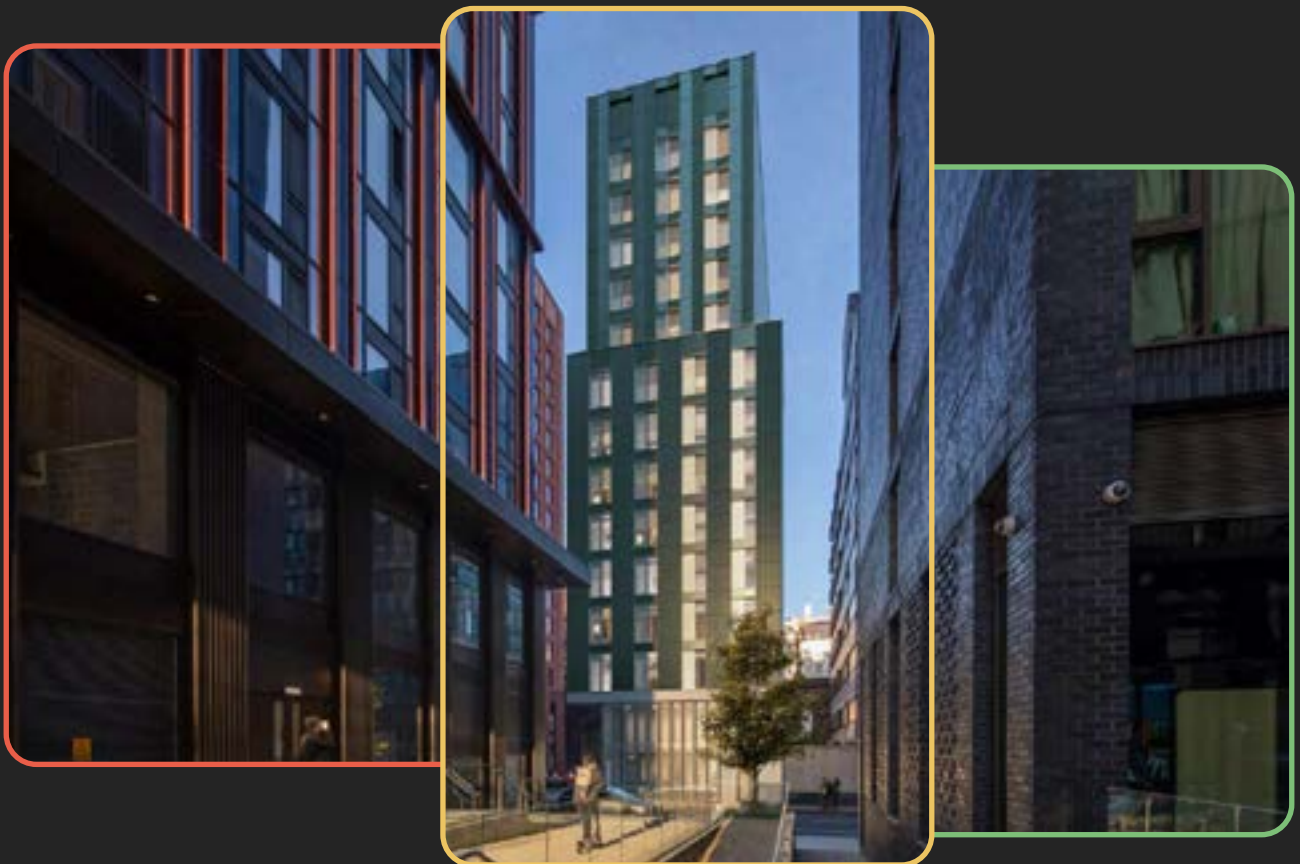


Charles Street

Environmental Statement Volume 1:

Primary Report and
Supporting Graphics



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 Jadebricks Manchester Limited (hereafter referred to as the 'Applicant') for a purpose built student accommodation (PBSA) development (hereafter referred to as the 'Proposed Scheme'). The Proposed Scheme is for up to 100 purpose built student accommodation units (Use Class Sui Generis).

