes-and-buildings-standards-2023-consultation>
- ⁷ Places for everyone joint development plan document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan (March 2024). Available at: <https://www.greatermanchester-ca.gov.uk/media/2drduk0t/places-for-everyone-joint-development-plan-dec24.pdf>
- ⁸ [Manchester's Core Strategy \(2012\)](#)
- ⁹ EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022). Available at: <https://www.iema.net/preview-document/assessing-greenhouse-gas-emissions-and-evaluating-their-significance>
- ¹⁰ RIBA 2030 Climate Challenge. Available at: <https://www.architecture.com/about/policy/climate-action/2030-climate-challenge>
- ¹¹ LETI Climate Emergency Design Guide. Available at: https://www.leti.london/files/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

-
- ¹² LETI (2021). Embodied Carbon Alignment Target. Available at:
https://www.leti.uk/files/ugd/252d09_25fc266f7fe44a24b55cce95a92a3878.pdf
- ¹³ IEMA (2020). EIA guide to: Climate Change Resilience & Adaptation. Available at:
<https://www.iema.net/resources/reading-room/2020/06/26/iema-eia-guide-to-climate-change-resilience-and-adaptation-2020>
- ¹⁴ IPCC (2019). Global warming of 1.5°C. Available at:
https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf
- ¹⁵ BEIS (2024). UK Local Authority and Regional Carbon Dioxide Emissions National Statistics: 2005 to 2022. Available at: <https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics>.
- ¹⁶ Tyndall Centre (2024). Setting Climate Commitments for Manchester. Available at:
<https://carbonbudget.manchester.ac.uk/reports/E08000003/>
- ¹⁷ Electricity emissions factors to 2100 kgCO₂e/kWh, DESNZ (2023) Available at:
https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjxuCjjsr9AhXTFsAKHfvzCCsQFnoECA8QAQ&url=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F1129255%2Fdata-tables-1-19.xlsx&usg=AOvVaw20O8FpOwsZ_38RiDyW0w7 .

11. Socio-economics and Human Health

Introduction

- 11.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to socio-economics and human health.
- 11.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 11.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 11.4 This Chapter, and its associated **Figure 11.1**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 11.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 11.6 The project team has undertaken an EIA Scoping exercise (described further under the 'Scope of Assessment' section below), which included consultation with MCC and other statutory consultees. The outcomes of this are documented in Chapter 2: Approach to EIA and Appendix 2.1 and 2.2. No further technical consultation regarding socio-economics and human health has been undertaken, over and above that completed during the EIA Scoping process.

Scope of the Assessment

- 11.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as Appendix 2.1. The EIA Scoping Opinion was received on 7th April 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

- 11.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Access to primary healthcare facilities;
 - Social cohesion and inclusive design;
 - Crime reduction and community safety;

- Access to healthy food;
- Access to active travel and sustainable transport options;
- Access to open space and sports and recreation facilities;
- Access to training opportunities; and
- Employment generated during the operational stage.

Effects Considered Likely to be Significant

11.9 The following effects (Table 11.1) were considered likely to be significant and are reported within this Chapter:

Table 11.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Employment generated	Labour force	Construction
Provision of PBSA	Students requiring accommodation	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

11.10 There is no relevant legislation or policy stipulating the means through which effects within this Chapter should be assessed.

11.11 The following guidance has informed the assessment of effects within this Chapter:

- Homes and Communities Agency (HCA) (2014) Additionality Guide (4th Edition)¹;
- NHS Healthy Urban Development Unit (HUDU) (2019) Rapid Health Impact Assessment Toolkit (4th edition)²;
- Institute of Environmental Management and Assessment (IEMA) (2022) Effective Scoping of Human Health in Environmental Impact Assessment³; and
- IEMA (2022) Determining Significance for Human Health in Environmental Impact Assessment⁴.

Defining the Study Area

11.12 In the absence of guidance or policy available to inform the definition of appropriate study areas for the assessment of socio-economic and human health effects, study areas are defined based on an understanding of relevant socio-economic geographies and the extent to which socio-economic and human health effects are likely to be contained within these geographies. A socio-economic and human health study area plan is included in **Figure 11.1** and shows:

- A **local impact area** defined as the local authority of Manchester. The 2021 Census⁵ indicates that 42% people working in Manchester also live within the authority, suggesting reasonable socio-economic containment within this geography. All effects assessed within the Chapter are relevant to analyse at the scale of the local impact area;
- A **wider impact area**, defined as the administrative boundary of the combined authority of Greater Manchester. The 2021 Census found that the vast majority (88%) of people working in Manchester lived within the wider impact area, suggesting a high level of socio-economic containment within this geography. The consideration of wider impact area enables the full extent of employment related effects assessed within this Chapter to be captured.

Background Studies to Inform the ES / Establishing the Baseline

11.13 **Table 11.2** summarises all studies and analysis undertaken to inform the assessment presented within this Chapter.

Table 11.2: Background Studies / Surveys / Evaluations /Analysis

Study / Analysis	Overview	Date of Completion
Desk-based study of publicly accessible socio-economic and human health data	Data obtained to understand prevailing socio-economic and human health conditions.	February 2025
Economic impact modelling exercise	Modelling conducted to establish magnitude of change, level of effect and whether the effect is significant or not.	February 2025

Assessment Process

11.14 There is no overarching guidance which sets out a definitive or preferred methodology for the preparation of assessments of the likely effects of development proposals in terms of socio-economic or human health. However, there are several methodological guides which cover key elements of the assessment. These are drawn upon as appropriate within the assessment, with the HCA Additionality Guide alongside statistical evidence published by organisations such as the Office for National Statistics (ONS) being of particular relevance to the assessment of economic impacts.

11.15 Drawing on the above guidance, the following methodology has been applied:

- **Employment generated during construction:** Gross full-time equivalent (FTE) jobs supported by the construction of the Proposed Scheme have been estimated by dividing construction costs (provided by the Applicant) by the average annual turnover for construction sector employees in the North West region⁶. This has then been divided by the duration of the construction stage (i.e. number of years) to estimate the average gross FTE jobs supported throughout the construction stage. Allowances are

then made for leakage^a and displacement^b, respectively, taking into account commuting patterns⁷ and standards set out in recognised guidance⁸ in order to calculate net FTE jobs. Multipliers^c have also been applied to estimate indirect and induced employment, drawing on guidance. The extent to which employment supported by the Proposed Scheme's construction stage impacts upon baseline levels and growth of local construction sector employment in the context of wider economic trends informs its level of effect/significance against this indicator.

- **Provision of PBSA:** The impact of the Proposed Scheme on the supply of PBSA in the local impact area is considered quantitatively in the context of evidence of need for PBSA in Manchester⁹. Qualitative analysis of the impact on resident health and wellbeing of delivering new PBSA at the Site is also presented, with reference to key health and wellbeing determinants established by the NHS HUDU¹⁰.

Reporting of the Environmental Effect and Significance Criteria

11.16 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. 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 Sensitivity of Receptor

11.17 The sensitivity of affected receptors has been considered on a scale of **high, medium, low** or **negligible**.

11.18 The sensitivity of receptors is determined through comparison with wider city-regional and national trends. Consideration is also given to the priority and value attributed to specific receptors in strategy and policy terms. The assessment is based on professional judgement.

11.19 In the absence of industry wide guidance on assessing the significance of socio-economic and human health effects, **Table 11.3** provides a general overview of the sensitivity criteria which have been applied in the assessment. Given the broad range of effects assessed within the Chapter, it is not possible to define specific criteria that would be applicable across all receptors. The sensitivity of each specific receptor is therefore discussed and justified in turn within the 'Assessment of Effects, Secondary Mitigation and Residual Effects' section of this Chapter, based on these general principles.

^a Leakage is defined by the HCA Additionality Guidance as '*the proportion of outputs that benefits those outside of the intervention's target area or group*'. For example, the number of jobs which would be held by those living outside of the respective impact areas.

^b Displacement is defined by the HCA Additionality Guidance as '*the proportion of intervention outputs/outcomes accounted for by reduced outputs/outcomes elsewhere in the target area*'.

^c Multipliers are defined by the HCA Additionality Guide as '*Further economic activity (jobs, expenditure and income) associated with additional local income and local supplier purchases*'.

Table 11.3: Definition of sensitivity of receptors

Sensitivity	Definition
High	Receptor of national importance, with little ability to absorb, adapt to or recover from change.
Medium	Receptor of regional or local importance, with medium ability to absorb adapt to or recover from change.
Low	Receptor of local importance, with some ability to absorb, adapt to or recover from change.
Negligible	Receptor of limited or no importance.

Determining the Magnitude of Change

- 11.20 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of **large, medium, small** or **negligible**.
- 11.21 In the absence of industry-wide guidance on assessing the magnitude of change with respect to socio-economic and human health effects, **Table 11.4** provides a general overview of the criteria applied in the assessment.
- 11.22 To determine magnitude, the absolute impact attributable to the Proposed Scheme is benchmarked (where relevant) against the average annual rate of change in the corresponding socio-economic and human health characteristics or baseline.

Table 11.4: Definition of magnitude of change

Magnitude	Definition
Large	The change will result in substantial difference from baseline conditions, and is likely to affect large numbers of people and / or businesses over the long term.
Medium	The change will result in a notable difference from baseline conditions, and is likely to affect a reasonable number of people and / or businesses over a medium duration.
Small	The change will result in a perceptible difference from baseline conditions, and is likely to affect a small number of people and / or businesses over a short duration.
Negligible	The change does not result in variation beyond baseline conditions, and is unlikely to measurably affect people and / or businesses.

Determining the Level of Effect

- 11.23 The level of effect has been informed by the magnitude of change 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 11.5** has been a tool which has assisted with this process.
- 11.24 Whilst **Table 11.5** 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*'.

Table 11.5: Matrix to Support Determining the Level of Effect

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

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.

- 11.25 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

- 11.26 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.
- 11.27 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

Economic Activity and Employment

- 11.28 Gaining fulfilling employment can have notable economic and wellbeing benefits for both individuals and society. This is exemplified by the fact that health expenditure on an unemployed person is reported to be double the average expenditure per person, given that an individual’s overall health and wellbeing, in terms of physical and mental health, is strongly associated with being in fulfilling and stable employment¹¹.
- 11.29 OHID research¹² (originally published as PHE) highlights the following benefits of having necessary skills to obtain employment:
- Employment is generally the key means to obtaining adequate economic resources, which are essential for material wellbeing and full participation in society; and
 - Work also meets important psychological needs in societies where employment is the norm and is central to individual identity, social roles and social status, with employment and socio-economic status being among the main drivers of health outcomes.
- 11.30 Whilst conversely, this research indicates that a lack of skills and unemployment:
- Causes the loss of regular income, the material and psychological impacts of which contributes to the link between unemployment and poor health;
 - Causes additional psychological stressors related to status and self-esteem, identity and the loss of a core role in life, which impact on health;
 - Is also associated with unhealthy behaviours, including increased smoking and alcohol consumption and decreased physical exercise; and
 - Can have effects beyond the individual directly affected, with evidence suggesting that financial difficulties or associated stress can increase the risk of poor mental health among families of those who are unemployed.
- 11.31 The ONS regularly monitors national wellbeing, and its research¹³ highlights a correlation between unemployment and people’s experiences of feelings of loneliness. Higher unemployment rates in an area are linked to higher loneliness rates and poses a threat to people’s economic means as well as their health and wellbeing.

- 11.32 As such, NHS HUDU guidance¹⁴ identifies income and employment and access to work and training as key determinants of human health. Similarly, IEMA guidance¹⁵ highlights ‘employment and income’ as a relevant human health-related effect for consideration within EIA.
- 11.33 Analysis of economic activity, employment and unemployment rates provides an indication of the latent labour force either currently unemployed or available to start work immediately. Over the year October 2023 – September 2024, the ONS’s Annual Population Survey (APS)¹⁶ indicates that economic activity rates amongst the resident working-age population of the local and wider impact areas of Manchester and Greater Manchester (71% and 75% respectively) are lower than the activity rates in England as a whole (79%). Similarly, the employment rate in the local and wider impact areas (65% and 71% respectively) were also lower than the rate in England as a whole (76%)¹⁷.
- 11.34 The latest Claimant Count data published by the ONS¹⁸ provides an up-to-date record of the number of people currently claiming benefits principally for the reason of being unemployed. This indicates that as of January 2025, there were c. 26,190 people in Manchester claiming out-of-work benefits, accounting for 6.8% of the resident working-age population. The number of claimants extends to circa 97,770 across Greater Manchester (5.3% of the working-age population)¹⁹. These proportions are higher than the rates recorded nationally (4.3%).
- 11.35 Analysis of ONS data regarding Jobseeker’s Allowance (JSA) claimants (a sub-set of the above, which also captures the majority now claiming Universal Credit) highlights that 235 people in Manchester were recorded as specifically seeking employment in construction-related trades in January 2025, rising to c. 980 across Greater Manchester. This indicates that there is an available construction workforce both locally and in the wider area²⁰.
- 11.36 On 12 December 2024, the new Labour Government (elected on 4 July 2024), published their new “*pro-growth*” National Planning Policy Framework (NPPF)²¹, setting out the Government’s planning policies for England. The NPPF establishes the intention for the planning system to ‘help create the conditions in which businesses can invest, expand and adapt’. In this context, it confirms that ‘*significant weight should be placed on the need to support economic growth and productivity*’²².
- 11.37 The need for new jobs and a boost to pay and living standards also remain of vital importance in the current context of inflationary pressures and the ongoing cost-of-living crisis; whilst the proportion of adults reporting an increase in their cost of living has fallen since peaking in October 2022, a September 2024 ONS survey indicates that 52% of adults nationally reported that their cost of living had increased compared to the previous month, with the most commonly reported reason remaining the price of their food shop (92%)²³.
- 11.38 Further to this, the ONS reports²⁴ that after wage increases had slowed in the recent months; over the year to October 2024 annual average wage growth was 6.3%, the highest rate of annual increase recorded since March 2024, when it was 6.4%. Additionally, the growth in ‘real wages’ (i.e. adjusted for inflation) during the same period was markedly lower, at 3%.

Labour Market and Industry

- 11.39 The latest (2023) ONS Business Register and Employment Survey (BRES)²⁵ recorded that the local impact area of Manchester supported a total of c. 457,600 workforce jobs. The wider Greater Manchester area supported a total of circa 1.5 million jobs.
- 11.40 As of 2018, Manchester supported c. 398,500 jobs, indicating growth of 59,125 jobs during the 5-year period to 2023, equating to total growth of 15% and an average increase of c. 11,800 jobs per annum. Employment in the wider impact area of Greater Manchester grew by 115,000 jobs during this time (8% growth overall), equating to average creation of an additional c. 23,000 jobs per annum.
- 11.41 BRES data indicate that Manchester supported employment for 9,000 people in the construction sector as of 2023. This equates to 2.0% of total employment in the area, which is lower than the sector's 4.7% contribution to the total workforce across the Greater Manchester area (circa 70,000 construction jobs).
- 11.42 The number of construction jobs in Manchester as of 2023 remains in line with 2018 levels (at 9,000 jobs). Employment in the sector did albeit fluctuate during the intervening period; for example, peaking at 11,000 jobs in 2021, before falling again in subsequent years. Construction employment in Greater Manchester has also fluctuated over the past 5 years, and as of 2023 stands at 9,000 jobs higher than recorded in 2018, an annual growth of 1,800 jobs per annum.
- 11.43 Key employment sectors in Manchester as of 2023 include those in professional, scientific & technical industries (accommodating 64,000 jobs, 14% of total employment); health (53,000, 12%); business administration & support services (50,000, 11%); and education (42,000 jobs, 9% of total employment).

PBSA

- 11.44 A person's ability or otherwise to access housing which is of good quality, is affordable and which meets their needs can have a significant impact on their physical and mental health. As outlined in OHID guidance²⁶ (originally published as PHE), there are risks to an individual's health associated with living in:
- A cold, damp, or otherwise hazardous home (an unhealthy home);
 - A home that does not meet the household's needs due to risks such as being overcrowded or inaccessible to a disabled or older person (an unsuitable home); and
 - A home that does not provide a sense of safety and security, including precarious living circumstances and/or homelessness (an unstable home).
- 11.45 Poor housing conditions have all been shown to be associated with physical illnesses including eczema, hypothermia and heart disease, with respiratory health also having been shown to be particularly affected. Poor physical conditions can also negatively impact on mental health, due to the stress caused by living in insecure, overcrowded, cold, polluted or damp conditions²⁷. Research commissioned by Shelter²⁸ reported 20% of English adults surveyed stated that a housing issue had negatively impacted upon their mental health in the last 5 years.

- 11.46 The above is also significant in the context of student housing, given that 2023 research²⁹ investigating the experiences of students in the private rented sector indicated that:
- 54% have experienced damp or mould on walls or ceilings in their current accommodation;
 - 57% have experienced condensation in their current accommodation;
 - 49% say their accommodation is poorly insulated / draughty;
 - 70% say they limit the length of time they have their heating on to save money on energy bills;
 - 12% have been unable to pay their energy bills at the final reminder;
 - 59% say they have felt uncomfortably cold in their current accommodation; and
 - 48% who say they've felt uncomfortably cold say it makes them feel anxious or depressed.
- 11.47 As such, 'Housing Quality and Design' is included as a key determinant of health by the NHS HUDU Rapid HIA Tool³⁰. Similarly, IEMA guidance³¹ highlights 'housing' as a relevant human health-related effect for consideration when scoping EIA.
- 11.48 Evidence regarding demand of PBSA in Manchester was presented to MCC's Executive Committee in May 2023³². The report identified need for between an additional 5,440 to 11,320 bedspaces up to 2030, and concluded that demand for PBSA city-wide equated to need for 750 new bed spaces annum up to 2030. This reflects an under-provision in the city relative to the size of its student population, with the report affirming that there is a clear need for additional PBSA in Manchester. It is also noted that the Site is identified by the report ('Cambridge Halls') as one of 20 sites that could contribute towards meeting PBSA need in Manchester during this period.
- 11.49 Further industry analysis³³ of PBSA need conducted in 2024 suggests that Manchester's shortfall in PBSA could extend to c. 16,000 bedspaces, and therefore need is potentially higher still than the Council's assessment of requirements for this type of housing.

Future Baseline

Employment

- 11.50 It is anticipated that the Proposed Scheme will be delivered over a 5-year period between 2025 (the estimated commencement of site preparation) and 2030 (the completion of all works on Site and the Site becomes fully operational). The below therefore summarises (where possible) Experian's latest employment forecasts³⁴ (at time of writing) for the future baseline at the commencement of the construction stage (including demolition) and the anticipated date of full completion/operation.
- 11.51 Between 2025 (commencement of construction) and 2030 (completion and full operation):
- Total FTE employment is forecast to increase by 0.2% in Manchester, and by 0.7% across Greater Manchester as a whole.

- Construction sector FTE employment is forecast to decrease by 3.5% in Manchester, and by 1.6% across Greater Manchester as a whole.

11.52 Without development in this location, there is not expected to be any impact on employment in the local and wider impact areas beyond that which would ordinarily occur under the conditions of prevailing baseline trends.