1.2 The Proposed Scheme will be delivered on an approximately 0.04 hectare (ha) site, which is currently being used as a construction compound (hereafter referred to as the 'Site') (as defined on **Figure 1.1: Site Location Plan**). The Site is bound by a commercial garage (DC Motor Engineers) beyond which is a raised railway viaduct to the north; Bracken House to the east; Charles Street to the south; and York Street to the west.

1.3 Turley are commissioned by the Applicant to undertake an Environmental Impact Assessment (EIA) and subsequent ES for the Application, with the support of a competent project team (as set out in **Table 1.2**). The ES reports the assessment of likely significant effects of the construction and operation of the Proposed Scheme. For the purpose of planning permission, the Proposed Scheme is defined as:

"Full planning permission for the erection of 15-storey purpose-built student accommodation building, including site preparation works, works over the public highway and associated works."

1.4 Further details of the Proposed Scheme are set out within **Chapter 4: Development Specification**.

1.5 This ES is one of the documents submitted in support of the Application and has the status of a material consideration during the determination of the Application¹ by Manchester City Council (MCC), who are the determining authority. The ES is the output of the EIA process undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (SI2017/571)² (hereafter referred to as the 'EIA Regulations').

1.6 The remainder of this Chapter is structured as follows:

- Definition of EIA;
- Legal Framework for the EIA;
- Planning Context;
- The Project Team and Their Roles;
- Application Reports and Plans;
- Structure of the ES; and

- Availability of the ES.

Definition of EIA

- 1.7 The term 'EIA' has the meaning given by Regulation 4 of the EIA Regulations, as "*a process consisting of-*
- (a) the preparation of an environmental statement;*
 - (b) any consultation, 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)".*
- 1.8 Under Regulation 4(2), the 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;*
 - (e) the interaction between the factors referred to in sub-paragraphs (a) to (d)."*
- 1.9 The aim of EIA, as defined by online national Planning Practice Guidance (PPG)³ 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".*

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 project listed within Schedule 1 of the EIA Regulations. Following an appraisal against Schedule 2 of the EIA Regulations, the Proposed Scheme is considered to fall below the thresholds of Schedule 2, 10(b)(ii): ‘urban development projects’.
- 1.12 The threshold/criteria does 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*”, normally presented within an EIA Screening Report and submitted to the determining authority for their opinion. An EIA Screening Report was intended to be undertaken; however, through consultation with MCC, the need for an EIA was established to support the Application with regards to concerns regarding potentially significant effects on daylight, sunlight and overshadowing and air quality. Further details are provided in **Chapter 2: Approach to EIA and Consideration of Alternatives**.

Stage 2: EIA Scoping

- 1.13 As set out within Paragraph 036 of PPG, there is no legal requirement for the Applicant to consult with or seek a formal scoping opinion from MCC. Instead, the scope of the ES has been informed by advice received from the Applicant’s consultant team, pre-application engagement with MCC as well as an internal scoping process completed by the project team. Ultimately it was determined that a single technical topic was scoped into the Environmental Statement, requiring further assessment. Further details are provided in **Chapter 2: Approach to EIA and Consideration of Alternatives**.

Stage 3: Environmental Statement

- 1.14 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 and Consideration of Alternatives, Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing**.
- 1.15 **Table 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.

Table 1.1: Required information, as Specified by the EIA Regulations, and its Location within the ES

Regulation 18	Schedule 4	Location within this ES
(3) an environmental statement is a statement which includes at least - (a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development.	(1) A description of the development, including in particular: (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational stages; (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.	Chapter 3: Site Context, Chapter 4: Development Specification; Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant.
(3)(b) a description of the likely significant effects of the proposed development on the environment.	(5) a description of the likely significant effects of the development on the environment resulting from, inter alia: (a) the construction and existence of the development, including, where relevant, demolition works; (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; (c) the emissions of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste; (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;	Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant and Chapter 7: Assessment of Cumulative Effects.

Regulation 18	Schedule 4	Location within this ES
	(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; and (g) the technologies and the substances used. The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effect and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC and Directive 2009/147/EC.	
(3)(c) a description of any features of the proposed development, or measure envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.	(7) a description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational stages.	Chapter 4: Development Specification, Chapter 5: Air Quality Evaluation, Chapter 6: Daylight, Sunlight and Overshadowing where relevant and Chapter 7: Assessment of Cumulative Effects.
(3)(d) a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the	(2) a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 2: Approach to EIA and Consideration of Alternatives.

Regulation 18	Schedule 4	Location within this ES
development on the environment.		
(3)(e) a non-technical summary of the information referred to in sub-paragraph (a) to (d).	(9) a non-technical summary of the information provided under paragraphs 1 to 8.	Volume 4: Non-Technical Summary.
(4) an environmental statement – must— (a) where a scoping opinion or direction has been issued in accordance with regulation 15 or 16, be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction¹); (b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and		Chapter 2: Approach to EIA and Consideration of Alternatives, Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant.

¹ This is further discussed in **Chapter 2: Approach to the EIA**.

Regulation 18	Schedule 4	Location within this ES
(c) be prepared, taking into account the results of any relevant UK environmental assessment, which are reasonably available to the person preparing the environmental statement, with a view to avoiding duplication of assessment.		
(5) In order to ensure the completeness and quality of the environmental statement -	–	Chapter 1: Introduction
(a) the developer must ensure that the environmental statement is prepared by competent experts; and		
(b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.		
–	(3) a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 3: Site Context, Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.

Regulation 18	Schedule 4	Location within this ES
–	(4) a description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	Chapter 3: Site Context, Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
–	(6) a description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the new required information and the main uncertainties involved.	Chapter 2: Approach to EIA and Consideration of Alternatives, Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
–	(8) a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the details of preparedness for and proposed response to such emergencies.	Chapter 2: Approach to EIA and Consideration of Alternatives; Chapter 5: Air Quality Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
	(10) a reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Chapters 1 – 7 (at the end of each Chapter with references made throughout).

Competent Expertise

- 1.16 Regulation 18, Paragraph 5(a) of the EIA Regulations requires the ES to be prepared by competent experts.
- 1.17 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.
- 1.18 All technical assessment has been undertaken by a suitably qualified project team, inclusive of a thorough technical review to assure technical credibility, followed by a subsequent procedural review by the EIA coordination team and EIA Project Director.



Planning Context

- 1.19 The EIA Regulations do not require the ES to assess planning policy or guidance with respect to the Proposed Scheme. The **Planning Statement**, which accompanies the Application, examines the merits of the Proposed Scheme against the relevant national, regional and local planning policy context.
- 1.20 Where planning policy has informed assessments, this has been clearly referenced within **Technical Chapter 6**.

The Project Team and Their Roles

- 1.21 Turley have been responsible for the coordination of the ES in conjunction with a full project team. The full project team are identified within **Table 1.2**.

Table 1.2: Project Team

Team Member	Role
Jadebricks Manchester Limited	Applicant
Simpson Haugh	Architect
Gardiner & Theobald	Project Manager and Quantity Surveyor
DP Squared Ltd	Structural Engineers
Caldwell Consulting / BPP Energy	MEP, BREEAM, Vertical Transportation
OFR Consultants	Fire Engineer
Project Four	Principal Designer / CDM Advisor
GTech Surveys	TV and Radio and Reception
Horus	Security Consultant
Turley	Planning, EIA, Strategic Communications, Socio-Economics, Heritage and Townscape and Visual.
Curtins	Transport and Access consultants

Team Member	Role
Hann Tucker Associates	Noise and Vibration consultants
GIA	Daylight, Sunlight and Overshadowing and wind consultants
E3P	Biodiversity consultants
Oxford Archaeology	Archaeology consultants
Miller Goodall	Air Quality
DP Squared	Drainage and Flood Risk
GeoAssist	Ground Conditions and Contamination consultants

Application Reports and Plans

- 1.22 As stated, the ES is one of the supporting documents submitted in support of the Application. For a full list of documents and plans and their planning status (i.e. for approval or supporting information) please refer to the **Planning Application Cover Letter**.
- 1.23 Those application plans and reports that have been used to inform this ES, in terms of baseline, assessment or secondary mitigation, are detailed below. Reference to these is clearly identified and signposted throughout the ES. All information for the assessment within the ES is provided as part of the ES.
- 1.24 In addition, we have set out other application reports submitted that do not inform the ES but provide additional detail for information purposes.