Primary and Tertiary Mitigation

Construction Stage

11.53 No primary or tertiary mitigation has been evaluated as part of the construction stage assessment.

Operational Stage

11.54 No primary or tertiary mitigation has been evaluated as part of the operational stage assessment.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Employment generated during construction

- 11.55 Based on estimated construction costs (provided by the Applicant), and the average turnover per employee per annum in the construction sector in the North West³⁵, it is estimated that the Proposed Scheme has the capacity to support circa 1,400 'person-years' of direct employment within the construction sector. Over the course of a 5-year build period, this equates to an average of 280 FTE on- and off-Site construction jobs during the construction stage.
- 11.56 Of the new construction jobs created, not all will be additional to the local and wider impact area. A proportion of jobs will be taken by those living across the UK, outside of the respective local and wider impact areas of Manchester and Greater Manchester (referred to as 'leakage'), and a proportion of jobs will be taken by those who, in the absence of the Proposed Scheme, could otherwise be working on alternative construction projects locally (referred to as 'displacement').
- 11.57 Following the application of appropriate assumptions for leakage³⁶ and displacement³⁷ (respectively in line with guidance and published data³⁸), it is estimated that 190 FTE jobs will be directly supported across Greater Manchester, of which 80 FTE jobs are likely to be taken by those living in the local impact area of Manchester.
- 11.58 The beneficial economic impacts will extend beyond construction employment to include the generation of indirect benefits for the local economy. Investment will generate considerable expenditure on construction materials, goods and other services which will be purchased from a wide range of suppliers. This expenditure has far-ranging benefits both locally and further afield as it filters down the supply chain, and via the induced impacts of employment, through onward expenditure.
- 11.59 The result is that the initial investment is amplified in an economic 'multiplier' effect with linked benefits in terms of generated expenditure spent locally on goods and services. This will bring indirect employment and financial benefits for local individuals and firms involved

in the skilled construction trades and associated professions. It could also help to sustain employment within this sector across the local and wider economy. Based on the application of appropriate multipliers³⁹, based on published guidance⁴⁰, it is estimated that construction could support a further 90 FTE jobs across Greater Manchester via indirect and induced effects, including contracts within the supply chain, salaries and onward expenditure, inclusive of 20 FTE jobs in the local impact area.

11.60 The total net additional employment impact describes the sum of direct and indirect / induced employment effects. Therefore, the assessment finds that a total of 280 net additional FTE positions could be generated each year across Greater Manchester, inclusive of 100 jobs in Manchester.

11.61 Construction stage employment impacts are summarised in **Table 11.6**.

Table 11.6: Construction Stage Employment

	Local Impact Area	Wider Impact Area
Person-years of employment	1,400	
Construction period (years)	5	
Gross FTE employment	280	
Direct net additional FTE employment	80	190
Indirect / induced net additional FTE employment	20	90
Total net additional FTE employment	100	280

Source: Turley Economics, 2025

11.62 The sensitivity of the labour force in the local and wider impact areas is considered to be high, given the number of people claiming JSA and other unemployment-related benefits who are seeking work in the construction sector in the local and wider impact areas. This also reflects a heightened sensitivity in the context of inflationary pressures and ongoing cost-of-living crisis as well as the importance of employment and income as determinants of human health.

11.63 As set out in the baseline section, employment in the construction sector remained flat locally and grew by 9,000 jobs in the city region over the period to 2018-2023 (an average rate of growth of 1,800 additional jobs per annum). The 280 gross direct construction jobs (190 of which will be net additional to residents of the wider impact area, including 80 for Manchester residents) generated by the Proposed Scheme will therefore contribute towards sustaining rates of employment in the sector going forwards, albeit over a temporary, medium-term period. On this basis, whilst beneficial, the magnitude of change is considered to be small, relative to baseline indicators regarding local construction employment.

11.64 Therefore, there is likely to be a direct, temporary, medium-term, beneficial effect which is considered to be minor.

Secondary Mitigation or Enhancement

11.65 No secondary mitigation or enhancement is required.

Residual Effect

- 11.66 In the absence of secondary mitigation the residual effect for the labour force is the same as that reported in the pre-mitigation scenario.

Significance

- 11.67 This effect is considered to be **Not Significant**.

Operational Stage

Provision of PBSA

- 11.68 The net addition of 2,302 PBSA bedspaces (accommodating an equivalent number of residents) – equating to a net on-site uplift of 1,531 bedspaces and residents – at the Proposed Scheme would represent a notable scale of delivery against the existing need for PBSA city-wide in Manchester, which was estimated at MCC's last count as at least 5,440 bedspaces (and potentially up to 11,320) over the period to 2030. The scale of net additional provision to be delivered by the Proposed Scheme would equate to between 14% and 28% of the overall need to 2030, as most-recently estimated by MCC.
- 11.69 Further to this quantitative increase, the new provision will also contribute to a qualitative uplift in terms of the standard of student accommodation provision for students in Manchester. New PBSA will ensure that students are accommodated within housing of high environmental and accessibility standards, which – as set out in the baseline section – are key aspects which contribute to a healthy home, as defined by the NHS HUDU⁴¹.
- 11.70 As highlighted by MCC's Core Strategy Policy H12, PBSA should be close to the University campuses or within areas with high frequency public transport routes.
- 11.71 The Proposed Scheme's location and wider site design means that it will be well-placed to deliver health and wellbeing benefits to its student residents. The Site location benefits from easy access to the University's main campus on Lyceum Place, situated adjacent to the Site and to the wide range of services, amenities and transport options in the Oxford Road Corridor and city centre that will be available for residents.
- 11.72 The sensitivity of students requiring accommodation in the local impact area is considered to be high, given the identified deficit of provision of PBSA city-wide in Manchester. This level of sensitivity also acknowledges the importance of a person's housing situation to their health and wellbeing, with this being a particularly salient issue in terms of student housing. The magnitude of change is considered to be large, given that the Proposed Scheme's 2,302 new (1,531 net) PBSA bedspaces will deliver a permanent uplift to provision in Manchester (equivalent to at least 14% - and potentially as much as 28% – of MCC's identified additional PBSA need over the period to 2030). The new PBSA will provide high-quality, healthy homes for students that result in a notable qualitative enhancements to PBSA supply and which are designed to align with wider positive wellbeing determinants, such as safety, social cohesion and access to amenities and services.
- 11.73 Therefore, there is likely to be a direct, permanent, long-term, beneficial effect which is considered to be major.

Secondary Mitigation or Enhancement

- 11.74 No secondary mitigation or enhancement is required.

Residual Effect

11.75 In the absence of secondary mitigation the residual effect for students requiring accommodation is the same as that reported in the pre-mitigation scenario.

Significance

11.76 This effect is considered to be **Significant**.

Limitations and Assumptions

11.77 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- In the absence of specific policy or guidance relating to the consideration of socio-economic and human health effects (e.g. regarding the definition of the study area, sensitivity of receptors, magnitude of change, level of effect and significance), the assessment has been informed by professional judgement.
- The assessment relies on secondary survey data such as the 2021 Census⁴² and BRES⁴³. Each data source has methodological limitations related to data collection and surveys only represent the socio-economic context at a specific point in time. In particular with regard to the 2021 Census, it should be noted that responses were collected during the Covid-19 pandemic, during which time rates of home-working increased substantially. Whilst the ONS therefore advises exercising caution in the use of 2021 Census travel-to-work data, it should be noted that the rate of labour force containment for Manchester reported by the 2011 Census was 38%⁴⁴, and therefore only slightly lower than the 42% subsequently recorded in the 2021 Census⁸. It is therefore considered that 2021 Census data represents a robust basis for the purposes of establishing suitable worst-case (i.e. greatest leakage) economic impact areas; and
- The future baseline and assessment of future effects relies on population and employment forecast data drawn from Experian⁴⁵. There are known uncertainties related to using trend-based analysis (especially in the current context of economic uncertainty caused by factors such as global inflationary pressures and the cost-of-living crisis); however, the use of such forecasts is considered appropriate for drawing conclusions about how the economy and labour market might change in the future.

Summary

11.78 **Table 11.7** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

11.79 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 11.7: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Employment generated during construction	Labour force	Minor beneficial	No
Operational Stage			
Provision of PBSA	Students requiring accommodation	Major beneficial	Yes

References

- ¹ Homes & Communities Agency (2014). Additionality Guide (4th Edition)
- ² NHS Healthy Urban Development Unit (HUDU) (2019). Rapid Health Impact Assessment Toolkit (4th Edition)
- ³ IEMA (2022). Effective Scoping of Human Health in Environmental Impact Assessment
- ⁴ IEMA (2023). Determining Significance of Human Health in Environmental Impact Assessment
- ⁵ ONS via Nomis (2024) Census 2021
- ⁶ Department for Business, Energy & Industrial Strategy (2024). Business Population Estimates 2024: North West
- ⁷ ONS (2024). 2021 Census, Origin-destination data
- ⁸ Homes & Communities Agency (2014). Additionality Guide (4th Edition)
- ⁹ Manchester City Council (2023) Purpose Built Student Accommodation: Supply and Demand Update
- ¹⁰ NHS Healthy Urban Development Unit (2019) Rapid Health Impact Assessment Toolkit (4th Edition)
- ¹¹ Department for Work & Pensions (2010). The Department for Work and Pensions Social Cost-Benefit Analysis framework
- ¹² Public Health England (2015). Local Action on Health Inequalities: Increasing Employment Opportunities and Improving Workplace Health
- ¹³ ONS (2021). Opinions and Lifestyle Survey
- ¹⁴ NHS Healthy Urban Development Unit (2019). Rapid Health Impact Assessment Toolkit (4th Edition).
- ¹⁵ IEMA (2022). Effective Scoping of Human Health in Environmental Impact Assessment.
- ¹⁶ ONS via Nomis (2025). Annual Population Survey: October 2023 – September 2024
- ¹⁷ Ibid.
- ¹⁸ ONS via Nomis (2025). Claimant Count: January 2025
- ¹⁹ Ibid.
- ²⁰ ONS via Nomis (2025). Jobseeker's Allowance by Occupation: January 2025
- ²¹ Ministry of Housing, Communities and Local Government (December 2024)
- ²² Ibid, Paragraph 85
- ²³ ONS (2024). 'Public opinions and social trends, Great Britain: July 2024' [Online]. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/publicopinionsandsocialtrendsgreatbritain/september2024>
- ²⁴ ONS (2024). 'Average weekly earnings in Great Britain: December 2024' [Online]. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/averageweeklyearnings01>
- ²⁵ ONS via Nomis (2025). Business Register and Employment Survey: 2023
- ²⁶ Public Health England (2017) Guidance: Improving health through the home.
- ²⁷ Shelter (2013) People living in bad housing – numbers and health impacts.
- ²⁸ Shelter (2017) The Impact of Housing Problems on Mental Health.
- ²⁹ Students Organising for Sustainability (2023) 'Homes Fit for Study' [Online]. Available at: <https://www.sos-uk.org/research/homes-fit-for-study>
- ³⁰ NHS Healthy Urban Development Unit (HUDU) (2019), Rapid Health Impact Assessment Toolkit (4th Edition)
- ³¹ IEMA (2022) Effective Scoping of Human Health in Environmental Impact Assessment
- ³² Manchester City Council (2023) Purpose Built Student Accommodation: Supply and Demand Update
- ³³ Midollo (2024) The Battle for Beds: Tackling Manchester's Purpose-Built Student Accommodation Crisis

-
- ³⁴ Experian (2025) Local Market Forecasts Quarterly: December 2024
- ³⁵ Department for Business, Energy & Industrial Strategy (2024) Business Population Estimates 2024: North West.
- ³⁶ In line with 2021 Census data, leakage rates of 60% and 5% are applied at the respective scales of the local (Manchester) and wider (North West) impact areas.
- ³⁷ In line with HCA guidance, a 'low' (25%) rate of displacement is applied at the scale of all impact areas.
- ³⁸ ONS (2025) 2021 Census: Origin-destination data.
- ³⁹ Drawing on HCA guidance, multipliers of 1.25 and 1.50 applied at the respective scales of the local and wider impact areas.
- ⁴⁰ Homes and Communities Agency (2014) Additionality Guide (4th Edition).
- ⁴¹ NHS Healthy Urban Development Unit (2019) Rapid Health Impact Assessment Toolkit (4th Edition)
- ⁴² ONS via Nomis (2025) Census 2021.
- ⁴³ ONS via Nomis (2025) Business Register and Employment Survey: 2023.
- ⁴⁴ ONS via Nomis (2025) Census 2011: WU01UK - Location of usual residence and place of work by sex
- ⁴⁵ Experian (2025) Local Market Forecasts Quarterly: December 2024.

12. Air Quality

Introduction

- 12.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Air Quality.
- 12.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 12.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 12.4 This Chapter, and its associated **Appendix 12.1: Air Quality Technical Assessment**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 12.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

- 12.6 **Table 12.1** provides an overview of the consultation that has been undertaken to inform the Proposed Scheme and EIA, including the consideration of likely significant effects and the methodology for assessment.

Table 12.1: Summary of Consultation

Body / Organisation	Contact	Date and Form of Consultation	Summary
MCC	Environmental Health Officer	24/06/2024 Email	The purpose of the consultation was to agree the methodology of the air quality assessment prior to commencement. A response has not yet been received at the time of writing. Therefore, the approach and method within this EIA Scoping Report follows best practice and aligns with similar applications carried out by Arup in Manchester and we can be confident in delivering a robust assessment that follows best practice.

Scope of the Assessment

- 12.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 2025 (**Appendix 2.2**). This section provides update on the scope of the assessment presented within this Chapter following submission of the EIA Scoping Report.

Effects Not Considered to be Significant

- 12.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Nuisance and disturbance as a result of dust from demolition and construction activities and Non-Road Mobile Machinery emissions;
 - Health effects from building emissions during operation; and
 - Exposure of residents or users of the Proposed Scheme to poor ambient air quality and local area's emissions.
- 12.9 Following the EIA Scoping process the following additional effects are now not considered significant and the evidence to support this determination is outlined below.

Changes to pollutant concentrations resulting from operational traffic generated by the Proposed Scheme

- 12.10 A screening assessment has been undertaken using the indicative criteria in the EPUK/IAQM land-use guidance¹. As the Site is located within Greater Manchester Combined Authority Air Quality Management Area² (AQMA), the following criteria apply:
- A change of Light Duty Vehicle (LDV) flows of more than 100 annual average daily traffic (AADT) movements; or

- A change of Heavy Duty Vehicle (HDV) flows of more than 25 AADT movements.
- 12.11 Meeting any of the criteria would indicate that detailed dispersion modelling of road traffic emissions would be necessary.
- 12.12 Operational trip data was obtained from the project transport consultants for the Site. The development is car-free, with the provision of up to 10 disabled parking spaces, and is predicted to generate a total of 40 LDV trips (arrivals) a day, including deliveries and servicing. Compared with the existing site, there would be a net increase of 14 LGVs and 0 HGV trips, this equates to an LDV AADT of 28.
- 12.13 Based on the minimal traffic numbers, an operational traffic assessment has been scoped out of requiring further detailed assessment as effects would be negligible and not significant.

Effects Considered Likely to be Significant

- 12.14 The following effects (**Table 12.2**) were considered likely to be significant and are reported within this Chapter:

Table 12.2: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Changes to pollutant concentrations resulting from traffic generated by the Proposed Scheme	Existing and proposed sensitive receptors close to roads affected by changes in traffic flows. Existing sensitive receptors include; four residential properties, New Medlock House Student Halls, Cambridge House Student Halls, Faculty of Business and Law, Element Manchester Student Halls, Manchester House Student Halls, Opal Hall Student Halls, Faculty of Science and Engineering, Student Union, Cavendish Student Halls, School of Digital Arts, Manchester Law Building, and Institute of Sport Building.	Construction

Assessment Methodology

Legislative Framework, Policy and Guidance

The following legislation and policy has informed the assessment of effects within this Chapter, and is detailed further in **Appendix 12.1**:

- Environment Act 2021³;
- Environmental Improvement Plan 2023⁴;

- Air Quality Standards Regulations 2010 (amended in 2016) (England)⁵;
- Clean Air Act⁶;
- Non-Road Mobile Machinery Regulations⁷;
- Dust Nuisance⁸;
- Air Quality (Amendment of Domestic Regulation) (EU Exit) Regulations 2019⁹;
- National Planning Policy Framework (NPPF) 2024¹⁰;
- Clean Air Strategy¹¹;
- Greater Manchester Air Quality Action Plan 2016-2021¹²;
- Greater Manchester Clean Air Plan¹³; and
- Manchester City Council Air Quality & Planning Technical Guidance¹⁴.

12.15 The following guidance has informed the assessment of effects within this Chapter and is detailed further in **Appendix 12.1**:

- Defra's LAQM.PG(22)¹⁵ and TG(22)¹⁶;
- Planning Practice Guidance¹⁷;
- Local Air Quality Management Policy¹⁸ and Technical Guidance; and
- EPUK/IAQM's Land Use Planning and Development Control: Planning for Air Quality¹.

Defining the Study Area

12.16 Construction traffic volumes generated by the Proposed Scheme were provided by the transport consultants and assessed against the screening criteria detailed in the EPUK/IAQM guidance¹, to determine the construction traffic study area.

12.17 Figure 2 in **Appendix 12.1** sets out the study area for the construction traffic assessment. The study area extends along A57 (M) (Mancunian Way Ring Road), A5067 (Higher Cambridge Street), Boundary Street West, and Higher Chatham Street.

Establishing the Baseline

12.18 **Table 12.3** summarises all air quality baseline undertaken to inform the assessment presented within this Chapter.

Table 12.3: Baseline Assessment

Study	Overview	Date of Completion
Baseline Assessment (Section 6, Appendix 12.1)	Description of the existing air quality conditions in the vicinity of the site including local monitoring (shown in Figure 5 of Appendix 12.1) and background concentrations.	Latest available data.

Assessment Process

- 12.19 The air quality effects of emissions from traffic generated by the Proposed Scheme have been assessed using the Atmospheric Dispersion Modelling System, ADMS-Roads atmospheric dispersion model. The assessment follows the methodology set out in Defra's LAQM Technical Guidance¹⁶.
- 12.20 The following scenarios were assessed as part of the detailed air quality assessment of construction traffic:
- 2023 current baseline scenario;
 - 2026 'Do Nothing' future baseline scenario; and
 - 2026 peak construction scenario.
- 12.21 The 2023 baseline scenario represents the existing baseline conditions for model verification purposes, based on the most recent available monitoring data. The 2026 'Do Nothing' future baseline scenario represents the future baseline conditions, for which the 2026 peak construction traffic of the Site can be assessed.
- 12.22 For further details regarding the assessment process, see **Section 5 of Appendix 12.1**.

Reporting of the Environmental Effect and Significance Criteria

- 12.23 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction stage. 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 Sensitivity of Receptor

- 12.24 The sensitivity of affected receptors has been considered on a scale of **high, medium, low or negligible**.
- 12.25 Sensitive human receptors include residential properties, schools, hospitals, care homes and nurseries. The receptor sensitivity is established based upon locations where members of the public are likely to be present and exposure over the averaging period of the objective based on the IAQM planning guidance¹. Sensitive ecological receptors include statutory and non-statutory designated ecological sites. There are no ecological sites within 2km of the Site boundary, following IAQM planning guidance¹ and Defra TG22¹⁶. All human and ecological

receptors established following IAQM guidance are considered to be **high** on the scale of sensitivity.

12.26 Existing receptors are detailed in **Table 2** of **Appendix 2.1**.

Determining the Magnitude of Change

12.27 The magnitude of change at each sensitive receptor has been determined by the long term concentration at the receptor and the percentage change in pollutant concentrations relative to the air quality objectives, in accordance with the EPUK/IAQM guidance¹.

Determining the Level of Effect

12.28 The level of effect attributed was assessed based on the magnitude of change due to the Proposed Scheme and the long term concentration at the affected receptors. The level of effect was based on 'impact' descriptors in accordance with IAQM and EPUK guidance. The matrix in **Table 12.4** below was used to determine the effect at receptors considered.

Table 12.4: IAQM and EPUK Matrix to Support Determining Level of Effect

Long term average concentration at receptor	% Change in Concentration Relative to Air Quality Objective			
	<1%	2 – 5%	6 – 10%	>10%
75% or less of Objective	Negligible	Negligible	Minor	Moderate
76 – 94% of Objective	Negligible	Minor	Minor	Moderate
95 – 102% of Objective	Minor	Moderate	Moderate	Major
103 – 109% of Objective	Moderate	Moderate	Major	Major
110% or more	Moderate	Major	Major	Major

Note: Figures are rounded up to the nearest whole number, therefore any value less than 1% after rounding (effectively less than 0.5%) will be described as negligible.