Plans

- 1.25 The ES has been based on the detailed plans which are submitted for approval as part of the Application.
- 1.26 The detailed plans have informed the ES and are presented as part of **Chapter 4: Development Specification**.

Application Reports

- 1.27 The following reports are appended to the ES in **Volume 2: Technical Appendices**:
- **Appendix 5.1: Construction Dust Assessment;**
 - **Appendix 6.1: Drawings,**
 - **Appendix 6.2: Daylight and Sunlight Results; and**
 - **Appendix 6.3: Overshadowing results**
- 1.28 The above document technically informs the evidence within the ES.
- 1.29 There are a number of other documents which provide a greater level of detail on how the Proposed Scheme is likely to come forward, how the Proposed Scheme complies with policy

or provide assessments for technical topics for which no likely significant effects are considered to arise. Where information from these documents has informed 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 so they do not feature in the ES. These documents are therefore submitted as standalone Application Reports:

- Archaeological Desk Based Assessment;
- Crime Impact Statement;
- Design and Access Statement;
- Socio-economic Regeneration Impact Statement;
- Flood Risk Assessment and Drainage Strategy;
- Whole Life Carbon Assessment and Circular Economy Statement;
- Energy and Sustainability Statement;
- BREEAM Pre-Assessment Report;
- Fire Statement;
- Heritage Statement;
- Environmental Noise Survey and Noise Impact Assessment Report;
- Construction Noise and Vibration Assessment;
- Train Induced Vibration Assessment Report;
- Phase 1 Desk Study and Preliminary Contaminated Land Risk Assessment;
- PBSA Needs Assessment;
- Preliminary Ecological Appraisal;
- Planning and Tall Building Statement;
- Statement of Community Engagement;
- Townscape and Visual Impact Assessment;
- Neighbour Interface Statement;
- Piling Methodology;
- Transport Statement;
- Interim Travel Plan;

- TV Reception Survey;
- Broadband Connectivity Assessment;
- Ventilation Design Strategy;
- Wind Microclimate Assessment Report; and
- Construction Environmental Management Plan (CEMP).

Structure of the ES

1.30 The ES is provided in four parts:

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

1.31 **Volume 1: Primary Report and Supporting Graphics** provides the main text of the ES which is divided into 'Chapters' which are supported by a series of figures and technical appendices as required (see **Volume 2: Technical Appendices** below).

1.32 The structure of **Volume 1: Primary Report and Supporting Graphics** is outlined in **Table 1.3**.

Table 1.3: Structure of Volume 1: Primary Report and Supporting Graphics

Chapter No.	Chapter Title	Description of Content
1	Introduction	Introduction to the ES, including definitions of EIA, legal procedure and requirements of EIA and setting out the structure of the ES.
2	Approach to EIA and Consideration of Alternatives	Description of the overall method adopted through the EIA process and presented within the ES, including justification for the scope of the ES and the assessment criteria for determining sensitivity, magnitude, level of effect and significance, alongside adherence to best practice guidance. Outline of the main alternatives considered by the Applicant as required by Schedule 4 of the EIA Regulations.
3	Site Context	Overview of the location of the Site, and the sensitive receptors for assessment within this ES.
4	Development Specification	Comprehensive description of all elements of the Proposed Scheme including its physical characteristics across the construction and operational stages. It is this description which has

Chapter No.	Chapter Title	Description of Content
		informed the assessment undertaken as part of the EIA. This description is inclusive of committed primary and tertiary mitigation considered in Chapter 6: Daylight, Sunlight and Overshadowing .
5	Air Quality Evaluation	Presentation of evidence base for the evaluation of potentially significant effects arising from the Proposed Scheme.
6	Daylight, Sunlight, and Overshadowing	Presentation of assessment of likely significant effects arising from the Proposed Scheme and secondary mitigation required to avoid, offset or reduce anticipated adverse effects or improve beneficial effects.
7	Assessment of Cumulative Effects	Provides a single and comprehensive assessment of cumulative effects, including effect interactions and in-combination effects.

- 1.33 **Volume 2: Technical Appendices** encompasses the technical reports which have informed the technical assessments presented in Volume 1: Primary Report and Supporting Graphics. The full suite of technical appendices is listed in the Environmental Statement Contents Page.
- 1.34 **Volume 3: Environmental Management Plan** provides a schedule of the mitigation committed to throughout the ES. This acts as the checklist for all mitigation which is required to be implemented as part of the approved plans and planning conditions (or other appropriate mechanism) and acts as an Environmental Management Plan (EMP) which can be updated throughout subsequent stages of the project.
- 1.35 **Volume 4: Non-Technical Summary** provides a summary of the ES in non-technical language to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

Availability of the ES

- 1.36 The Application will be submitted as digital copy to MCC. All documentation, including the ES will be published on the MCC website for viewing and downloading.
- 1.37 A digital file can be requested for £15, via the following contact details:

Turley EIA Team

EIA Team
1 New York St
Manchester
M1 4HD

Tel: 0161 233 7676

- 1.38 During the determination of the Application, members of the public may view and comment on the Application via MCC, either in writing or through the MCC Public Access website. Comments can be sent via the following contact details:

Manchester City Council

Town Hall Extension
Albert Square
Manchester
M2 5DB
Tel: 0161 234 4490

References

¹ The Town and Country Planning Act 1990. Available at:

<http://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed: 10/11/2023].

² The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) Statutory Instrument 2017/517. Available at:

<http://www.legislation.gov.uk/uksi/2017/571/contents> [Accessed: 10/11/2023].

³ 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> [Accessed: 10/11/2023].

Regulation 18	Schedule 4	Location within this ES
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OFR Consultants	Fire Engineer
Project Four	Principal Designer / CDM Advisor
GTech Surveys	TV and Radio and Reception
Horus	Security Consultant
Turley	Planning, EIA, Strategic Communications, Socio-Economics, Heritage and Townscape and Visual.
Curtins	Transport and Access consultants

Team Member	Role
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- Train Induced Vibration Assessment Report;
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- Statement of Community Engagement;
- Townscape and Visual Impact Assessment;
- Neighbour Interface Statement;
- Piling Methodology;
- Transport Statement;
- Interim Travel Plan;

- TV Reception Survey;
- Broadband Connectivity Assessment;
- Ventilation Design Strategy;
- Wind Microclimate Assessment Report; and
- Construction Environmental Management Plan (CEMP).

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- **Volume 2: Technical Appendices;**
- **Volume 3: Environmental Management Plan; and**
- **Volume 4: Non-Technical Summary.**

1.31 **Volume 1: Primary Report and Supporting Graphics** provides the main text of the ES which is divided into 'Chapters' which are supported by a series of figures and technical appendices as required (see **Volume 2: Technical Appendices** below).

1.32 The structure of **Volume 1: Primary Report and Supporting Graphics** is outlined in **Table 1.3**.

Table 1.3: Structure of Volume 1: Primary Report and Supporting Graphics

Chapter No.	Chapter Title	Description of Content
1	Introduction	Introduction to the ES, including definitions of EIA, legal procedure and requirements of EIA and setting out the structure of the ES.
2	Approach to EIA and Consideration of Alternatives	Description of the overall method adopted through the EIA process and presented within the ES, including justification for the scope of the ES and the assessment criteria for determining sensitivity, magnitude, level of effect and significance, alongside adherence to best practice guidance. Outline of the main alternatives considered by the Applicant as required by Schedule 4 of the EIA Regulations.
3	Site Context	Overview of the location of the Site, and the sensitive receptors for assessment within this ES.
4	Development Specification	Comprehensive description of all elements of the Proposed Scheme including its physical characteristics across the construction and operational stages. It is this description which has

Chapter No.	Chapter Title	Description of Content
		informed the assessment undertaken as part of the EIA. This description is inclusive of committed primary and tertiary mitigation considered in Chapter 6: Daylight, Sunlight and Overshadowing .
5	Air Quality Screening Evaluation	Presentation of evidence base for the evaluation of potentially significant effects arising from the Proposed Scheme.
6	Daylight, Sunlight, and Overshadowing	Presentation of assessment of likely significant effects arising from the Proposed Scheme and secondary mitigation required to avoid, offset or reduce anticipated adverse effects or improve beneficial effects.
7	Assessment of Cumulative Effects	Provides a single and comprehensive assessment of cumulative effects, including effect interactions and in-combination effects.