12.29 The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse', depending on whether the concentration change is positive or negative:

- **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.

12.30 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

- 12.31 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.
- 12.32 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

- 12.33 A baseline assessment has been carried out to review the air quality conditions in the vicinity of the Site, as detailed in Section 6 of **Appendix 12.1**. The Site is located in Greater Manchester Combined Authority (GMCA) Air Quality Management Area (AQMA), declared due to exceedances of the annual mean standards of Nitrogen Dioxide (NO₂).
- 12.34 MCC undertakes continuous and passive monitoring of air quality and the situation at the Site is most similar to diffusion tubes 121 and 122, at these monitoring sites the annual average NO₂ concentrations in the past two years are below the annual mean objective (40 µg/m³).
- 12.35 The PM₁₀ and PM_{2.5} monitoring and Defra background data indicate that concentrations are well below the annual air quality objectives.

Future Baseline

- 12.36 Future Baseline is provided in detail in **Section 6.4 of Appendix 12.1**.
- 12.37 A review of the available data show that within the Site itself there are no exceedances of the NO₂, PM₁₀ or PM_{2.5} annual mean objectives in the initial opening year (2029). The PM_{2.5} concentrations are below the PM_{2.5} interim target of 12 µg/m³ to be achieved by 2028 and the objective of 10µg/m³ to be achieved by 2040. It can be observed that the future annual mean background concentrations are below the air quality standards for all pollutants and are lower than the current baseline as pollutant emissions are predicted to improve over time due to the introduction of cleaner vehicles in the fleet and increased update of electric vehicles, required to ensure that the Government's commitments to net zero are met.

Primary and Tertiary Mitigation

Construction Stage

12.38 The following primary and tertiary mitigation will be in place during construction:

- **Appendix 12.1** sets out the detailed construction traffic and dust measures to be included in the Construction Environmental Management Plan (CEMP) to be secured by planning condition.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Changes to pollutant concentrations resulting from construction traffic generated by the Proposed Scheme

- 12.39 Construction traffic generated by the Proposed Scheme has been assessed using detailed dispersion modelling of road traffic emissions.
- 12.40 Predicted annual mean concentrations for NO₂, PM₁₀ and PM_{2.5} at all modelled receptors are below the relevant air quality objectives.
- 12.41 The greatest increase in annual mean NO₂ concentration is 0.46µg/m³, predicted at receptor 14 School of Digital Arts. The change in annual mean PM₁₀ concentration is less than 0.1µg/m³, predicted at all modelled receptors. The change in annual mean PM_{2.5} concentrations is less than 0.1µg/m³ at all modelled receptors. The evaluation of the construction traffic generated by the Proposed Scheme found that impacts were negligible across all assessed sensitive receptors.
- 12.42 Receptor results tables are provided in Section B.3 of **Appendix 12.1**.
- 12.43 The sensitivity of human receptors are considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be an indirect, temporary, medium-term, adverse effect from the construction traffic which is considered to be negligible.

Secondary Mitigation or Enhancement

- 12.44 No secondary mitigation or enhancement is required.

Residual Effect

- 12.45 In the absence of secondary mitigation the residual effects for is that same as that reported in the pre-mitigation scenario.

Limitations and Assumptions

- 12.46 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.
- Following detailed air quality dispersion modelling, to reduce uncertainty, model verification of air quality dispersion modelling has been undertaken, using existing local air quality monitoring. The methodology for verification is detailed in **Section 5.2.2.7** of **Appendix 12.1**, with results presented in **Section B.2** of **Appendix 12.1**.

- A conservative approach has been taken, following best practice, for the earliest future construction year of 2026 to predict realistic worst-case concentrations. Further information on the methodology for is detailed in **Section 5.2.2.1** of **Appendix 12.1**.

Summary

- 12.47 **Table 12.5** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.
- 12.48 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 12.5: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Changes to pollutant concentrations resulting from construction traffic generated by the Proposed Scheme	Human receptors detailed in Table 2 and Figure 3 of Appendix 12.1 . Modelled human receptors include; four residential properties, New Medlock House Student Halls, Cambridge House Student Halls, Faculty of Business and Law, Element Manchester Student Halls, Manchester House Student Halls, Opal Hall Student Halls, Faculty of Science and Engineering, Student Union, Cavendish Student Halls, School of Digital Arts, Manchester Law Building, and Institute of Sport Building.	Negligible	No

References

¹ EPUK/IAQM's Land Use Planning and Development Control: Planning for Air Quality (2017). Available at: <https://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed January 2025]

-
- ² Defra AQMA (2025). Available at: https://uk-air.defra.gov.uk/aqma/details?aqma_ref=36 [Accessed January 2025]
- ³ Environment Act 2021. (2021) Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted> [Accessed January 2025]
- ⁴ Environmental Improvement Plan 2023. Available at: <https://www.gov.uk/government/publications/environmental-improvement-plan> [Accessed January 2025]
- ⁵ Air Quality Standards Regulations 2010 (amended in 2016) (England). Available at: <https://www.legislation.gov.uk/uksi/2010/1001/contents> [Accessed January 2025]
- ⁶ Clean Air Act 1993. (1993) Available at: <https://www.legislation.gov.uk/ukpga/1993/11/contents> [Accessed January 2025]
- ⁷ Non-Road Mobile Machinery (NRMM) (Emission of Gaseous and Particulate Pollutants) (Amended) Regulations 2014 (SI 2014/1309) (2014). Available at: <https://www.legislation.gov.uk/uksi/2014/1309/contents> [Accessed January 2025]
- ⁸ British Standard document BS 6069 (Part Two) [Accessed January 2025]
- ⁹ Air Quality (Amendment of Domestic Regulations (EU Exit) Regulations (2019). Available at: <https://www.legislation.gov.uk/uksi/2019/74/contents> [Accessed January 2025]
- ¹⁰ National Planning Policy Framework (2024) Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf> [Accessed January 2025]
- ¹¹ Defra (2019) Clean Air Strategy (2019) Available at: <https://www.gov.uk/government/publications/clean-air-strategy-2019> [Accessed January 2025]
- ¹² Greater Manchester Air Quality Action Plan (2016 – 2021). Available at: file:///C:/Users/Georgia.Puleikis/Downloads/GM_Air_Quality_Action_Plan_2016_21_1_.pdf. [Accessed January 2025]
- ¹³ Greater Manchester Clean Air Plan Available at: <https://cleanairm.com/clean-air-plan/> [Accessed January 2025]
- ¹⁴ Manchester City Council Air Quality & Planning Technical Guidance. Available at: https://www.manchester.gov.uk/downloads/download/5199/environmental_and_public_protection_information_for_developers. [Accessed January 2025]
- ¹⁵ Department for Environment Food and Rural Affairs (Defra) (2022) Local Air Quality Management Policy Guidance (PG22) (2022) Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2023/11/LAQM-Policy-Guidance-2022.pdf> [Accessed January 2025]
- ¹⁶ Department for Environment Food and Rural Affairs (Defra) (2022) Local Air Quality Management Technical Guidance (TG22) (2022) Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf> [Accessed January 2025]
- ¹⁷ National Planning Practice guidance (NPPG) (2024). Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed January 2025]
- ¹⁸ Defra Local Air Quality Management (2025). Available online at: <https://laqm.defra.gov.uk/> [Accessed January 2025]

13. Noise and Vibration

Introduction

- 13.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to noise and vibration.
- 13.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.
- 13.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details) and is informed by the EIA Scoping process (**Appendix 2.1 - 2.2**) and iterative scoping process where applicable.
- 13.4 This Chapter, and its associated **Figure 13.1** and **Appendices 13.1 - 13.4**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 13.5 In addition, this Chapter should be read in conjunction with **Chapter 14: Assessment of Cumulative Effects**.

Summary of Consultation

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

Scope of the Assessment

- 13.7 An EIA Scoping Report was submitted to MCC on 29th January 2025, as presented as **Appendix 2.1**. The EIA Scoping Opinion was received on 7th April 2025. 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

- 13.8 The following effects were not considered significant as part of the EIA Scoping Report and are not considered further in this Chapter:
- Disturbance from existing vibration sources (future users of the Proposed Scheme).

Effects Considered Likely to be Significant

- 13.9 The following effects (**Table 13.1**) were considered likely to be significant and are reported within this Chapter:

Table 13.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Development Stage
Noise disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Construction
Vibration disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Construction
Noise disturbance from increased road traffic	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Construction / Operation
Noise disturbance from proposed servicing areas and building services plant	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Operation
Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings, and Future users of the Proposed Scheme	Operation
Disturbance from existing environmental noise	Future users of the Proposed Scheme	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

13.10 The noise and vibration assessment for the Proposed Scheme has been undertaken in accordance with the following legislative, policy, and guidance frameworks. These establish the criteria and methodologies for identifying and evaluating the likely significant effects during construction and operation.

13.11 The following legislation has informed the assessment of effects within this Chapter:

- Environmental Protection Act 1990¹: Provides provisions to address noise as a statutory nuisance under Section 79.
- Control of Pollution Act 1974²: Establishes controls for managing noise and vibration during construction, including Section 61 agreements for prior consent.

13.12 The following policy has informed the assessment of effects within this Chapter:

- National Planning Policy Framework (NPPF, 2024)³: Highlights the need to mitigate and minimise adverse impacts on health and quality of life from noise and vibration. The NPPF emphasises the importance of sustainable development and balancing noise management with the need for growth.
- Noise Policy Statement for England (NPSE, 2010)⁴: Sets out the long-term vision for noise management in England, including avoiding significant adverse effects, mitigating adverse effects, and promoting good health and quality of life.
- Manchester City Council Local Plan⁵:
 - Policy H 12 Purpose Built Student Accommodation: Requires developments to minimise noise and disturbance effects on nearby residential amenity. The policy emphasises careful design and layout of student accommodation to avoid cumulative noise impacts and ensure compatibility with surrounding land uses.
 - Policy DM1 Development Management: Outlines the need for development proposals to consider noise, vibration, and other amenity impacts, ensuring that these do not adversely affect nearby receptors or the proposed use.
- Manchester City Council Planning and Noise Technical Guidance (October 2022)⁶: Sets specific thresholds and criteria for noise and vibration management, including construction-phase noise limits and operational noise standards for new developments.

13.13 The following guidance has informed the assessment of effects within this Chapter.

- IEMA Guidelines for Environmental Noise Impact Assessment (2014)⁷: Provides a comprehensive framework for evaluating noise impacts within Environmental Impact Assessments (EIAs).
- BS 7445:2003 - Description and Measurement of Environmental Noise, Part 2⁸: Guides the acquisition of noise data pertinent to land use.

- BS 5228-1:2009+A1:2014⁹ and BS 5228-2:2009+A1:2014¹⁰ (Noise and Vibration Control on Construction and Open Sites): Establishes standards for predicting and mitigating noise and vibration from construction activities.
- BS 4142+A1:2019 - Methods for Rating and Assessing Industrial and Commercial Sound¹¹: Provides guidance for assessing the impact of industrial and commercial noise on nearby sensitive receptors.
- Calculation of Road Traffic Noise (CRTN, Department for Transport/Welsh Office, 1998)¹²: Defines methodologies for predicting and assessing noise impacts associated with changes in road traffic.
- BS 8233:2014 - Guidance on Sound Insulation and Noise Reduction for Buildings¹³: Provides acoustic design criteria and guidance for achieving acceptable indoor noise levels, including for ventilation systems and building facades.
- ProPG: Professional Practice Guidance on Planning and Noise (2017)¹⁴: Offers best practice for acoustic design in residential developments, emphasising good design to reduce noise impacts.
- ProPG: Gym Acoustics Guidance (GAG, March 2023)¹⁵: Sets criteria for managing noise impacts from gym facilities, considering building-specific acoustic design.
- Artificial Grass Pitch (AGP) Acoustics - Planning Implications (2015)¹⁶: Recommends methodologies for assessing and mitigating noise impacts from artificial grass pitches.
- HM Government Approved Document O – Overheating (2021)¹⁷: Balances overheating risk management with acoustic and ventilation requirements, ensuring acceptable noise levels in residential developments.

13.14 This combination of legislative, policy, and guidance frameworks ensures compliance with national and local requirements, integrates industry best practices, and aligns with Manchester City Council’s expectations for noise and vibration assessments. These frameworks provide a robust basis for identifying, assessing, and mitigating the potential effects of the Proposed Scheme on existing and future sensitive receptors.

Defining the Study Area

13.15 The study area for the noise and vibration assessment has been defined to ensure a proportionate and focused evaluation of likely significant effects on noise-sensitive receptors (NSRs) during the construction and operational stages of the Proposed Scheme. Given the urban, built-up nature of the area surrounding the Site, the study area has been determined based on the proximity of the nearest NSRs to the Site boundary.

13.16 The study area for this assessment has been set to encompass all NSRs within 50m of the site boundary. This boundary, and the receptors within the boundary are shown in **Figure 13.1**. This approach ensures that:

- All the nearest and worst-affected existing NSRs, such as residential, educational, and commercial premises adjacent to the Site, are included. This also accounts for receptors within the Proposed Scheme itself.

- By assessing potential noise and vibration impacts at the closest receptors, it is possible to identify and evaluate worst-case effects. This provides confidence that significant effects will further reduced or avoided altogether at receptors located further from the Site.
- The 50m boundary aligns with the built-up nature of the surrounding environment and avoids excessive assessment of areas where impacts are likely to be negligible.

Background Studies to Inform the ES / Establishing the Baseline

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

Table 13.2: Background Studies / Surveys / Evaluations /Analysis

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Environmental Noise Survey, External Building Fabric and Building Services Noise Assessment, and Internal Noise Transfer Acoustic Assessment (Appendix 13.1) ¹⁸	Baseline noise levels at the Site were monitored over a full weekend period to establish prevailing noise conditions. This study also includes an assessment of the external building fabric and mechanical services noise, and internal noise transfer between residential and non-residential spaces. Conducted by Blackbird Acoustics.	Surveys in July 2024, November and December 2024 Assessment in January 2025
Demolition and Construction Noise and Vibration Assessment (Appendix 13.2) ¹⁹	Evaluation of the potential noise and vibration impacts arising from demolition and construction activities, using predicted data and modelling techniques. Conducted by Heyda Ltd.	February 2025
Technical Note: Noise Disturbance from Increased Road Traffic during Demolition/Construction and Operation (Appendix 13.3) ²⁰	Analysis of the potential noise impacts from increased road traffic generated by the Proposed Scheme during demolition/operation. Conducted by Heyda Ltd.	February 2025
Technical Note: Multi-Use Games Area (MUGA) and Gym Noise Impact Assessment (Appendix 13.4) ²¹	Assessment of the potential noise impacts from the proposed MUGA and gym facilities, including mitigation requirements to address noise transfer to sensitive receptors. Conducted by Heyda Ltd.	January 2025

Assessment Process

13.18 The assessment of likely significant effects of noise and vibration for the Proposed Scheme has been conducted in accordance with relevant legislation, standards, and guidance. Baseline conditions were established through an environmental noise survey, as detailed in **Appendix 13.1**, with further assessments carried out for each likely significant effect during both the construction and operational stages. The methodology for each assessment has been tailored to address specific impacts with consideration of magnitude of change/impact thresholds, prediction methods, and possible mitigation measures.

Construction Stage

13.19 Noise Disturbance from Demolition and Construction Activities

- **Assessment Overview:** Noise disturbance from demolition and construction activities was assessed to identify potential impacts on nearby noise-sensitive receptors (NSRs) for each demolition and construction stage of the Proposed Scheme. The assessment was conducted in accordance with BS 5228-1:2009+A1:2014.
- **Magnitude of Change/Impact Thresholds:** Noise thresholds were determined using the ABC method, and thresholds for noise insulation and temporary re-housing, as outlined in BS 5228-1, reflecting the existing ambient noise environment at identified NSRs.
- **Prediction Method:** A noise **model** of the Site and surrounding area was created to predict demolition and construction noise levels in accordance with ISO 9613:2024²². Noise sources were selected based on an assumed plant list, with appropriate plant noise levels referenced from BS 5228. The predictions considered the likely average operating conditions for each demolition/construction stage.
- **Mitigation Methods:** Specific noise mitigation measures, such as localised barriers, were trialled where possible. Where such **measures** were not feasible, it was demonstrated that Best Practicable Means (BPM) for noise reduction have been implemented. Good community liaison has been recommended to manage and minimise adverse noise impacts during demolition and construction. Further details are provided in **Appendix 13.2**.

13.20 Vibration Disturbance from Demolition and Construction Activities

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

good community liaison are recommended to manage potential adverse impacts. Further details are provided in **Appendix 13.2**.

13.21 Noise Disturbance from Increased Road Traffic

- **Assessment Overview:** Noise disturbance from increased road traffic during the construction stage was assessed to determine short-term changes in road traffic noise on nearby NSRs, in line with DMRB LA 111.
- **Magnitude of Change/Impact Thresholds:** Impact thresholds for short-term road traffic noise increases were applied in accordance with DMRB LA 111.
- **Prediction Method:** Predicted noise levels were calculated using the Basic Noise Level (BNL) method outlined in CRTN, based on future traffic flow assumptions provided/approved by the project team. There is no existing traffic flow data available for the areas surrounding the development, and therefore existing measured levels have been used to determine the road traffic noise increase due to an assumed number of additional HGV movements on roads adjacent to the Site during demolition and construction.
- **Mitigation Methods:** Possible mitigation measures include limiting the number of HGV movements per day, ensuring that the assumed number of HGV movements is not exceeded. Where additional demolition/construction traffic numbers exceed those that have been assumed, traffic management plans, controlling the timing and volume of vehicle movements during peak hours, and identifying alternative haulage routes should be investigated where practicable. Further details are provided in **Appendix 13.3**.

Operational Stage

13.22 Noise Disturbance from Increased Road Traffic

- **Assessment Overview:** Noise disturbance from increased road traffic during the operational stage was assessed to determine short-term changes in road traffic noise on nearby NSRs, in line with DMRB LA 111.
- **Magnitude of Change/Impact Thresholds:** Impact thresholds for short-term road traffic noise increases were applied in accordance with DMRB LA 111.
- **Prediction Method:** Predicted noise levels were calculated using the Basic Noise Level (BNL) method outlined in CRTN, based on future traffic flow assumptions provided/approved by the project team. There is no existing traffic flow data available for the areas surrounding the development, and therefore existing measured levels have been used to determine the road traffic noise increase due to an assumed number of additional vehicle movements on roads adjacent to the Site during operation.
- **Mitigation Methods:** Possible mitigation measures are limited. Provided operational traffic flow numbers do not exceed those that have been assumed, no mitigation measures are deemed to be necessary. Further details are provided in **Appendix 13.3**.

13.23 Noise Disturbance from Building Services Plant

- **Assessment Overview:** Operational noise impacts from **building** services plant were assessed to ensure compliance with relevant external noise criteria at nearby NSRs.
- **Magnitude of Change/Impact Thresholds:** Impact thresholds were set against the requirements of BS 4142:2019 and Manchester City **Council's** Supplementary Planning Guidance (SPG) for Noise.
- **Prediction Method:** A qualitative review of the likely **proposed** plant equipment was undertaken to evaluate the ability to meet the defined noise limits, considering anticipated operational noise levels.
- **Mitigation Methods:** Possible mitigation measures include the use of acoustic enclosures, silencers, and vibration isolators for plant machinery where required. It is anticipated that these measures will be secured through planning conditions. Further details are provided in **Appendix 13.1**.