- 1.33 **Volume 2: Technical Appendices** encompasses the technical reports which have informed the technical assessments presented in Volume 1: Primary Report and Supporting Graphics. The full suite of technical appendices is listed in the Environmental Statement Contents Page.
- 1.34 **Volume 3: Environmental Management Plan** provides a schedule of the mitigation committed to throughout the ES. This acts as the checklist for all mitigation which is required to be implemented as part of the approved plans and planning conditions (or other appropriate mechanism) and acts as an Environmental Management Plan (EMP) which can be updated throughout subsequent stages of the project.
- 1.35 **Volume 4: Non-Technical Summary** provides a summary of the ES in non-technical language to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

Availability of the ES

- 1.36 The Application will be submitted as digital copy to MCC. All documentation, including the ES will be published on the MCC website for viewing and downloading.
- 1.37 A digital file can be requested for £15, via the following contact details:

Turley EIA Team

EIA Team
1 New York St
Manchester
M1 4HD

Tel: 0161 233 7676

- 1.38 During the determination of the Application, members of the public may view and comment on the Application via MCC, either in writing or through the MCC Public Access website. Comments can be sent via the following contact details:

Manchester City Council

Town Hall Extension
Albert Square
Manchester
M2 5DB
Tel: 0161 234 4490

References

¹ The Town and Country Planning Act 1990. Available at:

<http://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed: 10/11/2023].

² The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) Statutory Instrument 2017/517. Available at:

<http://www.legislation.gov.uk/uksi/2017/571/contents> [Accessed: 10/11/2023].

³ 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> [Accessed: 10/11/2023].

2. Approach to EIA and Consideration of Alternatives

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;
 - Scope of the ES, including approach to determining scope of topics to be assessed;
 - Stakeholder engagement, summarising the level of engagement with statutory and non-statutory consultees, and other forms of engagement; and
 - Approach to the assessment of likely significant effects, specifically covering: consideration of the full extent of the development; approach to the assessment against a consistent baseline; consideration of future baseline and receptors; development specification and detailed plans; quantum of development; massing; assessment scenarios; implementation of mitigation and monitoring; determining the level of effect and significance criteria; and limitations and assumptions.

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 Regulations.
- 2.4 In addition, the EIA (and therefore the ES) has been undertaken with due consideration of the following guidance documents:
- Department for Levelling Up, Housing and Communities, Planning Practice Guidance (PPG)¹;
 - IEMA, EIA Guide to Shaping Quality Development²; and
 - IEMA, EIA Guide to Delivering Quality Development³.

Context for the Scope of the ES

- 2.5 As set out within Paragraph 036 of PPG, there is no legal requirement for the Applicant to consult with or seek a formal scoping opinion from MCC. As outlined within **Chapter**

1: Introduction, an EIA Screening Report was intended to be undertaken; however, MCC have requested that an EIA be undertaken to support the Application.

- 2.6 The scope of the ES, in terms of the technical topics requiring assessment as part of the EIA and reporting in this ES, has been informed by an internal EIA scoping process undertaken with the Applicant's project team and pre-application engagement with MCC who were seeking reassurance regarding the potentially significant effects on daylight, sunlight and overshadowing and air quality.

Scope of the ES

- 2.7 Based on an appraisal of the current baseline environment of the Site and the characteristics of the Proposed Scheme, the Applicant's consultant team have undertaken an EIA Scoping process to determine the likely significant environmental effects to be assessed within this ES.
- 2.8 **Table 2.1** summarises the outcomes of this EIA Scoping process for each of the technical topics appraised.
- 2.9 The EIA Scoping process has also taken into account primary and tertiary mitigation measures (discussed in more detail below within '*Implementation of Mitigation and Monitoring*'). Tertiary mitigation measures have only been considered if they are specific, easily achievable and if there is a high degree of confidence in their effectiveness and implementation. Where standard measures have been considered in order to mitigate the environmental effects associated with the Proposed Scheme, these are clearly stated in **Table 2.1**. Details of these mitigation measures are provided in **Volume 3: Environmental Management Plan**, which is assumed to be secured by a planning condition.
- 2.10 Due to specific concerns raised on potential effects from air quality by MCC, particular attention has been given to this topic which has been provided in **Chapter 5: Air Quality Screening Evaluation**.

Table 2.1: Outcomes of the EIA Scoping process

Topic	Appraisal of likely effects	Scoped in to this ES?
Transport and Access	The number of traffic movements associated with the construction of the Proposed Scheme will vary depending on the stage of construction. No information regarding the number and type of vehicle trips are known at this stage. However, construction traffic will be associated with movement of plant / machinery, workers (including subcontractors) and deliveries / collections. Based on experience of similar PBSA in Manchester (for approximately 107 units) it is unlikely that the Proposed Scheme would generate more than 30 (with an approximate 1:3 Heavy Good Vehicles to Light Good Vehicles ratio) vehicular movements per day. This number of vehicles are therefore anticipated to be below both the 500 annual average daily traffic (AADT) light duty vehicle (LDV) and 100 AADT HDV thresholds set out by IEMA guidance⁴. Similarly, given the low generation of construction traffic movements, drivers on the local road network are not anticipated to be significantly delayed, and pedestrians/cyclists are not anticipated to experience significant effects relating to delay, severance, fear and intimidation, loss of amenity or accidents and safety. Furthermore, a Construction Transport Management Plan (CTMP) will be prepared in line with best practice guidelines. Specifically, the CTMP will set out the following: • Delivery timings and associated control mechanisms for all construction traffic. Delivery of large, oversized plant/machinery to the Site should take place outside of peak highway hours (where possible); • Management of all construction related traffic, including details of HGV Booking/management systems; • Proposed construction vehicle routing to and from the Site; • Necessary temporary signage on the local road network; • Set out specifics of temporary parking for all construction staff, deliveries and sub-contractors; and • Provision of alternative pedestrian / cycle routes (including diversions, where required) with appropriate signposting. Given the above, significant effects during construction are not anticipated.	✗

Topic	Appraisal of likely effects	Scoped in to this ES?
	The Proposed Scheme does not provide for any car parking on Site. It is proposed that of the 17 on-street car parking spaces on York Street, two of these will be reallocated to facilitate a dedicated disabled bay and one loading bay along the site frontage. Vehicle movements associated with the operation of the proposed development would be limited to those for waste collections and maintenance (approximately 10 off peak vehicle movements). There will be additional traffic movements on specific days of the year when students arrive / depart at the beginning and end of term. The Applicant will implement 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. Overall, the number of vehicle movements on the local road network generated by the Proposed Scheme is anticipated to be limited and is unlikely to represent a greater than 10% change on the local road network given the current use of the Site. Therefore, it is considered unlikely that changes to traffic flows in the operational stage will cause a significant effect. The Proposed Scheme would not result in a change or loss to existing public transport provisions that currently service the area. The Proposed Scheme may generate an indirect demand on public transport. The Site is well served by existing public transport with cycle lanes and bus stops along Charles Street and Oxford Road Rail Station and St Peter's Square Metrolink station approximately 160m and 560m respectively from the Site. Due to the proposed use of the Site for student accommodation and the close proximity to the University of Manchester and Manchester Metropolitan University campuses on Oxford Road, the majority of movements are likely to be pedestrian and given the existing provision of public transport it is unlikely that the Proposed Scheme will have a significant effect on public transport services. As a result of the above, effects to the public transport system, road users, cyclists and pedestrians during construction and operation are considered unlikely to be significant and have not been scoped in to this ES. A stand alone Transport Statement and Interim Travel Plan report will be prepared and submitted with the Application.	
Air Quality	There is potential for dust and particulate matter emissions associated with construction activities on Site. Such emissions will be short-term and temporary and could be managed through the implementation of a Dust Management Plan (DMP) delivered through a CEMP, which will include dust management measures in line with	✓