13.24 Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)

- **Assessment Overview:** Noise and vibration between residential, non-residential spaces and off-site receptors (as relevant) was assessed to ensure future and existing residential amenities are protected. This includes the Multi-Use Games Areas (MUGA), gym facilities and other uses.
- **Magnitude of Change/Impact Thresholds:**
 - MUGAs: For existing receptors, thresholds were assessed against noise change criteria outlined in the Artificial Grass Pitch (AGP) Acoustics Guidance. For proposed receptors, thresholds were set against the requirements of BS 8233:2014 for external noise break-in.
 - Gyms: Impact thresholds were set against the requirements of the ProPG Gym Acoustics Guidance (2023).
 - Any other uses: Impact thresholds were set against the requirements of BS 8233:2014 for residential spaces. A range of criteria was considered to reflect different operational scenarios.
- **Prediction Method:**
 - MUGAs: a noise model was created to predict MUGA noise emissions in accordance with ISO 9613:2024, with source noise levels calibrated using the AGP Acoustics Guidance.
 - Gyms: No quantitative predictions could be undertaken at this stage due to the lack of detailed design information for the gym. Instead, an overview of potential mitigation measures has been provided, with a commentary on their feasibility.

- Any other uses: Noise transfer predictions were made based on a typical internal floor build-up for the Proposed Scheme, combined with typical operational noise levels associated with the proposed non-residential uses.
- **Mitigation Methods:**
 - MUGAs: Potential mitigation measures investigated include operational restrictions, management plans, and suitable façade treatments for proposed receptors to control noise emissions. Further details are provided in **Appendix 13.4**.
 - Gyms: Possible measures include floating floors, acoustic mats, and vibration isolators where necessary. The key measure at this stage is for appropriate noise and vibration limits to be conditioned as part of planning approval to control impacts. Further details are provided in **Appendix 13.4**.
 - Any other uses: Possible mitigation measures include enhanced acoustic insulation, separation walls, and adjustments to the internal layout where necessary. Further details are provided in **Appendix 13.1**.

13.25 Disturbance from Existing Environmental Noise

- **Assessment Overview:** The potential **impacts** of existing environmental noise on future users of the Proposed Scheme were assessed to ensure compliance with recommended internal noise standards.
- **Magnitude of Change/Impact Thresholds:** **Thresholds** were set against the requirements of BS 8233:2014, ProPG: Planning and Noise (2017), and Building Regulations Approved Document O.
- **Prediction Method:** Internal noise levels were predicted using the rigorous method outlined in BS 8233, for both the whole dwelling ventilation **condition** and the overheating ventilation condition.
- **Mitigation Methods:** Mitigation measures include enhanced **glazing** specifications, mechanical ventilation with heat recovery (MVHR), and acoustic trickle vents, where necessary, to achieve compliance with internal noise requirements. Further details are provided in **Appendix 13.1**.

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

Reporting of the Environmental Effect and Significance Criteria

13.27 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. 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 Sensitivity of Receptor

- 13.28 The sensitivity of affected receptors has been considered on a scale of **high, medium, low or negligible**. 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.
- 13.29 **Table 13.3** provides the definitions and examples of receptor sensitivity for noise and vibration based on receptor type and function.

Table 13.3: Noise and Vibration Sensitivity Criteria

Sensitivity	Examples
High	Residential dwellings, schools, healthcare buildings with sleeping facilities (e.g. hospitals), concert halls, recording studios.
Medium	Hotels, healthcare buildings without sleeping facilities (e.g. GP surgeries), education buildings, museums, libraries, places of worship.
Low	Commercial buildings (e.g. retail units, offices), research buildings, light industrial premises.
Negligible	Undeveloped land without specific or future usage, heavy industrial premises.

- 13.30 The sensitivity assigned to each receptor type ensures that the assessment appropriately reflects its susceptibility to noise and vibration impacts. High-sensitivity receptors, such as residential dwellings and schools, are highly susceptible to significant effects due to their reliance on quieter environments for essential activities. Medium-sensitivity receptors, including hotels and education buildings, have some capacity to accommodate noise and vibration but may still experience disruption. Low-sensitivity receptors, such as commercial and light industrial buildings, are more tolerant of changes in noise and vibration. Negligible-sensitivity receptors, such as heavy industrial premises and undeveloped land, are generally unaffected by such changes.
- 13.31 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

- 13.32 The magnitude of change or impact has been determined based on thresholds specific to each likely significant effect during both the construction and operational phases of the Proposed Scheme. The magnitude of change is categorised as **large, medium, small, 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.

Construction Stage

Demolition and Construction Noise

- 13.33 The magnitude of impact for demolition and construction noise has been determined by comparing the predicted noise level at noise-sensitive receptors (NSRs) against thresholds

derived using the Category A values of the ABC 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.

Table 13.4: Demolition and Construction Noise Magnitude of Impact

Magnitude of Impact	Predicted Noise Level (LAeq,12hours dB)
Negligible	< 55
Small	55 – 65
Medium	65 – 75
Large	> 75

Demolition and Construction Vibration

- 13.34 The magnitude of impact for vibration during demolition and construction activities has been determined in terms of Peak Particle Velocity (PPV) in accordance with BS 5228-2:2009+A1:2014.

Table 13.5: Demolition and Construction Vibration Magnitude of Impact

Magnitude of Impact	Vibration Level (PPV, mm/s)
Negligible	< 0.3
Small	0.3 – 1.0
Medium	1.0 – 10.0
Large	> 10.0

Demolition and Construction Traffic

- 13.35 The magnitude of change from construction traffic has been assessed based on changes in road traffic noise levels, as outlined in DMRB LA 111.

Table 13.6: Demolition and Construction Traffic Magnitude of Change

Magnitude of Change	Change in Noise Level (dB, LA10,18hours)
Negligible	0.1 – 0.9
Small	1.0 – 2.9
Medium	3.0 – 4.9
Large	> 5.0

Operational Stage

Operational Traffic

13.36 The magnitude of change from construction traffic has been assessed based on changes in road traffic noise levels, as outlined in DMRB LA 111.

Table 13.7: Operational Traffic Magnitude of Change

Magnitude of Change	Change in Noise Level (dB, LA10,18hours)
Negligible	0.1 – 0.9
Small	1.0 – 2.9
Medium	3.0 – 4.9
Large	> 5.0

Noise Disturbance from Building Services Plant

13.37 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 13.8: Building Services Plant Magnitude of Impact

Magnitude of Impact	Rating Noise Level Relative to Background (dB L _{Ar,T})
Negligible	≤ 0 dB
Small	0 – 5 dB
Medium	5 – 10 dB
Large	> 10 dB

Noise Disturbance from Other Proposed Uses (Retail, Community Uses, and Amenity Space)

13.38 The magnitude of impact has been determined relative to the BS 8233:2014 internal noise level guidelines:

- Living Rooms and Bedrooms (Daytime, 07:00–23:00): 35 dB L_{Aeq,16hr}
- Bedrooms (Night-time, 23:00–07:00): 30 dB L_{Aeq,8hr}

Table 13.9: Table Other Proposed Uses Magnitude of Impact

Magnitude of Impact	Noise Impact Relative to BS 8233 Criteria
Negligible	≥ 10 dB below
Small	10 – 5 dB below
Medium	5 – 0 dB below
Large	> BS 8233 guideline levels

Noise Disturbance from Other Proposed Uses (Multi-Use Games Area – MUGA)

13.39 For existing receptors, thresholds are based on noise change criteria in the AGP Acoustics Guidance. For proposed receptors, noise impacts have been assessed against the BS 8233:2014 internal noise level guideline for living rooms and Bedrooms during the daytime:

- Living Rooms and Bedrooms (Daytime, 07:00–23:00): 35 dB $L_{Aeq,16hr}$

Table 13.10: Other Proposed Uses (MUGA) Noise Magnitude of Change/Impact

Magnitude of Change/Impact	Noise Change outside Existing Receptors Relative to Existing Ambient $L_{Aeq,16hours}$ (dB)	Noise Impact within Proposed Receptors Relative to BS 8233 Criteria (dB)
Negligible	0.0 – 0.9	Below 35 dB
Small	1.0 – 2.9	0 – 5 dB above
Medium	3.0 – 4.9	5 – 10 dB above
Large	> 5.0	> 10 dB above

Noise Disturbance from Other Proposed Uses (Gym)

13.40 The criteria for airborne and structure-borne noise have been taken from the ProPG Gym Acoustics Guidance (2023).

Table 13.11: Other Proposed Uses (Gym) Acoustic Criteria

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

13.41 For structure-borne vibration, the following limits apply:

Table 13.12: Other Proposed Uses (Gym) Acoustic Criteria

Receptor Type	Tactile Vibration (mm/s ² , rms)	Peak Vibration (mm/s ²)
Residential Areas	7 mm/s ²	21 mm/s ²

- 13.42 The magnitude of impact has been determined based on the degree of exceedance of these criteria.

Table 13.13: Gym Noise and Vibration Magnitude of Impact

Magnitude of Impact	Airborne Noise Impact	Structure-Borne Vibration Impact
Negligible	Below stated criteria	Below stated criteria
Small	Within stated criteria	Below stated criteria
Medium	0 – 5 dB above	Above stated criteria
Large	> 5 dB above	Above stated criteria

Disturbance from Existing Environmental Noise

- 13.43 The internal noise level criteria have been taken from ProPG: Planning and Noise (2017).

Table 13.14: ProPG Internal Noise Level Guidelines

Location	Period	L _{Aeq,T} (dB)	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)

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

Table 13.15: Existing Environmental Noise Magnitude of Impact

Magnitude of Impact	Increase Above ProPG Criteria (dB)
Negligible	≤ 0 dB
Small	0 – 5 dB
Medium	5 – 10 dB

Magnitude of Impact	Increase Above ProPG Criteria (dB)
Large	> 10 dB

- 13.45 The magnitude of change 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 13.16: Overheating Ventilation Condition Magnitude of Impact

Magnitude of Impact	Increase Above ProPG Night Time Criteria (dB)
Negligible	≤ 5 dB
Small	5 – 10 dB
Medium	10 – 15 dB
Large	> 15 dB

Determining the Level of Effect

- 13.46 The level of effect has been informed by the magnitude of change/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 13.17** has been a tool which has assisted with this process.
- 13.47 Whilst **Table 13.17** 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*'.

Table 13.17: Matrix to Support Determining the Level of Effect

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

13.48 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.

13.49 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

13.50 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.

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

Baseline Conditions

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

Site Context

13.53 The Site is located within a predominantly urban environment in Manchester, surrounded by a mix of uses including residential properties, purpose-built student accommodation (PBSA), educational buildings, commercial premises, and entertainment venues. Key noise sources in the area include:

- Road traffic along Cambridge Street (A5067) to the west, Chatham **Street** to the east, Boundary Street West to the south, and Mancunian Way (A57(M)) approximately 100m north of the Site;
- Pedestrian activities associated with nearby uses, including **Manchester** Metropolitan University and The Salutation Pub; and
- Other local sources, such as occasional activities at nearby commercial **premises** and public areas.

Noise Survey

13.54 An environmental noise survey was conducted over a full weekend period from 14:40 on Thursday 25th July 2024 to 14:45 on Monday 29th July 2024 to capture representative daytime and night-time conditions. Due to equipment malfunction at one measurement position, a repeat noise survey was carried out from 14:45 on Thursday 28th November 2024 to 13:00 on Monday 2nd December 2024. 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

13.55 Measurements were undertaken at three positions around the Site:

- Position 1: North-West façade overlooking **Cambridge** Street;
- Position 2: South façade overlooking Boundary **Street** West near The Salutation Pub; and
- Position 3: North-East façade overlooking Chatham **Street** adjacent to Cavendish Hall.

13.56 Microphones were placed in free-field conditions at 2nd floor level, at least 1.5m from the façade line. Further details on the monitoring positions can be found in **Appendix 13.1**.

Summary of Measured Noise Levels

13.57 The measured noise levels are summarised in **Table 13.18**.

Table 13.18: Summary of Measured Noise Levels

Measurement Position	Period	Equivalent continuous SPL $L_{Aeq,T}$ (dB)	Typical maximum sound pressure level $L_{Amax,T}$ (dB)*	Typical background sound pressure level $L_{A90,1hour/15mins}$ (dB)**
Pos 1	Daytime	65	-	58
	Night-time	61	84	50
Pos 2	Daytime	55	-	44
	Night-time	51	69	39

Measurement Position	Period	Equivalent continuous SPL $L_{Aeq,T}$ (dB)	Typical maximum sound pressure level $L_{Amax,T}$ (dB)*	Typical background sound pressure level $L_{A90,1hour/15mins}$ (dB)**
Pos 3	Daytime	56	-	50
	Night-time	53	71	44

*The typical maximum noise level was determined using the 90th percentile of 5 minute sample periods.

** The assessment intervals (T) for the background sound levels are 1 hour for the daytime analyses and 15 minutes for the night-time.

13.58 Key observations from the survey include:

- Noise levels at Position 1 (Cambridge Street) were dominated by road traffic from the A5067 and surrounding roads, reflecting the Site's **urban** frontage.
- Noise levels at Position 2 (Boundary Street West) were influenced by road traffic, with occasional contributions from activities at The Salutation Pub.
- Noise levels at Position 3 (Chatham Street) were relatively lower due to shielding provided by adjacent buildings, with fewer contributions from local traffic sources.

13.59 Night-time L_{Amax} values were recorded to reflect individual noise events, with typical peak values of 84 dB near Cambridge Street.

13.60 Detailed monitoring results, including time-history graphs, spectral analyses, and LA90 histograms, are provided in **Appendix 13.1**.

Vibration Conditions

13.61 Baseline vibration conditions at the Site were not monitored as part of the initial survey because no significant sources of vibration were identified in the vicinity. There are no major railways, trams, or underground transport systems near the Site that could generate notable levels of vibration.

Future Baseline

Noise Baseline

13.62 Without the Proposed Scheme, the noise environment at the Site is anticipated to remain broadly consistent with current baseline conditions, dominated by road traffic noise from the adjacent A5067 Cambridge Street, Boundary Street West, Chatham Street, and the nearby Mancunian Way (A57(M)).

- **Road Traffic:** Existing noise levels from local traffic networks are unlikely to change significantly in the short term. Any changes would depend on fluctuations in traffic

volumes, but no substantial increases in traffic flows on the surrounding roads have been identified in the future baseline scenario.

- **Commercial and Entertainment Activities:** Noise contributions from nearby commercial premises, including The Salutation Pub, and Manchester Metropolitan University activities are expected to remain consistent with current conditions.
- **Other Local Developments:** Planned developments identified within the cumulative project list could marginally alter traffic patterns or introduce new localised noise sources (e.g., construction stages of nearby schemes). However, the cumulative effects of these developments are anticipated to have a negligible influence on the baseline noise environment in the absence of the Proposed Scheme.

13.63 The daytime L_{Aeq} is therefore anticipated to remain in the range of 55 – 65 dB, while the night-time L_{Aeq} is likely to remain between 51 – 61 dB, with peak L_{Amax} values of up to 84 dB along the noisier frontages such as Cambridge Street.

Vibration Baseline

13.64 No significant sources of existing vibration, such as railways or heavy industrial operations, are currently present within or near the Site. In the absence of the Proposed Scheme, this is expected to remain unchanged. Therefore, vibration levels are likely to remain negligible across the Site and surrounding area, with no discernible future baseline changes anticipated.

Primary and Tertiary Mitigation

Construction Stage

13.65 The Proposed Scheme will incorporate Best Practicable Means (BPM) in accordance with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 to control noise and vibration at source during demolition and construction activities. These will be included in the Construction Environment Management Plan (CEMP) and secured by condition. Key measures include but are not limited to:

- Use of quieter equipment and methods where practicable;
- Erection of acoustic barriers or temporary screens around the Site perimeter and near sensitive receptors to reduce airborne noise emissions;
- Phasing of high-noise activities to minimise their duration and ensure sensitive receptors are not exposed to prolonged periods of intrusive noise;
- Adoption of vibration-reducing techniques for piling (e.g. Continuous Flight Augering method over more intrusive piling methods), compaction, and other high-vibration activities where feasible; and
- Regular servicing and maintenance of construction plant and equipment to reduce noise emissions.

13.66 Construction traffic will be routed away from sensitive receptors where practicable, and site access points will be located to minimise noise intrusion into residential areas.

13.67 The following standard measures will be implemented to ensure compliance with regulatory controls and best practice. These will be detailed in the CEMP and secured by condition:

- Working Hours: Noisy activities will be restricted to the following core hours:
 - Monday–Friday: 07:30–18:00
 - Saturday: 08:30–14:00
 - No works on Sundays or Bank Holidays.
- Continuous noise and vibration monitoring at key sensitive receptor locations during high-impact activities, such as piling or demolition, to ensure compliance with agreed thresholds.
- Implementation of a Community Liaison Strategy to maintain open communication with residents and stakeholders. This will include advance notifications of noisy activities, complaints management processes, and the establishment of a contact point for concerns.

Operational Stage

Primary Mitigation

13.68 The following primary mitigation which has been evaluated as part of the operational stage assessment is outlined below.

- **Building Façade Design:** High-performance acoustic glazing and insulated façade treatments will be installed to achieve suitable internal noise levels in accordance with BS 8233:2014 and relevant local policy where necessary. Internal noise limits are:
 - Bedrooms (night-time, 23:00–07:00): 30 dB $L_{Aeq,8hr}$ and 45 dB $L_{Amax,F}$ (not exceeded more than 10 times).
 - Living rooms (daytime, 07:00–23:00): 35 dB $L_{Aeq,16hr}$.
- **Ventilation and Overheating Mitigation:** To avoid the need to open windows in areas affected by high external noise, Mechanical Ventilation with Heat Recovery (MVHR) systems will be installed. Additional measures to reduce overheating or attenuate noise during the overheating condition will be designed-in as necessary.
- **Building Services Plant:** Noise limits for fixed plant and servicing equipment will be set at 5 dB below the typical background noise level (L_{A90}) at the nearest noise-sensitive receptors, in accordance with BS 4142:2019 and local noise technical guidance. This will ensure the operational noise of external plant does not contribute to a noticeable increase in background noise levels.
- **Noise Transfer Between Uses:** Internal noise transfer between residential and non-residential uses, such as retail, and community spaces, will be controlled through appropriate acoustic insulation in line with BS 8233:2014.
- **MUGA and Gym Facilities:**

- Multi-Use Games Area (MUGA): The design ensures compliance with noise targets set for outdoor amenity areas. Operational hours will be restricted to daytime periods (07:00-23:00) to avoid night-time disturbance.
- Gym Facilities: The design incorporates measures to mitigate structure-borne noise and vibration, including floating floors, acoustic mats, and isolated gym equipment.

Tertiary Mitigation

13.69 The following measures will be applied to manage and minimise noise impacts during operation:

- Implementation of Noise Management Plans (NMPs) for the MUGA and gym facilities, including operational restrictions such as limiting hours of use and managing user behaviour. These can be secured by condition if deemed necessary.
- Ongoing maintenance of external plant and equipment to ensure noise emissions remain within agreed limits.
- Planning conditions will be applied to secure compliance with noise limits set for building services plant, with post-installation noise testing required where appropriate.
- For residential units, compliance with ventilation and overheating criteria under Approved Document O will be achieved to ensure thermal comfort is maintained without requiring windows to be opened.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Noise disturbance from demolition and construction activities

13.70 The construction noise impact assessment has been segmented into eight primary phases as outlined in **Appendix 13.2**. Predicted noise levels for each phase at sensitive receptors (residential dwellings, PBSA, and educational buildings) are summarised below, with magnitude of impact assigned based on updated thresholds (see **Table 13.4**).

13.71 The worst-affected private residential receptors are located to the west and northwest of the site (e.g., 44 Cavendish Street, Loxford Street, and Matham Walk).

Table 13.19: Predicted Construction Noise Levels – Private Residential Receptors

Phase	Predicted Noise Levels (dB LAeq,12hours)	Magnitude of Impact
1	69	Medium
2A	63	Small
2B	63	Small
3A	64	Small

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
3B	63	Small
4	68	Medium
5	60	Small

13.72 The worst-affected PBSA receptors include buildings to the west (Element Manchester, Manchester House, Opal Hall) and east (Cavendish Halls).

Table 13.20: Predicted Construction Noise Levels – PBSA Residences (West)

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
1	75	Medium
2A	69	Small
2B	69	Small
3A	70	Medium
3B	70	Medium
4	74	Medium
5	66	Small

Table 13.21: Predicted Construction Noise Levels – PBSA Residences (East)

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
1	74	Medium
2A	68	Small
2B	68	Small
3A	69	Small
3B	69	Small
4	73	Medium
5	65	Small

13.73 Educational buildings include the MMU Barracks to the west, MMU Student Union and School of Digital Arts to the south, and the MMU Business School to the north.

Table 13.22: Predicted Construction Noise Levels – Educational Building West of the Site (MMU Barracks)

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
1	75	Medium
2A	69	Small
2B	64	Small
3A	70	Medium
3B	65	Small
4	73	Medium
5	65	Small

Table 13.23: Predicted Construction Noise Levels – Educational Buildings South of the Site (MMU Student Union and School of Digital Arts)

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
1	75	Medium
2A	70	Medium
2B	63	Small
3A	71	Medium
3B	64	Small
4	74	Medium
5	66	Small

Table 13.24: Predicted Construction Noise Levels – Educational Buildings North of the Site (MMU Business School)

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
1	75	Medium
2A	62	Small
2B	71	Medium
3A	64	Small

Phase	Predicted Noise Levels (dB L _{Aeq,12hours})	Magnitude of Impact
3B	72	Medium
4	74	Medium
5	66	Small

- 13.74 Across all receptors, **Phases 1 and 4** (demolition and superstructure construction) are predicted to result in the highest noise levels, exceeding the threshold of 65 dB L_{Aeq,12hours} at multiple receptors. These exceedances result in **medium** magnitudes of impact for private residential receptors, PBSA residences, and educational buildings.
- 13.75 For other phases (e.g., Phases 2A, 2B, 3A, 3B, and 5), noise levels generally remain below the Significant Effect Threshold, resulting in **small** magnitudes of impact.
- 13.76 The sensitivity of the receptors is considered to be **high**. The magnitude of change across phases ranges from **small** to **medium**. Therefore, there is likely to be a **direct, temporary, medium-term, adverse effect**, which is considered to be **minor to moderate**.

Secondary Mitigation or Enhancement

- 13.77 No secondary mitigation is proposed.

Residual Effect

- 13.78 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

- 13.79 The effect is considered **Not Significant** due to the effective noise management measures in place, despite the **moderate** level of effect during Phases 1 and 4.

Vibration disturbance from demolition and construction activities

- 13.80 The demolition and construction vibration impact assessment, detailed in **Appendix 13.2**, evaluates the potential vibration impacts on sensitive receptors, including private residences, PBSA, and educational buildings, across multiple construction phases. Predicted vibration levels, summarized below, are based on BS 5228-2:2009+A1:2014 and the Federal Transit Administration (FTA) guide.
- 13.81 Continuous Flight Auger (CFA) piling, recommended for its minimal vibration impacts, is expected to generate vibration levels below 0.4 mm/s PPV at the nearest receptors, approximately 13m from piling activities. These levels correspond to a **small** magnitude of impact.
- 13.82 **Table 13.25** presents predicted vibration levels for key vibration-producing equipment, including vibratory rollers, lorries, and excavators. Impact magnitudes are assigned based on thresholds from **Table 13.5**.

Table 13.25: Predicted Construction Vibration Levels at Nearest Receptors

Receptor	Distance (m)	Predicted Construction Vibration Levels (PPV mm/s)	Magnitude of Impact
Nearest private residential	40	0.5 (Vibratory Roller) / 0.2 (Lorry, Excavator)	Small
Nearest PBSA residences	17	1.6 (Vibratory Roller) / 0.6 (Lorry, Excavator)	Medium (Roller) / Small
Nearest educational building	13	2.4 (Vibratory Roller) / 0.9 (Lorry, Excavator)	Medium (Roller) / Small

13.83 The results are summarised as follows:

- **Nearest Private Residential Receptors:** Predicted vibration levels from all activities correspond to a **small** magnitude of impact, reflecting the greater distance (40m) from the construction site.
- **Nearest PBSA Residences:** Vibratory roller activities are predicted to result in a **medium** magnitude of impact due to proximity (17m). Other equipment, including lorries and excavators, corresponds to a **small** magnitude of impact.
- **Nearest Educational Buildings:** Vibratory roller activities are predicted to result in a **medium** magnitude of impact due to the close proximity (13m) of the MMU School of Digital Arts. Other activities, including lorry movements and excavators, result in a **small** magnitude of impact.

13.84 The sensitivity of the receptors is considered to be **high**. The magnitude of change ranges from **small** to **medium**, depending on receptor type and activity. Therefore, there is likely to be a **direct, temporary, medium-term, adverse effect**, which is considered to be **minor to moderate**.

Secondary Mitigation or Enhancement

13.85 No secondary mitigation is proposed.

Residual Effect

13.86 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.87 The effect is considered **Not Significant** due to the implementation of effective vibration management measures, despite the **moderate** level of effect predicted for vibratory roller activities at PBSA residences and educational buildings.

Noise disturbance from increased road traffic

13.88 The Road Traffic Noise Increase Assessment, provided in **Appendix 13.3**, evaluates the potential noise increases resulting from construction traffic on local roads during the

daytime period. The assessment was based on the following traffic flows, approved by the project team, including:

- Up to 180 vehicles per 18-hour period (approximately 10 vehicles per hour);
- 75% Heavy Goods Vehicles (HGVs); and
- Traffic travelling at an average speed of 36 km/h.

13.89 Predictions were based on existing measured road traffic noise levels at three key locations adjacent to the site, with results summarised in **Table 13.26** below.

Table 13.26: Road Traffic Increase During Construction Stage (Daytime)

Measurement / Road	Calculated Existing L _{A10,18hr} (dB)	Predicted Construction Traffic Noise from Proposed Development L _{A10,18hr} (dB)	Predicted Total Future Traffic Noise during Construction L _{A10,18hr} (dB)	Predicted Road Traffic Noise Increase (dB)	Magnitude of Impact
Position 1 – Cambridge Street	67	56.9	67.4	+0.4	Negligible
Position 2 – Boundary Street West	57.2	56.9	60.1	+2.9	Small
Position 3 – Chatham Street	58.2	56.9	60.6	+2.4	Small

13.90 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible** to **small**. Therefore, there is likely to be a **direct, temporary, medium-term, adverse** effect which is considered to be **negligible** to **minor**.

Secondary Mitigation or Enhancement

13.91 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

13.92 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.93 This effect is considered to be **Not Significant**.

Operational Stage

Noise disturbance from increased road traffic

13.94 The Road Traffic Noise Increase Assessment, provided in **Appendix 13.3**, evaluates the potential noise increases resulting from operational traffic on local roads during both the daytime and night-time periods. The assessment was based on the following traffic flows, approved by the project team, including:

- Up to 220 vehicles per 18-hour period (approximately 12 vehicles per hour);
- 22% Heavy Goods Vehicles (HGVs); and
- Traffic travelling at an average speed of 36 km/h.

13.95 Predictions were based on existing measured road traffic noise levels at three key locations adjacent to the site, with results summarized in **Tables 13.27** and **13.28** below.

Table 13.27: Road Traffic Increase During Operational Stage (Daytime)

Measurement / Road	Calculated Existing $L_{A10,18hr}$ (dB)	Predicted Operational Traffic Noise from Proposed Development $L_{A10,18hr}$ (dB)	Predicted Total Future Traffic Noise during Operation $L_{A10,18hr}$ (dB)	Predicted Road Traffic Noise Increase (dB)	Magnitude of Impact
Position 1 – Cambridge Street	67	53.3	67.2	+0.2	Negligible
Position 2 – Boundary Street West	57.2	53.3	58.7	+1.5	Small
Position 3 – Chatham Street	58.2	53.3	59.4	+1.2	Small

Table 13.28: Road Traffic Increase During Operational Stage (Night-time)

Measurement / Road	Measured Existing Night-time $L_{Aeq,T}$ dB	Predicted Future Operational Traffic Noise from Proposed Development L_{night} dB	Predicted Total Future Traffic Noise during Operation L_{night} dB	Predicted Road Traffic Noise Increase (dB)	Magnitude of Impact
Position 1 – Cambridge Street	61.4	44.2	61.5	+0.1	Negligible

Measurement / Road	Measured Existing Night-time $L_{Aeq,T}$ dB	Predicted Future Operational Traffic Noise from Proposed Development L_{night} dB	Predicted Total Future Traffic Noise during Operation L_{night} dB	Predicted Road Traffic Noise Increase (dB)	Magnitude of Impact
Position 2 – Boundary Street West	51.4	44.2	52.2	+0.8	Negligible
Position 3 – Chatham Street	53.2	44.2	53.7	+0.5	Negligible

13.96 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible** to **small**. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible** to **minor**.

Secondary Mitigation or Enhancement

13.97 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

13.98 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.99 This effect is considered to be **Not Significant**.

Noise disturbance from proposed servicing areas and building services plant

13.100 The assessment of noise disturbance from building services plant has been undertaken and is provided in **Appendix 13.1**, which sets out the limiting criteria for external plant noise sources. The criteria require external plant noise to be limited to 5 dB below the background sound level at the nearest noise-sensitive receptors (NSRs) in accordance with BS 4142:2019 and Manchester City Council's Noise Technical Guidance.

13.101 The assessment confirms that these criteria are achievable through appropriate plant selection and design measures, ensuring compliance with the specified limits. This will ensure that noise impacts from building services plant are controlled to a negligible level.

13.102 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible**.

Secondary Mitigation or Enhancement

13.103 No secondary mitigation or enhancement is proposed at this stage; however, the noise limits will be secured through a planning condition to ensure that appropriate secondary mitigation will be included in the project design.

Residual Effect

13.104 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.105 This effect is considered to be **Not Significant**.

Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)

13.106 The assessment of noise disturbance from other proposed uses, including retail, community spaces, and amenity areas, has been undertaken and is provided in **Appendix 13.1**. This assessment considers noise transfer from non-residential spaces into residential parts of the building. The assessment confirms that noise levels from these uses will remain below 26 dB L_{Aeq} in residential spaces.

13.107 The predicted levels are 9 dB below the BS 8233:2014 daytime criteria for bedrooms and living rooms, which specify an internal limit of 35 dB $L_{Aeq,16hr}$. On this basis, the magnitude of change is considered to be **small**.

13.108 It is assumed that these spaces will not be used during the night-time period (23:00–07:00). The assessment of effects has been concluded on that basis.

13.109 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **small**. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **minor**.

Secondary Mitigation or Enhancement

13.110 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

13.111 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.112 This effect is considered to be **Not Significant**.

Noise disturbance from other proposed uses (Multi-Use Games Area - MUGA)

13.113 The assessment of noise disturbance from the Multi-Use Games Area (MUGA) has been undertaken and is provided in **Appendix 13.4**. The assessment considers noise change outside existing receptors relative to existing ambient noise levels, as well as noise break-in to proposed receptors in accordance with **BS 8233:2014** guidelines.

13.114 The assessment demonstrates the following:

- For existing receptors, the worst-case noise increase is predicted to be 0.3 dB $L_{Aeq,16hr}$, which falls within the **negligible** magnitude of change category.
- For proposed receptors, noise break-in levels are predicted to remain within the BS 8233:2014 daytime guideline of 35 dB $L_{Aeq,16hr}$ for living rooms and bedrooms, also representing a **negligible** magnitude of change.

13.115 The assessment is undertaken on the basis that the MUGA will be used during the daytime period only (07:00–23:00).

13.116 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible**.

Secondary Mitigation or Enhancement

13.117 No secondary mitigation or enhancement is required/has been identified.

Residual Effect

13.118 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.119 This effect is considered to be **Not Significant**.

Noise disturbance from other proposed uses (Gym)

13.120 The assessment of noise disturbance from the gym has been undertaken and is provided in **Appendix 13.4**. The assessment sets out limiting criteria for both airborne and structure-borne noise in accordance with the ProPG Gym Acoustics Guidance (2023). These criteria have been established to ensure that noise and vibration levels do not adversely affect nearby noise-sensitive receptors (NSRs), including residential units within the Proposed Scheme.

13.121 The assessment confirms that compliance with the defined criteria can be achieved through appropriate design measures, including acoustic insulation and control of structure-borne noise emissions. It is anticipated that these limits will be secured through a planning condition to ensure compliance at the operational stage.

13.122 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible**. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible**.

Secondary Mitigation or Enhancement

13.123 No secondary mitigation or enhancement is proposed at this stage; however, it is expected that the noise and vibration limits will be controlled through a planning condition to ensure compliance during operation.

Residual Effect

13.124 In the absence of secondary mitigation, the residual effects for the receptors are the same as those reported in the pre-mitigation scenario.

Significance

13.125 This effect is considered to be **Not Significant**.

Disturbance from existing environmental noise

13.126 The assessment of disturbance from existing environmental noise has been undertaken and is provided in **Appendix 13.1**. The assessment considers compliance with the ProPG: Planning

and Noise (2017) and Building Regulations Approved Document O (2023) internal noise guidelines for residential spaces under two ventilation conditions:

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

13.127 The assessment demonstrates that:

- Under the whole dwelling ventilation condition, compliance with the ProPG internal noise guidelines will be achieved in all residential rooms through the incorporation of suitable building envelope specifications, including high-performance glazing and alternative ventilation strategies. This represents a negligible impact.
- Under the overheating ventilation condition, noise levels in the majority of rooms will not exceed more than 10 dB above the ProPG night-time criteria (40 dB $L_{Aeq,8hr}$ and 55 dB $L_{Amax,F}$). This represents a **small impact** and is achieved by keeping windows closed in noise-affected locations and relying on alternative overheating mitigation measures.
- In some instances, where external noise levels are lower (e.g., shielded or rear-facing façades), reliance on openable windows to mitigate overheating is preferred. This would result in noise levels exceeding the ProPG night-time criteria by up to 13 dB, representing a **medium impact**.

13.128 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible** under the whole dwelling ventilation condition, and **small to medium** under the overheating ventilation condition, depending on the location of the façade and ventilation strategy adopted. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible to moderate**.

Secondary Mitigation or Enhancement

13.129 The secondary mitigation measures identified in **Appendix 13.1** include the following:

- Agreement will be sought from MCC and Building Control and Building Safety Regulator that reliance on openable windows for mitigating overheating is generally acceptable for bedrooms located on the shielded, rear-facing façades, where noise levels are lower, and exceedances of Approved Document O criteria are expected to be marginal. The risk of significant adverse effects in these locations is considered low, and the open window strategy is much more in keeping with the principles of sustainable development.
- During warmer months, when overheating is most likely to occur, Purpose-Built Student Accommodation (PBSA) typically has an occupancy rate of around 25% due to term times. Operational management measures will ensure that longer-term residents are allocated rooms overlooking central courtyards or shielded façades where noise levels are lower; this should ensure that rooms in which exceedances are expected are not occupied during the relevant periods, meaning that the impact reduces from **medium to small**. This will be controlled as part of a letting plan which will be secured by condition if necessary.

- For Cambridge Street fronting bedrooms, where external noise levels are higher, reliance on openable windows is not acceptable under current guidance requirements. Alternative overheating mitigation measures in accordance with the Building Regulations, such as mechanical ventilation with heat recovery (MVHR) systems, will be required to maintain internal noise levels within ADO guidelines.

Residual Effect

13.130 The sensitivity of the receptors is considered to be **high**. The magnitude of change is considered to be **negligible** under the whole dwelling ventilation condition, and **small** under the overheating ventilation condition, depending on the location of the façade and ventilation strategy adopted. Therefore, there is likely to be a **direct, permanent, long-term, adverse** effect which is considered to be **negligible to minor**.

Significance

13.131 This effect is considered to be **Not Significant**.

Limitations and Assumptions

13.132 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- Noise Modelling Assumptions:
 - For the purposes of noise modelling, the ground around the Site has been assumed to have an absorption coefficient of 0.1, representing hard ground conditions.
 - All building surfaces have been assumed to be acoustically reflective.
 - Noise predictions were conducted using the ISO 9613-2:2024 methodology, with plant noise levels derived from BS 5228-1:2009+A1:2014 and manufacturer data sheets.
- Construction Noise and Vibration:
 - Assumptions regarding plant type, quantity, and operational times are based on typical construction site practices and BS 5228 guidance. These assumptions will require updating once a contractor is appointed and details are finalised.
 - Eight primary construction phases have been assumed based on the development's timeline:
 - Demolition
 - Substructure (Piling mat installation and Piling for Phase 1 and 2 Blocks)
 - Construction of the Superstructure
 - Building Envelope
 - Internal Fit-Out.
 - Noise predictions have been based on the source noise data provided in BS 5228-1:2009+A1:2014 and assume that construction works will only occur between:

- 07:30 – 18:00 Monday to Friday;
 - 08:30 – 14:00 on Saturdays; and
 - No works on Sundays or Bank Holidays.
- Predictions are based on typical construction activities and plant usage, including the schedule of equipment detailed in Appendix B of the Noise and Vibration Assessment.
 - Predictions for construction vibration have assumed vibratory rollers with two vibrating drums, a maximum drum vibration amplitude of 0.5 mm, and a drum width of 1 m, as a representative plant type.
 - We assume that noise and vibration monitoring will be conducted at positions representative of sensitive receptors, as shown in the Noise and Vibration Assessment **Appendix 13.2**. Continuous logging with automatic alerts for threshold exceedances will ensure compliance.
- Construction Traffic Noise:
 - Predictions assume a maximum of 180 construction-related vehicles per 18-hour daytime period (10 vehicles per hour), with 75% of these being Heavy Goods Vehicles (HGVs).
 - Assumed vehicle speeds are 36 km/h for the construction phase.
 - The analysis considers vehicle routes along Cambridge Street, Boundary Street West, and Chatham Street as primary haul routes.
 - Operational Plant Noise:
 - A qualitative assessment was undertaken as specific plant details are not available at this stage. Noise levels from operational plant will need further detailed assessment to ensure compliance with BS 4142:2019 and Manchester City Council's Noise Technical Guidance.
 - Operational Traffic Noise:
 - Predictions assume up to 220 vehicles per 18-hour daytime period (12 vehicles per hour), with 22% being Heavy Goods Vehicles (HGVs), for the operational phase.
 - Assumed vehicle speeds are 36 km/h for the operational phase.
 - Multi-Use Games Area (MUGA) Noise:
 - The MUGA assessment assumes a worst-case operational scenario in terms of noise emissions. The noise predictions are based on the use of typical source noise levels calibrated using the AGP Acoustics Guidance.
 - The assessment assumes that MUGA usage will be restricted to the daytime period only (07:00–23:00).

- Gym Noise and Vibration:
 - Predictions for gym-related noise and vibration are based on assumed mitigation measures (e.g., floating floors and isolated equipment) that will meet the internal noise and vibration criteria set in ProPG Gym Acoustics Guidance (2023).
 - Further detailed assessment will be required at later design stages to confirm compliance.
- Existing Environmental Noise:
 - The assessment assumes that ventilation and overheating mitigation will be provided through a combination of mechanical ventilation systems and reliance on openable windows for shielded façades.

Summary

13.133 **Table 13.29** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

13.134 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation that has been taken into account is set out in detail within the Chapter and summarised within Environmental Management Plan included within **Volume 3: Environmental Management Plan**.

Table 13.29: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Noise disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Minor to moderate adverse	No
Vibration disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Minor to moderate adverse	No

Effect	Receptor	Residual Effect	Is the Effect Significant?
Noise disturbance from increased road traffic	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Negligible to minor adverse	No
Operational Stage			
Noise disturbance from proposed servicing areas and building services plant	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Negligible adverse	No
Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings, and Future users of the Proposed Scheme	Negligible to minor adverse	No
Noise disturbance from increased road traffic	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Negligible to minor adverse	No
Disturbance from existing environmental noise	Future users of the Proposed Scheme	Negligible to moderate adverse	No

References

-
- ¹ UK Government. Environmental Protection Act 1990. Available at: [\[https://www.legislation.gov.uk/ukpga/1990/43/contents\]](https://www.legislation.gov.uk/ukpga/1990/43/contents) [Accessed: 17 December 2024].
- ² UK Government. Environmental Protection Act 1990. Available at: [\[https://www.legislation.gov.uk/ukpga/1990/43/contents\]](https://www.legislation.gov.uk/ukpga/1990/43/contents) [Accessed: 17 December 2024].
- ³ Ministry of Housing, Communities & Local Government (2024). National Planning Policy Framework (NPPF). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Accessed: 17 December 2024].
- ⁴ Department for Environment, Food and Rural Affairs (2010). Noise Policy Statement for England (NPSE). Available at: <https://www.gov.uk/government/publications/noise-policy-statement-for-england> [Accessed: 17 December 2024].
- ⁵ Manchester City Council (2012). Manchester's Local Development Framework: Core Strategy Development Plan Document. Adopted 11th July 2012. Available at: [\[https://www.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027\]](https://www.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027) [Accessed: 17 December 2024].
- ⁶ Manchester City Council (2022). Planning and Noise Technical Guidance. Available at: [\[https://www.manchester.gov.uk/info/500207/planning_and_regeneration/1962/additional_planning_guidance/3\]](https://www.manchester.gov.uk/info/500207/planning_and_regeneration/1962/additional_planning_guidance/3) [Accessed: 17 December 2024].
- ⁷ Institute of Environmental Management and Assessment (2014). Guidelines for Environmental Noise Impact Assessment. Available at: <https://www.iema.net> [Accessed: 17 December 2024].
- ⁸ British Standards Institution (2003). BS 7445-2: Description and Measurement of Environmental Noise – Part 2: Guide to the Acquisition of Data Pertinent to Land Use. Available at: <https://www.bsigroup.com> [Accessed: 17 December 2024].
- ⁹ British Standards Institution (2009). BS 5228-1: Noise and Vibration Control on Construction and Open Sites – Part 1: Noise. Available at: <https://www.bsigroup.com> [Accessed: 17 December 2024].
- ¹⁰ British Standards Institution (2009). BS 5228-2: Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration. Available at: <https://www.bsigroup.com> [Accessed: 17 December 2024].
- ¹¹ British Standards Institution (2019). BS 4142: Methods for Rating and Assessing Industrial and Commercial Sound. Available at: <https://www.bsigroup.com> [Accessed: 17 December 2024].
- ¹² Department for Transport and Welsh Office (1998). Calculation of Road Traffic Noise (CRTN). Available at: [offline] [Accessed: 17 December 2024].
- ¹³ British Standards Institution (2014). BS 8233: Guidance on Sound Insulation and Noise Reduction for Buildings. Available at: <https://www.bsigroup.com> [Accessed: 17 December 2024].
- ¹⁴ Association of Noise Consultants (2017). ProPG: Professional Practice Guidance on Planning and Noise. Available at: <https://www.association-of-noise-consultants.co.uk> [Accessed: 17 December 2024].
- ¹⁵ Association of Noise Consultants (2023). ProPG Gym Acoustics Guidance (GAG). Available at: <https://www.association-of-noise-consultants.co.uk> [Accessed: 17 December 2024].
- ¹⁶ Sport England (2015). Artificial Grass Pitch (AGP) Acoustics – Planning Implications. Available at: <https://www.sportengland.org> [Accessed: 17 December 2024].
- ¹⁷ HM Government (2021). Approved Document O: Overheating. Available at: <https://www.gov.uk/government/publications/approved-document-o-overheating> [Accessed: 17 December 2024].
- ¹⁸ Blackbird Acoustics (2024). Environmental Noise Survey, External Building Fabric and Building Services Noise Assessment, and Internal Noise Transfer Acoustic Assessment. Available at: [Appendix 13.1] [Accessed: 17 December 2024].
- ¹⁹ Heyda Ltd (2024). Construction Noise, Vibration, and Traffic Impact Assessment. Available at: [Appendix 13.2] [Accessed: 17 December 2024].
- ²⁰ Heyda Ltd (2024). Technical Note: Noise Disturbance from Increased Road Traffic. Available at: [Appendix 13.3] [Accessed: 17 December 2024].
- ²¹ Heyda Ltd (2024). Technical Note: Multi-Use Games Area (MUGA) and Gym Noise Impact Assessment. Available at: [Appendix 13.4] [Accessed: 17 December 2024].
- ²² International Organization for Standardization (2024). EN ISO 9613-2:2024: Acoustics – Attenuation of Sound during Propagation Outdoors. Available at: [\[https://www.iso.org/standard/74047.html\]](https://www.iso.org/standard/74047.html) [Accessed: 17 December 2024].

14. Assessment of Cumulative Effects

Introduction

- 14.1 This Chapter reports the assessment of cumulative effects arising from the Proposed Scheme, in line with Schedule 4, Paragraph 5(e) of the EIA Regulations, which states the need to consider the following:

“the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources”.

- 14.2 To accord with the EIA Regulations, in terms of providing an assessment of cumulative effects, this assessment has considered the following types of cumulative effects:

- **Effect interactions:** the interaction of environmental effects of the Proposed Scheme affecting the same receptor either within the Site or in the surrounding area^a, for example an adjacent residential receptor experiencing an increase in construction noise and change in visual amenity during construction; and
- **In-combination interactions:** the combination of environmental effects of the Proposed Scheme with existing or cumulative projects affecting the same receptor, for example multiple new tall buildings in-combination with the Proposed Scheme changing townscape character.

Legislative Framework and Guidance

- 14.3 Planning Practice Guidance¹ (PPG) refers to the need for cumulative effects to be assessed as part of an ES, but at present, there is no widely accepted assessment methodology or best practice. As such, the methodology in this Chapter is based on previous experience and knowledge at Turley, the types of receptors being assessed and the nature of the Proposed Scheme.

Assessment Methodology

- 14.4 The assessment of cumulative effects, for both effect interactions and in-combination effects, is largely qualitative in nature. The assessment of effect interactions is based on information contained within the ES, whilst the assessment of in-combination effects is based on publicly available information (i.e. the planning applications submitted for the projects considered for in-combination effects). The approach to the assessment of both effect and in-combination interactions is set out in the following sections.

^a I.e the technical study areas as defined in **Technical Chapters 6 – 13**.

Effect Interactions

- 14.5 Following the completion of **Technical Chapters 6 – 13**, the residual effects have been collated into a matrix so that effect interactions on common receptors^b can be identified. The matrix groups the receptors into categories, aligning with Schedule 4, Paragraph 4 of the EIA Regulations (e.g. population and human health, climate, etc). Where a residual effect is reported in **Technical Chapters 6 – 13** to be negligible, then this was excluded from the matrix (**Table 14.2** and **14.3**). This is on the basis that a negligible residual effect is unlikely to cause a noticeable change at a receptor or the receptor is not considered sensitive to a change.
- 14.6 Where the level of effect ranged across receptors assessed, the worst case level of effect was included in **Tables 14.2** and **14.3**, i.e. the 'least beneficial' or 'most adverse'.
- 14.7 Where effect interactions have been identified, a qualitative appraisal has been undertaken for the relevant receptor categories. The qualitative evaluation at the receptor level considered the following:
- Clear identification of specific receptor(s) considered for each effect 'contributing' to a potential effect interaction to understand the common receptor (and their attributes, such as location etc.);
 - An appraisal where there are specific common receptors, considering;
 - Magnitude of change (or impact) of each residual effect;
 - Sensitivity (or value, importance, etc.) of the receptor / receiving environment to change;
 - Duration (of the effects individually and collectively utilising the short / medium / long-term criteria set out in **Chapter 2**) and reversibility of the effect;
 - If the effects are temporary and / or permanent;
 - If the effects are experienced / occur concurrently or sequentially; and / or
 - The geographical / spatial extent of the individual effects.
- 14.8 This process has been documented within the 'Assessment of Effect Interactions' section of this Chapter.

In-Combination Effects

- 14.9 The assessment of potential in-combination effects has followed a two-step approach, as detailed below.

Step 1: Identification and Evaluation of Projects for Further Consideration

- 14.10 A review of planning applications submitted to MCC was undertaken as part of the EIA Scoping Report (**Appendix 2.1**) to identify an initial list of projects (referred to as

^b The common sensitive receptors considered within this assessment are those which are assessed within two or more of the technical assessments within the ES.

‘Cumulative Projects’) that could give rise to in-combination effects with the Proposed Scheme. The review considered projects that have submitted applications, rather than any projects that are foreseeable or allocated sites. This is due to it being unlikely that there will be sufficient information to inform a robust in-combination assessment for schemes where no application is yet submitted.

14.11 The Cumulative Projects considered in this ES have been identified from the following sources:

- MCC’s online register of projects^c;
- Planning Inspectorate online register of projects^d;
- Transport and Works Order Act online register of projects^e; and
- Parliament Hybrid Bills online register^f.

14.12 In line with the EIA Regulations, this search has focused on projects and therefore is not inclusive of sites allocated within local plans, core strategy documents or supplementary planning documents.

14.13 In line with Planning Inspectorate Advice Note Seventeen, criteria and professional judgment have been used to determine whether to include or exclude projects from further assessment (i.e. apply proportionality), informed by aspects such as temporal scale, nature of development and other factors.

14.14 As such, the search has been focused on projects within 1km of the Site, acknowledging the maximum extent of likely receptors and nature of effects to be reported within the ES.

14.15 The following additional criteria has also been used to define the list of Cumulative Projects:

- Applications dating from June 2019 onwards. It is anticipated that applications prior to this date will already have been built out (and therefore form part of the baseline) and / or where subsequent applications have been submitted these would be captured within the search dates;
- Applications that have been submitted, consented/granted planning permission, or part implemented;
- Applications that have been refused but are subject to an undetermined appeal;

^c This search has also been informed by using Landstack.

^d <https://infrastructure.planninginspectorate.gov.uk/projects/register-of-applications/>.

^e <https://www.gov.uk/government/collections/twa-inspector-reports-and-decision-letters>.

^f <https://www.parliament.uk/business/bills-and-legislation/current-bills/hybrid-bills/>.

- Projects of a pertinent scale, which has been determined using professional judgment but informed by their scale, perceived impact, or complexity, and are present near the Site^g.

14.16 A further search was undertaken in January 2025 (8 weeks prior to the finalisation of the assessment of cumulative assessment as part of the ES) to ensure there is sufficient time for the Cumulative Projects to be considered and incorporated within any studies / evaluation / modelling that may underpin the assessments within the ES (e.g. visualisations).

14.17 The final list of Cumulative Projects is set out in **Table 14.1** and shown on **Figure 14.1**.

Step 2: Assessment of In-Combination Effects

14.18 A review of available information for each Cumulative Project was undertaken using MCC's online planning portal. Relevant ES's or other relevant environmental reports were downloaded for consideration by the project team. Where no environmental reporting was available, professional judgement was used in order to determine any potential in-combination effect.

14.19 Where available, consideration was also given to whether there is likely to be a concurrent construction or operational stage with the Proposed Scheme.

14.20 The sensitive receptors identified for the Proposed Scheme (as set out in **Technical Chapters 6 – 13^h**) were then cross checked against the receptors identified within the Cumulative Projects. In order for there to be a potential in-combination effect, there needs to be a potential effect on the same receptor for a similar duration within the overall programme (or part of it) for the Proposed Scheme.

14.21 The qualitative evaluation at the receptor level considered the following:

- Combined magnitude of change of all Cumulative Projects;
- Sensitivity/value/importance of the receptor/receiving environment to change; or/and
- Duration and reversibility of effect.

14.22 The evaluation is largely qualitative in nature. Through a combination of the evaluation and mitigation presented in the ES, conclusions have been drawn as to the likelihood for significant in-combination environmental effects.

^g Informed by the definition of major development by NPPF; the definition of Schedule 1 and Schedule 2 developments set out within the EIA Regulations; and developments that do not fall into the above but have notable implications due to location or scale.

^h It is noted that there are some technical appendices in **Volume 2** which provide assessment of all relevant receptors, however only receptors scoped in for assessment in **Technical Chapter 6 – 13** were considered when identifying common receptors with the Cumulative Projects. This is because these were the receptors identified as having the potential to experience a likely significant effect.

Table 14.1: List of Cumulative Projects for In-Combination Assessment

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
1	128485/FO/2020 All Saints Park, Manchester	Full Planning Permission for the refurbishment and expansion of All Saints Park public realm and surrounding streets including flexible use for temporary events, activities and pop-up retail (Use Classes E(a) and E(b)) facilities; works to include: the demolition of targeted areas of the existing stone wall and railings; removal of three existing trees and replacement tree planting and soft landscaping; installation of new drainage scheme; installation of lighting columns, wayfinding signage and other street furniture; provision of a redesigned memorial garden; provision of cycle parking and accessible car parking bays; highways and servicing access works, including the closure of parts of Higher Ormond Street, Lower Ormond Street and Cavendish Street to traffic through a stopping-up order; and, associated works.	75m east	No	Under construction
2	130387/FO/2021 The Former Gamecock Public House, Boundary Lane	Erection of a part 7, part 9 storey purpose built student accommodation building comprising 146 bed spaces (Sui Generis use class) with ancillary amenity space, a ground floor community hub (proposed for Use Classes F2(b), E(b), E(3), E(f)) and associated landscape works and infrastructure.	200m southwest	No	Approved
3	136043/FO/2023 Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The	Erection of 13-storey office building (Use Class E) with associated public realm, external roof terraces (floors 11 and 12) and other associated works including external amenity spaces (Plot 10A).	250m northwest	Yes	Under construction

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
	South And The Development Plot 9A To The West				
4	138831/FO/2023 Plot 11 Block C, First Street South, Manchester	Erection of a ground plus 28-storey building plus plant level, comprising purpose-built student accommodation (PBSA -Sui Generis) and other associated works including public realm, secure cycle parking and servicing arrangements.	265m northwest	Yes	Awaiting decision
5	125573/FO/2019 Plot 11, First Street, Manchester	Construction of four buildings of heights varying from 10 storeys to 45 storeys together comprising Co-living bedspaces (use class sui generis) and associated amenity facilities, with ground floor commercial units (Use classes A3 (Café / Restaurant and D2 (Gym)), private amenity space and public realm comprising hard and soft landscaping, car parking and cycle facilities and other associated works.	270m northwest	Yes	Under construction
6	134288/FO/2022 No. 3 Circle Square, Manchester	Erection of 15 storey building comprising office space (Use Class E(g)(i)) and ancillary flexible commercial uses (Use Class E), rooftop terrace, highway works, landscaping, and other associated works	280m northeast	Yes	Under construction
7	136170/FO/2023 Plot 10A Of the First Street Masterplan, Manchester	Erection of 14-storey building comprising purpose-built student accommodation (PBSA) (Sui Generis) and ground floor Food Hall (Sui Generis Use), and other associated works including external amenity spaces, public realm, secure cycle parking, access and servicing arrangements (Plot 10B).	350m northwest	Yes	Under construction

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
8	132600/FO/2021 Plot 9 First Street Manchester	Erection of a nine-storey building with rooftop plant and basement comprising office accommodation (Use Class E(c)) with ancillary facilities for occupiers including roof top terrace, winter gardens, gym/ yoga studio, basement car parking (26 spaces) and cycle parking (130 spaces) landscaping and other associated works.	380m northwest	No	Under construction
9	137401/FO/2023 Land Between Upper Brook Street, Kincardine Road And Grosvenor Street Manchester	Full planning application for the demolition of existing buildings and erection of three ground floor + 12/14/29 storey buildings to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 983 bedrooms in total and 506sqm of ground floor ancillary uses (café/commercial and convenience store - Use Classes E (a)/(b)/(c)), three buildings comprising ground floor + 5/7/9 storeys for Science and Innovation uses (Use Class E (g)(i) & (ii)) and 834sqm ground floor community uses (retail/ cafés and medical facility (Use Classes E (a)/(b) and (e)), and the provision of new public realm, two new public squares, new access and parking, and associated works.	430m east	Yes	Approved
10	135419/FO/2022 One Medlock Street	Demolition of the existing hotel building and structures and redevelopment of the site to comprise two separate buildings: one 13 storey office building with commercial unit (Use Class E) at ground floor; a part 11, part 38 storey building comprising 1,014 purpose built student accommodation units (sui generis) with ground floor office/community uses (Use Class E, F1 or F2); and	450m northwest	Yes	Under construction

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
		associated ancillary internal and external amenity space, hard and soft landscaping and associated highway works.			
11	138808/FO/2023 Car Park At Junction Of Charles Street And York Street, Manchester	Erection of 15-storeys plus plant level building to provide purpose-built student accommodation (PBSA - Sui Generis) along with site preparation works, works over the public highway and other associated works.	470m northeast	Yes	Approved
12	138805/FO/2023 Hotspur Press, Gloucester Street	Partial demolition of the former Hotspur Press Complex (Medlock Mill) and redevelopment of the site to provide Purpose Built Student Accommodation (Sui Generis Use Class) above ground floor commercial or community uses (Use Classes F(e), F2(a)(b) and E(b)), within a part 4/5-storey and part 37-storey building plus roof parapet level above basement level, associated ancillary internal and external amenity space, public realm (including a new public square), hard and soft landscaping and associated highway works.	470m northwest	Yes	Awaiting decision
13	128002/FO/2020 One City Road, Manchester	Full Planning Application for demolition of existing structures on site, erection of one 11-storey plus basement office building (Use Class E) and one 14-storey plus basement office building with ground floor commercial unit (Use Class E), landscaping, highways works, and associated works.	500m northwest	No	Under construction
14	137399/FO/2023 Land Bounded By Upper Brook Street, Cottenham	Erection of a 6 to 9 storey building for Sci-Tech use (Use Class E (g)(ii)) and 265sqm of a cafe/bar (Use Class E (b)), and a 9 to 23 storey building for Purpose Built Student Accommodation (PBSA) (Use Sui Generis), comprising 737	550m east	Yes	Approved

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
	Street & Kincardine Road Manchester	bedrooms and 293sqm of community use (Use Class F2 (b)) and 80sqm of commercial floorspace (Use Class E), alongside new public realm, access, parking, and associated works following demolition of existing buildings.			
15	136934/FO/2023 Greenheys Building, Pencroft Way	Erection of 7-storey building including a full plant level; comprising office and laboratory floorspace (Use Class E); associated cycle parking, hard and soft landscaping, access and servicing and other associated works.	580m south	No	Approved
16	129273/FO/2021 34 Great Jackson Street, Manchester	Demolition of existing structures and the construction of two residential buildings of 56 storeys (plus basement and roof plant) (use class C3), with ground floor commercial uses (use class E), car parking, cycle provision, landscaping, access and other associated works.	620m northwest	Yes	Approved
17	132199/FO/2021 Plot F Great Jackson Street Manchester	Full planning permission for the demolition of existing structures and the erection of two 51-storey residential buildings (Use Class C3) across two phases, including residential amenity facilities, basement car parking, landscaping and public realm, servicing and access arrangements, highways alterations, and associated works.	655m northwest	Yes	Under construction
18	139715/FO/2024 Viadux Phase 2	Full Planning Permission for the phased construction of 2 buildings to include: a tall mixed-use building to include residential (Use Class C3) and hotel with associated bars and restaurant (Use Class C1) (Plot 2a), a second tall building with residential accommodation (Use Class C3) with flexible commercial units (Use Class E) (Plot 2b),	700m northwest	Yes	Awaiting decision

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
		landscaping and public realm, servicing, drainage and access arrangements, highways alterations, and other associated works.			
19	137227/FO/2023 Plot D, Great Jackson Street	Full planning permission for the demolition of existing structures and the erection of one residential building to a height of 71 storeys comprising 642 homes (Use Class C3) with food and drink uses (Use Class E) and / or drinking establishment (Sui Generis); and one office building (Use Class E); with basement car parking, cycle parking, landscaping and public realm, servicing and access arrangements, highways alterations and associated works.	760m northwest	Yes	Awaiting decision
20	124972/FO/2019 Mayfield Phase 1	Phased creation of circa 2.4 ha (6 acres) of public park, including hard and soft landscaping and new bridges across the River Medlock; erection of 9 storey office development above basement with mezzanine and plant level (Class B1) with ground floor Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment) B1 (Office) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway; erection of 11 storey Multi-Storey Car Park to provide 581 car parking spaces with associated landscaping; highways and infrastructure works including the creation of new junction from London Road to provide access to the multi-storey car park (MSCP) (Use Class Sui Generis); works to Baring Street, stopping up of Bond Street and Nether Street (alongside associated Traffic Regulation Orders to manage unrestricted parking to Buxton Street, Berry Street and	780m northeast	Yes	Under construction

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
		Travis Street (to be delivered and implemented prior to the MSCP becoming operational)) alongside enabling works comprising phased demolition and site clearance, earthworks including re-profiling and construction of retaining walls for the land bounded by the Mancunian Way to the south, Mayfield Depot to the north, Baring Street to the west and Hoyle Street to the east			
21	126308/FO/2020 2-4 Whitworth Street West, Manchester	The demolition of 2 to 4 Whitworth Street West and the construction of a mixed-use building, comprising flexible units for retail, food and drink use at ground floor level with a hotel at upper storeys, together with associated landscaping, servicing, cycle parking and other associated works.	800m northwest	No	Approved
22	137226/FO/2023 Part Of Plot C And Plot E, Great Jackson Street	Full planning permission for the demolition of existing structures and the phased construction of four residential buildings (two at 47 storeys and two at 51 storeys) to provide 1,746 homes (Use Class C3), flexible commercial, leisure, food and drink uses (all Use Class E) and / or drinking establishment (Sui Generis), basement car parking, cycle parking, landscaping and public realm, servicing and access arrangements, highways alterations and associated works.	800m northwest	Yes	Awaiting decision
23	136874/FO/2023 Echo Street, Manchester	Erection of 3 interlinked towers ranging from 27, 21 and 16 storeys together with intermediary link buildings (15 and 11 storeys) to form Purpose Built Student Accommodation (Sui Generis) with associated amenity	810m northeast	Yes	Under construction

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
		space and external landscaping and other associated works.			
24	125804/FO/2019 325 - 327 Deansgate, Manchester	Demolition of existing buildings and structures on-site and erection of 22-storey building comprising apart-hotel (Use Class C1) with flexible commercial uses at ground floor and within existing viaduct arches (Use Class A1, A2, A3, A4, D2), access, landscaping and other associated works.	850m northwest	Yes	Under construction
25	135565/FO/2022 Great Northern Warehouse, Deansgate	Demolition of the central atrium, car park ramps, and other elements, retention of casino (Sui Generis), bowling alley and existing food and drink unit (Use Class E) alongside to allow refurbishment, restoration and re-use of the Great Northern Car Park to provide office accommodation, retail and/or food and drink uses (Use Class E) and ancillary areas; and Refurbishment, restoration, partial demolition and erection of a 3-storey extension to Deansgate Terrace (northern section) and Goods Yard Entrance to form office, retail and / or food and drink use (Use Class E) and drinking establishments / hot food takeaway (Sui Generis), with associated public realm works comprising the reconfiguration of Great Northern Square and the introduction of additional public realm with associated hard and soft landscaping, highways works, access and servicing facilities, rooftop plant and other associated works; and Partial demolition of the existing leisure box to erect three residential buildings (ground plus 16, 27 and 34 storeys) to provide 746 residential apartments (Use Class C3), reconfiguration of existing car parking together with the creation of office,	860m northwest	Yes	Awaiting decision

Ref.	App. Reference / Project Name	Description	Distance from Site	EIA?	Status
		retail and / or food and drink use (Use Class E), or Sui Generis (drinking establishments / hot food takeaway) at ground floor and level 3, hard and soft landscaping, together with highways works, access and servicing facilities, rooftop plant and other associated works; and, External alterations and restoration of Deansgate Terrace (southern section) to provide office, retail or food and drink use (Use Class E) or Sui Generis (drinking establishments / hot food takeaway / live music venue), along with delivery of associated public realm, highways works, plant, and associated works			
26	127486/FO/2020 Baring Street, Manchester	Construction of a 7,11,14 storey building with roof top plant area and basement, comprising office use (Use Class B1) with external terraces above ground floor commercial units (Use Classes A1 and A3); new public realm and landscaping, cycle parking; external plant, access, servicing and work to the highway (Baring Street) and other associated works.	930m northeast	No	Awaiting decision

Assessment of Effect Interactions

- 14.23 **Table 14.2** and **14.3** detail those receptor categories where residual effects were identified within **Technical Chapters 6 – 13** for the construction and operational stages of the Proposed Scheme, respectively. **Technical Chapters 6 – 13** have each identified specific sensitive receptors within their assessments, and these have been grouped into common categories in **Table 14.2** and **14.3** for further consideration.
- 14.24 Where effects are reported as significant in **Technical Chapters 6 – 13**, these are shown in **Table 14.2** and **14.3** as **bold** and shaded grey. Where topic chapters are not included, this is because no effects above negligible were identified.

Construction Stage

Table 14.2: Matrix of Effect Interactions (Construction Stage)

Effect	Population and Human Health	Climate	Cultural Heritage
Chapter 7: Built Heritage			
Change within the setting of a designated heritage asset			Minor adverse ⁱ
Chapter 9: Daylight, Sunlight and Overshadowing^j			
Reduced daylight amenity	Major adverse ^k		
Reduced sunlight amenity	Moderate adverse ^l		
Increased overshadowing	Moderate adverse ^m		
Chapter 10: Climate Change			
Greenhouse gas emissions		Minor adverse	
Chapter 11: Socio-Economics and Human health			

ⁱ At Former Manchester Ear Hospital; Roman Catholic Church of St Augustine; Ormond Building; Righton Building; Grosvenor Building; and Former Town Hall Façade to Mabel Tylecote Building.

^j **Chapter 9: Daylight, Sunlight and Overshadowing** did not model and report on the effects of the demolition / construction stage as the completion of the Proposed Scheme at operation was considered to represent the worst-case effect assessment scenario. To ensure a worst case effect interactions assessment, the operational stage effects are used as a worst case construction stage effect in **Table 14.2**.

^k At Cavendish Halls of Residence; Needham Court; and Cambridge House. Effects are moderate adverse and significant at Manchester House; and 84 Cambridge Street. Effects are minor adverse and not significant at Victoria Hall; and 2-12 Matham Walk.

^l At Cambridge House only.

^m At Manchester Metropolitan Uni only.

Effect	Population and Human Health	Climate	Cultural Heritage
Employment generated during construction	Minor beneficial ⁿ		
Chapter 13: Noise and Vibration			
Noise disturbance from demolition and construction activities	Minor to moderate adverse ^o		
Vibration disturbance from demolition and construction activities	Minor to moderate adverse ^p		
Noise disturbance from increased road traffic	Negligible to minor adverse ^q		
Potential Effect Interaction:	YES	NO	NO

ⁿ For the labour force.

^o For residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings.

^p For the same receptors as above.

^q For the same receptors as above.

- 14.25 No effects above negligible were reported for **Chapter 8: Wind**, and **Chapter 12: Air Quality** during the construction stage and therefore these chapters are excluded from **Table 14.2**. No construction stage effects were scoped in for assessment in **Chapter 6: Townscape and Visual**.
- 14.26 As shown in **Table 14.2**, there were residual effects reported to the 'population and human health'; 'climate'; and 'cultural heritage' receptor groups during the construction stage. There are no effect interactions reported for the climate and cultural heritage receptor group as there is only one effect reported in these groups. Therefore, only potential effect interactions to the 'population and human health' receptor group have been considered further.
- 14.27 The following residual effects were reported in the population and human health group during the construction stage:
- Reduced daylight and sunlight amenity and increased overshadowing;
 - Employment generated during construction;
 - Noise disturbance from demolition and construction activities;
 - Vibration disturbance from demolition and construction activities; and
 - Noise disturbance from increased road traffic
- 14.28 All effects reported during the construction stage are adverse, with the exception of employment generation which is beneficial.
- 14.29 Given the urban context of the Site, the concentration of receptors within a small geographical area, the environmental effects considered within **Technical Chapters 6 – 13** and the breadth of receptors within the population and human health receptor category, the potential for effect interactions is not uncommon or unexpected.
- 14.30 To note, the adverse effects from reduced daylight and sunlight amenity and increased overshadowing are the operational stage effects when the full massing is in place, and therefore a worst case proxy used for the construction stage. In reality, the effects will evolve and not reach these worst case effects until the massing is fully in place. Therefore, there is only likely to be a short term period within the overall construction period where these effects could interact with other construction stage effects.
- 14.31 The beneficial effect of employment generated during construction is considered on a wider scale (Manchester and Greater Manchester) than the other effects which are more relevant to receptors in close proximity to the Site. Therefore, this is unlikely to interact with the more local scale effects and there is no perceived effect interaction with respect to these effects and the adverse ones identified.
- 14.32 There is some potential for the three noise and vibration effects to interact and result in a greater effect for surrounding residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester

Metropolitan University educational buildings. None of the noise and vibration effects during construction are significant, and the effects range depending on location and type of activity. The effects are temporary and limited to only when noisy or vibration generating activities are being undertaken.

- 14.33 Overall, there is likely to be a temporary effect interaction during the construction stage, which is greater than each effect individually (**Table 14.2**) but that is not considered to be significant.

Operational Stage

Table 14.3: Matrix of Effect Interactions (Operation Stage)

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Chapter 6: Townscape and Visual				
Changes to local townscape character			Moderate beneficial^r	
Changes to visual amenity	Moderate adverse^s			
Chapter 7: Built Heritage				
Change within the setting of a designated heritage asset				Minor adverse ^t
Chapter 9: Daylight, Sunlight and Overshadowing				
Reduced daylight amenity	Major adverse^u			
Reduced sunlight amenity	Moderate adverse^v			
Increased overshadowing	Moderate adverse^w			

^r At LTCA1 – Universities Area.

^s For Residents of the Student Accommodation located adjacent the western Site boundary. There is a moderate to major beneficial effect for users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W) and a moderate to major neutral effect for open space users in All Saints Park.

^t At Former Manchester Ear Hospital; Roman Catholic Church of St Augustine; Ormond Building; and Righton Building.

^u At Cavendish Halls of Residence; Needham Court; and Cambridge House. Effects are moderate adverse and significant at Manchester House; and 84 Cambridge Street. Effects are minor adverse and not significant at Victoria Hall; and 2-12 Matham Walk.

^v At Cambridge House only.

^w At Manchester Metropolitan Uni only.

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Chapter 10: Climate Change				
Greenhouse gas emissions		Minor adverse		
Chapter 11: Socio-Economics and Human health				
Provision of PBSA	Major beneficial ^x			
Chapter 13: Noise and Vibration				
Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)	Negligible to minor adverse ^y			
Noise disturbance from increased road traffic	Negligible to minor adverse ^z			
Disturbance from existing environmental noise	Negligible to moderate adverse ^{aa}			
Potential Effect Interaction:	YES	NO	NO	NO

^x For students requiring accommodation.

^y For residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings, and Future users of the Proposed Scheme.

^z For residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings.

^{aa} For future users of the Proposed Scheme

- 14.34 No effects above negligible were reported for **Chapter 8: Wind**. No operational stage effects were scoped in for assessment in **Chapter 12: Air Quality**.
- 14.35 As shown on **Table 14.3**, there were residual effects reported to the 'landscape'; 'cultural heritage'; 'population and human health'; and 'climate' receptor groups during the operation stage. There are no effect interactions reported for the landscape, cultural heritage, and climate receptor groups as there is only one effect reported in these groups. Therefore, only potential effect interactions to the population and human health receptor group have been considered further.
- 14.36 The following residual effects were reported in the population and human health group during the operational stage:
- Changes to visual amenity;
 - Reduced daylight and sunlight amenity and increased overshadowing;
 - Provision of PBSA;
 - Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space);
 - Noise disturbance from increased road traffic; and
 - Disturbance from existing environmental noise.
- 14.37 With the exception of provision of PBSA and views for users of tertiary roads within close proximity, both of which were beneficial, the effects summarised above were largely adverse.
- 14.38 As noted for the construction stage above, given the urban context of the Site, the concentration of receptors within a small geographical area, the environmental effects considered and the breadth of receptors within the population and human health receptor category, the potential for effect interactions is not uncommon or unexpected.
- 14.39 The receptors considered for these effects can be split into existing receptors and future receptors. Therefore there are two types of effect interactions that could occur, those to existing receptors and those to future receptors, and there would not be overlap between the categories.
- 14.40 Future receptors are relevant for the provision of PBSA; noise disturbance from other proposed uses; and disturbance from existing environmental noise. The provision of PBSA is considered in the context of the student accommodation provision in Manchester, which is a beneficial effect. This could interact with adverse effects of noise that the future PBSA receptors would experience, however both these effects are not significant.
- 14.41 In relation to existing receptors, there is only a significant change to visual amenity for residents of the Student Accommodation located adjacent the western Site boundary (adverse); users of the tertiary roads within close proximity to the Site including (Lower

Chatham Street, Cavendish St and Boundary Street W) (beneficial); open space users in All Saints Park (neutral). The only overlap of receptor with other topics is the Student Accommodation located adjacent the western Site boundary which will also experience effects from the increase in noise (which are not significant) and reduced daylight and sunlight amenity (which is significant for some receptors). This would be a permanent adverse effect interaction.

- 14.42 There is further overlap of receptors (in addition to the Student Accommodation located adjacent the western Site boundary discussed above) across the daylight and sunlight and noise assessments. Therefore, the worst case noise effect of minor adverse, could interact with the major and moderate adverse daylight and sunlight effects.
- 14.43 Interactions on receptors could be experienced concurrently (i.e. at the same time, which is considered above) or consecutively (i.e. one after the other). Given the common receptors identified above, there is not considered to be any instances where there would be concurrent effect interactions.
- 14.44 Effect interactions during the operational stage are considered to be long-term and permanent. Due to the number of effects and how they may interact, the effect interaction on existing receptors is likely to be greater than the effects individually. Given the levels and significance of the effects that contribute to an effect interaction on receptors within the population and human health receptor category, the effect interactions are perceived to be significant (as some of the effects individually are significant). The effect interactions on future receptors is considered to be not significant.

Assessment of In-Combination Effects

- 14.45 Cumulative Projects identified for the assessment of in-combination effects are detailed in **Table 14.1** and shown on **Figure 14.1**. The assessment of in-combination effects is set out below on a topic by topic basis.

Townscape and Visual

- 14.46 There are only common receptors with the receptors assessed in **Chapter 6: Townscape and Visual** and Cumulative Projects 2 – 12. The only common receptor is the Local Townscape Character Area 1 – Universities Area (LTCA1). There would be a direct change to the character of LTCA1 as a result of the relevant Cumulative Projects. However, due to intervening features in the townscape and distance from the Site (as the LTCA covers a wider area), the Cumulative Projects would not be experienced in combination with the more localised effects of the Proposed Scheme. There would be no change to the level of effect or significance determined for the Proposed Scheme in isolation.

Built Heritage

- 14.47 Based on a review of technical reporting, only Cumulative Projects 1, 5 and 9 share common receptors with the Proposed Scheme. Technical assessments for these projects conclude no significant effects, as the built-up urban context is well established and setting is not a major contributor to the heritage significance of the identified listed buildings

- 14.48 The Proposed Scheme is closer to the receptors and therefore exerts a greater influence, with effects assessed as negligible to minor adverse and not significant (see **Chapter 7: Built Heritage**).
- 14.49 When considering all relevant Cumulative Projects, there is no in-combination effect greater than that of the Proposed Scheme alone. The Cumulative Projects would result in limited changes to the setting of heritage assets and reinforce the existing urban character. Any in-combination effects are primarily driven by the Proposed Scheme due to its proximity to the receptors.

Wind

- 14.50 Cumulative Projects that include massing changes and fully lie within a 500m radius of the centre of the Site have been considered in the assessment of the cumulative effects. Cumulative Projects beyond this radius are considered to be too far to have meaningful impact on wind conditions on the Site. A model with the selected Cumulative Projects was modelled using the same CFD methodology as the rest of the scenarios in **Chapter 8: Wind Microclimate**. The comfort and safety results are shown in the associated **Figures 8.17 - 8.20**. These show similar conditions to those modelled around the Proposed Scheme in existing surroundings. Therefore, the in-combination effects with the cumulative surroundings are the same as those reported in the **Chapter 8: Wind Microclimate** for the Proposed Scheme in existing surroundings, which are not significant.

Daylight, Sunlight and Overshadowing

- 14.51 None of the Cumulative Projects are located close enough to the Site to influence that daylight sunlight and overshadowing effect of the Proposed Scheme. The nearest Cumulative Project is located at All Saints Park (Cumulative Project 1) which is 75m to the east of the Site and will not contain any significant massing. With regards to other nearby Cumulative Projects, the development at the Former Gamecock PH (Cumulative Project 2) is a part 7, part 9 storey PBSA building around 200m to the southwest of the Site. This development will not be fully visible from the neighbouring sensitive receptors tested and is located too far away to cast any additional shadow over the amenity spaces tested or increase the daylight and sunlight effects of the Proposed Scheme.
- 14.52 The remaining Cumulative Project located within 400m of the Site are all located over 250m to the north across Mancunian Way. Due to the distance away and orientation to the Site, all Cumulative Projects will not be visible from the sensitive receptors tested and will not increase the daylight and sunlight effects. These Cumulative Projects will also not cast any additional overshadowing to the amenity areas tested as they are located to the north and will not cast additional shadow to the south.

Climate Change

- 14.53 The atmospheric concentration of greenhouse gases (GHGs) and resulting effect on climate change is affected by all sources and sinks globally, anthropogenic and otherwise. As GHG emissions 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.

- 14.54 For example, air pollutants are dispersed and diluted after being emitted and only the cumulative contributions of other relatively nearby sources contribute materially to the pollutant concentration, and hence effect, at a particular sensitive receptor in the study area. Due to the persistence of GHGs in the atmosphere, that same dispersion effect contributes to the global atmospheric GHG emissions balance. There is no greater local climate change effect from a localised impact of GHG emission sources (or vice versa).
- 14.55 For this reason, IEMA's GHG in EIA guidance² states that effects of GHG emissions from specific cumulative projects should not in general be assessed. Instead, the contextualisation of GHG emissions from the Proposed Scheme within the context of current and future baseline GHG emissions at various specific geographical levels (i.e. local authority, region and UK) as set out in **Chapter 10: Climate Change** is inherently a cumulative assessment within that boundary.

Socio-Economics and Human Health

Construction Stage

- 14.56 The construction stage of all Cumulative Projects may overlap with the Proposed Scheme in terms of timescales. In-combination effects with the relevant construction stage receptor (labour force) are therefore likely, as outlined below:
- **Employment generated (high sensitivity):** All Cumulative Projects will generate employment in the construction sector. In-combination effects with the relevant construction stage receptor (labour force) are therefore likely as a result of employment generated. The combined magnitude of change is anticipated to be large. This cumulative beneficial effect is considered to be temporary, medium-term and major. This will exceed the level of effect (Minor) considered at the project level. The cumulative effect is **Significant**, exceeding the level of effect at the project level.

Operational Stage

- 14.57 The operational stage of all Cumulative Projects will overlap with the Proposed Scheme in terms of timescales. In-combination effects with the relevant operational stage receptors (students requiring accommodation) are therefore likely, as outlined below:
- **Provision of housing (high sensitivity):** Cumulative Projects 2, 4, 7, 9, 10, 11, 12, 14 and 23 will provide PBSA. In total, it is understood that Cumulative Projects will deliver a combined c. 5,937 PBSA bedspaces. In-combination effects with the relevant operational stage receptor (students requiring accommodation) are therefore likely as a result of the provision of PBSA. The combined magnitude of change is anticipated to be large. This cumulative beneficial effect is considered to be permanent, long-term and Major. This will be in line with the level of effect (Major) considered at the project level (albeit will be quantitatively higher). This effect is **Significant**, as it is at the project level.

Air Quality

- 14.58 **Chapter 12: Air Quality** considers the construction vehicle traffic that will attend the Site. The construction traffic data with the Proposed Scheme considers traffic growth (due to the consideration of the future year scenario rather than against the existing

baseline) and the impact of local developments on the highway network, using the TEMPro tool. As such, the air quality assessment considers a cumulative evaluation of construction traffic in **Chapter 12: Air Quality**, which is not significant. The Construction Environmental Management Plan (CEMP), as set out in **Appendix 12.1**, will set out routing, site access and programme measures agreed with the highway authority to minimise effects.

- 14.59 No operational stage effects were scoped in for assessment in **Chapter 12: Air Quality**, therefore there are no operational stage cumulative effects.

Noise and Vibration

- 14.60 There are only common receptors (residential dwellings, PBSA, educational buildings) between the Proposed Scheme and Cumulative Project 1, which is located approximately 75m east of the Site. Construction of this project is anticipated to be completed before the Proposed Scheme commences. Therefore, no overlapping construction activities are expected, and no in-combination effects are identified during the construction stage.
- 14.61 With reference to the operational stage, the planning application for Cumulative Project 1 has not been supported by a noise assessment, indicating that no frequently occurring noise-generating activities are expected. Additionally, the Proposed Scheme and Cumulative Project 1 are physically separated by Cavendish Halls (PBSA), which are common receptors. Any potentially noise-generating activities occurring simultaneously from both the Proposed Scheme and Cumulative Project 1 would affect opposite façades of this building (and be unlikely to influence the same internal receptor). Therefore, no in-combination effects are anticipated during operation.

Summary

- 14.62 The assessment of cumulative effects considered effect interactions (where more than one effect is experienced by a single receptor) and in-combination effects (where effects on a receptor may combine with those of other projects in the locale).

Effect Interactions

- 14.63 The assessment of effect interactions, which considers multiple effects generated by the Proposed Scheme impacting upon the same receptor, identified that effect interactions would be experienced by the 'population and human health' factors / receptor groups for the construction and operational stages.
- 14.64 At the construction stage, the potential effect interactions are in relation to the adverse effect of reduced daylight and sunlight amenity and overshadowing (albeit this is most likely when the full massing is implemented towards the end of the construction period); the beneficial effect of employment generated (in Manchester and Greater Manchester) and the adverse effects from noise and vibration (from construction activities and traffic). Overall, the effect interaction during the construction stage is likely to be greater than each effect individually but not considered to be significant due to the different spatial scales at which the effects will be felt, the temporal scope of the effects and that the construction stage effects are temporary.

- 14.65 During the operational stage of the Proposed Scheme, there is also a possible effect interaction in relation to the adverse effects of reduced daylight and sunlight amenity and increased overshadowing; noise disturbance and change in visual amenity (for one receptor); and beneficial effects from provision of PBSA and change in visual amenity (one receptor, with another receptor being reported as neutral). The interactions on future receptors (i.e. future users of the PBSA) are not considered to be significant due to the types of effects interacting (i.e. beneficial effects of the provision of PBSA on a wider Manchester scale, and the adverse effect of noise that the future PBSA receptors would experience, which is not significant). The interactions on existing sensitive receptors are likely to be greater than the effects individually, which are perceived to be significant (with some of the effects individually being significant). This is due to the permanent nature of the effects and the overlap in receptors which may experience reduced daylight and sunlight; increased noise and changed visual amenity all concurrently.

In-Combination Effects

- 14.66 The assessment of in-combination effects considered 26 Cumulative Projects on a technical topic by topic basis (i.e. **Technical Chapters 6 – 13**).
- 14.67 A summary of the evaluation of in-combination effects is provided within **Table 14.4**.
- 14.68 Where a greater in-combination effect is identified and is considered to be Significant, this has been highlighted in **grey**.

Table 14.4: Summary of In-Combination Effects

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Townscape and visual	Due to intervening features in the townscape and distance from the Site, the Cumulative Projects would not be experienced in combination with the Proposed Scheme in the Local Townscape Character Area – ‘Universities Area’. Therefore there is no in-combination effect greater than for the Proposed Scheme in isolation.
Built Heritage	There are only common receptors between the Proposed Scheme and Cumulative Projects 3, 5 and 9. In-combination effects are not greater than for the Proposed Scheme in isolation (which are not significant) due the projects being experienced as a continuation of the varied, urban context of the common receptors.
Wind	The Cumulative Projects within a 500m radius were modelled with the Proposed Scheme. Results showed similar conditions to those modelled around the Proposed Scheme in existing surroundings. Therefore the in-combination effects with the cumulative surroundings are the same as those for the Proposed Scheme in isolation, which are not significant.

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Daylight, Sunlight and Overshadowing	None of the Cumulative Projects are located close enough to the Site to influence the daylight, sunlight and overshadowing effect of the Proposed Scheme.
Climate Change	All global cumulative GHG sources are relevant to the effect on climate change, which is taken into account when defining the global climatic system receptor as being of high sensitivity to further emissions in Chapter 10: Climate Change. Therefore, the cumulative effect remains as reported in Chapter 10: Climate Change, which is not significant.
Socio-Economics and Human Health	All Cumulative Projects will generate employment in the construction sector. This will exceed the level of effect considered at the project level and result in a significant cumulative effect. Cumulative Projects 2, 4, 7, 9, 10, 11, 12, 14 and 23 will provide PBSA. This will result in a cumulative effect quantitatively greater than at the project level (albeit the level of effect remains the same), which is significant.
Air Quality	Chapter 12: Air Quality considers the construction vehicle traffic that will attend Site. The construction traffic data with the Proposed Scheme considers traffic growth and the impact of local developments on the highway network, using the TEMPro tool. As such, the air quality assessment considers a cumulative evaluation of construction traffic in Chapter 12: Air Quality , which is not significant
Noise and Vibration	There are only common receptors with Cumulative Project 1. Construction of this project will have finished in advance of the Proposed Scheme, therefore there is no construction stage cumulative effect. During operation, the Proposed Scheme and Cumulative Project 1 are physically separated by Cavendish Halls (PBSA), which are common receptors. Any potentially noise-generating activities occurring simultaneously from both the Proposed Scheme and Cumulative Project 1 would affect opposite façades of this building. No in-combination effects are anticipated.

References

¹ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government (2020). Planning Practice Guidance – Environmental Impact Assessment. Available at: [Environmental Impact Assessment - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/planning-practice-guidance-environmental-impact-assessment) [Accessed: 13/03/2025].

² IEMA (2022). EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance

15. Summary

Introduction

- 15.1 The purpose of this Chapter is to provide a summary of the outcome of the assessments reported within **Technical Chapters 6 – 13**, focussing on the following key objectives:
- Provide a summary of residual effects and conclude if these are significant or not; and
 - Provide a summary of the assessment of cumulative effects, including how they differ from previously identified effects and again conclude if these are significant or not.
- 15.2 Through delivering these objectives, MCC should have sufficient information on environmental impacts to inform their decision-making process.
- 15.3 The residual effects defined within this Chapter rely upon the implementation of the mitigation set out within **Volume 3: Environmental Management Plan**. This is critical as the project team have developed detailed mitigation in order to avoid, resolve or off-set impacts. Without the implementation of **Volume 3: Environmental Management Plan**, the conclusions of the ES may change.

Summary of Residual and Significant Effects

- 15.4 A consolidated summary of the outputs of the assessment (i.e. residual effects and the judgement on significance) for both the construction and operation stages are set out within **Table 15.1** and **Table 15.2**, respectively.
- 15.5 Where effects were identified to be significant, this is indicated by the text being in **bold**, highlighted in grey, and is in red (adverse), green (beneficial), blue (neutral^a) or in automatic / normal text (negligible).
- 15.6 Where Technical Chapters have identified individual level of effects for specific sensitive receptors for an assessed effect, each level of significance concluded has been stated in **Table 15.1** and **Table 15.2** and the greatest level of impact has been considered when considering the effects as a whole (i.e. to all receptors).

^a Within the Townscape and Visual Assessment, 'neutral' is a term used to describe an effect that is both adverse and beneficial.

Table 15.1: Summary of Residual Effects and Significant Effects During Construction

Technical Chapter	Potential Effect	Receptor	Residual Effect
Chapter 6: Townscape and Visual	No construction stage effects scoped in for assessment.		
Chapter 7: Built Heritage	Change within the setting of a designated heritage asset	Former Manchester Ear Hospital	Minor adverse
		Roman Catholic Church of St Augustine	
		Ormond Building	
		Righton Building	
		Grosvenor Building	
		Former Town Hall Façade to Mabel Tylecote Building	
	Change within the setting of a non-designated heritage asset	Salutation Public House	Negligible adverse
Chapter 8: Wind	No construction stage effects scoped in for assessment. The operational stage effects summarised in Table 15.2 are considered to represent the worst case construction stage effects.		
Chapter 9: Daylight, Sunlight, and Overshadowing	No construction stage effects scoped in for assessment. The operational stage effects summarised in Table 15.2 are considered to represent the worst case construction stage effects.		
Chapter 10: Climate Change	Greenhouse gas emissions	Global climate system	Minor adverse
Chapter 11: Socio-Economics and Human Health	Employment generated during construction	Labour force	Minor beneficial

Technical Chapter	Potential Effect	Receptor	Residual Effect
Chapter 12: Air Quality	Changes to pollutant concentrations resulting from construction traffic generated by the Proposed Scheme	Existing and proposed sensitive receptors close to roads affected by changes in traffic flows. Existing sensitive receptors include; four residential properties, New Medlock House Student Halls, Cambridge House Student Halls, Faculty of Business and Law, Element Manchester Student Halls, Manchester House Student Halls, Opal Hall Student Halls, Faculty of Science and Engineering, Student Union, Cavendish Student Halls, School of Digital Arts, Manchester Law Building, and Institute of Sport Building.	Negligible
Chapter 13: Noise and Vibration	Noise disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Minor to moderate adverse
	Vibration disturbance from demolition and construction activities	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Minor to moderate adverse
	Noise disturbance from increased road traffic	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and	Negligible to minor adverse

Technical Chapter	Potential Effect	Receptor	Residual Effect
		Manchester Metropolitan University educational buildings	

Table 15.2: Summary of Residual Effects and their Significance During Operation

Technical Chapter	Potential Effect	Receptor	Residual Effect
Chapter 6: Townscape and Visual	Changes to local townscape character	Local Townscape Character Area 1 – Universities Area	Moderate beneficial
	Changes to visual amenity	1. ^b Open Space Users in All Saints Park	Moderate – major neutral
		10. Users of the tertiary roads within close proximity to the Site including (Lower Chatham Street, Cavendish St and Boundary Street W)	Moderate – major beneficial
		11. Residents of the Student Accommodation located adjacent the western Site boundary	Moderate adverse
Chapter 7: Built Heritage	Change within the setting of a designated heritage asset	Former Manchester Ear Hospital	Minor adverse
		Roman Catholic Church of St Augustine	
		Ormond Building	
		Righton Building	
		Grosvenor Building	Negligible adverse

^b Numbering relates to the receptor numbers as identified in **Appendix 6.1: Townscape and Visual Impact Assessment**.

Technical Chapter	Potential Effect	Receptor	Residual Effect
		Former Town Hall Façade to Mabel Tylecote Building	
	Change within the setting of a non-designated heritage asset	Salutation Public House	Negligible beneficial
Chapter 8: Wind	Altered wind comfort conditions	Users of main entrances at ground level and level 01	Negligible
		Users of secondary entrances	
		Users of thoroughfares at ground level and level 01	
		Users of main entrances on level 07 podium	
		Users of recreational/fair-weather leisure space on level 07 podium	
	Altered wind safety conditions	Users of main entrances, secondary entrances, thoroughfares, and recreational/fair-weather leisure space on all levels	Negligible
Chapter 9: Daylight, Sunlight, and Overshadowing	Reduced daylight amenity	Cavendish Hall Residence	Major adverse
		Needham Court	Major adverse
		Victoria Hall	Minor adverse
		Manchester House	Moderate adverse
		44 Cavendish Street	Negligible

Technical Chapter	Potential Effect	Receptor	Residual Effect
		2-28 Dalesman Walk	Negligible
		84 Cambridge Street	Moderate adverse
		Cambridge House	Major adverse
		2-12 Elmdale Walk	Negligible
		2-12 Broomwood Walk	Negligible
		2-12 Matham Walk	Minor adverse
		2-24 Knowles Place	Negligible
		60-70 Loxford Street	Negligible
	Reduced sunlight amenity	Cavendish Hall Residence	Negligible
		Needham Court	Negligible
		Victoria Hall	Negligible
		Manchester House	Negligible
		44 Cavendish Street	Negligible
		2-28 Dalesman Walk	Negligible
		84 Cambridge Street	Negligible
		Cambridge House	Moderate adverse
		2-12 Elmdale Walk	Negligible
		2-12 Broomwood Walk	Negligible

Technical Chapter	Potential Effect	Receptor	Residual Effect
	Increased overshadowing	2-12 Matham Walk	Negligible
		2-24 Knowles Place	Negligible
		60-70 Loxford Street	Negligible
		Loxford Gardens	Negligible
		Manchester Metropolitan Uni	Moderate adverse
		Cavendish Hall of Residence	Negligible
Chapter 10: Climate Change	Greenhouse gas emissions	Global climate system	Minor adverse
Chapter 11: Socio-Economics and Human Health	Provision of PBSA	Students requiring accommodation	Major beneficial
Chapter 12: Air Quality	No operational stage effects scoped in for assessment.		
Chapter 13: Noise and Vibration	Noise disturbance from proposed servicing areas and building services plant	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Negligible adverse
	Noise disturbance from other proposed uses (e.g., retail, community uses, sports provision, amenity space)	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings, and Future users of the Proposed Scheme	Negligible to minor adverse

Technical Chapter	Potential Effect	Receptor	Residual Effect
	Noise disturbance from increased road traffic	Residential dwellings, existing Purpose-Built Student Accommodation (PBSA) residences along Cambridge Street (A5067) and Manchester Metropolitan University educational buildings	Negligible to minor adverse
	Disturbance from existing environmental noise	Future users of the Proposed Scheme	Negligible to moderate adverse

15.7 A summary of the technical topics is provided in the table below where:

- No significant effects were identified – denoted by ✕;
- Significant adverse effects were identified – denoted by ✓;
- Significant beneficial effects were identified – denoted by ✓; and
- A mixture of significant adverse and beneficial effects were identified – denoted by ✓.

Technical topic	Significant effects?
Townscape and Visual	✓
Built Heritage	✕
Wind	✕
Daylight, Sunlight, and Overshadowing	✓
Climate Change	✕
Socio-Economics and Human Health	✓
Air Quality	✕
Noise and Vibration	✕

Summary of Cumulative Effects Assessment

15.8 An assessment of cumulative effects has been completed within **Chapter 14: Assessment of Cumulative Effects**. The assessment considered the two most common types of cumulative effect; effect interactions and in-combination cumulative effects. A summary of the outputs of the assessment for each type of cumulative effect is set out below.

Effect Interactions

- 15.9 The assessment of effect interactions, which considers multiple effects generated by the Proposed Scheme impacting upon the same receptor, identified that effect interactions would be experienced by the 'population and human health' factors / receptor groups for the construction and operational stages.
- 15.10 At the construction stage, the potential effect interactions are in relation to the adverse effect of reduced daylight and sunlight amenity and overshadowing (albeit this is most likely when the full massing is implemented towards then end of the construction period); the beneficial effect of employment generated (in Manchester and Greater Manchester) and the adverse effects from noise and vibration (from construction activities and traffic). Overall, the effect interaction during the construction stage is likely to be greater than each effect individually but not considered to be significant due to the different spatial scales at which the effects will be felt, the temporal scope of the effects and that the construction stage effects are temporary.
- 15.11 During the operational stage of the Proposed Scheme, there is also a possible effect interaction in relation to the adverse effects of reduced daylight and sunlight amenity and increased overshadowing; noise disturbance and change in visual amenity (for one receptor);

and beneficial effects from provision of PBSA and change in visual amenity (one receptor, with another receptor being reported as neutral). The interactions on future receptors (i.e. future users of the PBSA) are not considered to be significant due to the types of effects interacting (i.e. beneficial effects of the provision of PBSA on a wider Manchester scale, and the adverse effect of noise that the future PBSA receptors would experience, which is not significant). The interactions on existing sensitive receptors are likely to be greater than the effects individually, which are perceived to be significant (with some of the effects individually being significant). This is due to the permanent nature of the effects and the overlap in receptors which may experience reduced daylight and sunlight; increased noise and changed visual amenity all concurrently.

In-Combination Effects

- 15.12 The assessment of in-combination effects considered 26 Cumulative Projects on a technical topic by topic basis (i.e. **Technical Chapters 6 – 13**).
- 15.13 A summary of the evaluation of in-combination effects is provided within **Table 15.3**.
- 15.14 Where a greater in-combination effect is identified and is considered to be Significant, this has been highlighted in grey.

Table 15.3: Summary of In-Combination Effects

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Townscape and visual	Due to intervening features in the townscape and distance from the Site, the Cumulative Projects would not be experienced in combination with the Proposed Scheme in the Local Townscape Character Area – ‘Universities Area’. Therefore there is no in-combination effect greater than for the Proposed Scheme in isolation.
Built Heritage	There are only common receptors between the Proposed Scheme and Cumulative Projects 3, 5 and 9. In-combination effects are not greater than for the Proposed Scheme in isolation (which are not significant) due the projects being experienced as a continuation of the varied, urban context of the common receptors.
Wind	The Cumulative Projects within a 500m radius were modelled with the Proposed Scheme. Results showed similar conditions to those modelled around the Proposed Scheme in existing surroundings. Therefore the in-combination effects with the cumulative surroundings are the same as those for the Proposed Scheme in isolation, which are not significant.
Daylight, Sunlight and Overshadowing	None of the Cumulative Projects are located close enough to the Site to influence the daylight, sunlight and overshadowing effect of the Proposed Scheme.
Climate Change	All global cumulative GHG sources are relevant to the effect on climate change, which is taken into account when defining

Technical Topic	Summary of In-Combination Effects with Relevant Projects
	the global climatic system receptor as being of high sensitivity to further emissions in Chapter 10: Climate Change. Therefore, the cumulative effect remains as reported in Chapter 10: Climate Change, which is not significant.
Socio-Economics and Human Health	All Cumulative Projects will generate employment in the construction sector. This will exceed the level of effect considered at the project level and result in a significant cumulative effect. Cumulative Projects 2, 4, 7, 9, 10, 11, 12, 14 and 23 will provide PBSA. This will result in a cumulative effect quantitatively greater than at the project level (albeit the level of effect remains the same), which is significant.
Air Quality	Chapter 12: Air Quality considers the construction vehicle traffic that will attend Site. The construction traffic data with the Proposed Scheme considers traffic growth and the impact of local developments on the highway network, using the TEMPro tool. As such, the air quality assessment considers a cumulative evaluation of construction traffic in Chapter 12: Air Quality, which is not significant
Noise and Vibration	There are only common receptors with Cumulative Project 1. Construction of this project will have finished in advance of the Proposed Scheme, therefore there is no construction stage cumulative effect. During operation, the Proposed Scheme and Cumulative Project 1 are physically separated by Cavendish Halls (PBSA), which are common receptors. Any potentially noise-generating activities occurring simultaneously from both the Proposed Scheme and Cumulative Project 1 would affect opposite façades of this building. No in-combination effects are anticipated.