Topic	Appraisal of likely effects	Scoped in to this ES?
	IAQM Guidance⁵. Therefore, nuisance and disturbance as a result of dust from construction activities to existing residential receptors are not considered to be significant. During operation, the Proposed Scheme will be primarily supplied with energy via an all-electric connection to the local District Heat Network. There is an emergency generator associated with the Proposed Scheme which will be tested for approximately 30 minutes per month. This equates to six hours annually. The short-term NO₂ objective is that the 1-hour mean of 200 µg/m³ not be exceeded more than 18 times per year. Consequently, the testing of the emergency generator will not result in exceedances of the short-term NO₂ objective because it will run for less than 18 hours annually. During the construction and operation of the Proposed Scheme vehicle movements to and from the Site have the potential to increase pollutant concentrations (NO_x, NO₂, and PM₁₀) from exhaust emissions. As discussed above, traffic flows associated with the Proposed Scheme are anticipated to be less than the daily thresholds outlined in the Environmental Protection UK and Institute of Air Quality Management guidance^a (i.e. 100 Light Duty Vehicle (LDV) flows and 25 Heavy Duty Vehicle (HDV) flows). There is a railway line within 30 m of the Proposed Scheme. This railway line has been identified by Defra as having significant diesel locomotive use⁶ and thus has the potential to have a significant effect on air quality at the Proposed Scheme. Due to the opening year background NO₂ concentrations at the Proposed Scheme being below 25 µg/m³, a detailed assessment of the railway line can be screened out i.e. the effects will be not significant. The Transport for Greater Manchester 2016 modelling screenshot of the Site and its surrounding area has been examined in conjunction with monitoring in the local area. Through analysing this data, it can be concluded that the impact of road traffic emissions associated with the existing road network adjacent to the Proposed Scheme on future residential receptors is not considered to be significant. There is a commercial garage adjacent to the north of the Site which has the potential to impact on air quality adjacent to the Site due to emissions from vehicles within the garage. Due to the size of the garage and its activity,	

^a The thresholds for requiring an air quality assessment in Environmental Protection UK and Institute of Air Quality Management (2017) Land-Use Planning & Development Control: Planning for Air Quality.

Topic	Appraisal of likely effects	Scoped in to this ES?
	the effects of emissions from the commercial garage on new residential receptors are not considered to be significant. However, to provide further reassurance on the potential effects, further evaluation of air quality has been undertaken and reported in Chapter 5: Air Quality Screening Evaluation.	
Noise and Vibration	There is a potential for a temporary increase in noise and vibration associated with construction activities. The existing noise environment at and in the vicinity of the Site is likely to be influenced by road and rail movements and commercial activities. The closest and most sensitive noise receptors are likely to be residents at Bracken House, and the ground floor nursery also within Bracken House. Construction noise and vibration can be controlled through adherence to Best Practicable Means and methods set out in British Standard 5228-1:2009 + A1:2014⁷ as part of a CEMP. It is assumed that the construction working hours would be 08:00 to 18:00 Mondays to Fridays; 08:00 to 13:00 on Saturday; and it is anticipated that there will be no construction on Sundays or Bank Holidays. The implementation of such best practice measures (defined by an understanding of the activities / methodologies) will be prepared by the appointed contractor(s) and submitted to MCC for approval prior to the commencement of on-site activities. Noise will also be generated by construction traffic movements on the local road network which has the potential to impact surrounding receptors. However, given the scale of the Proposed Scheme, the temporary nature of the construction activities, and the maximum number of construction vehicles (<10 HGVs and <20 LGVs a day) which represents a 0.2% increase in traffic on Oxford Road and a 0.1% increase on Princess Road, additional noise generated by construction traffic movements will not lead to a significant increase above the existing noise levels. Although vehicle type affects noise increase, a 25% increase in traffic would be needed to result in approximately a 1dB increase in noise (imperceptible to human ear), and a 100% increase in traffic would result in approximately a 3dB increase in noise (just perceptible to human ear). As outlined above it is likely that traffic movements associated with the Proposed Scheme will be limited to those for waste collections and maintenance. Given this and the existing traffic flows on the surrounding local road network, it is considered unlikely that traffic movements generated by the Proposed Scheme will represent a	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	change of + 25% (and therefore a noise change of 1 decibel (dB) at receptors where road traffic noise is dominant). A 1dB increase is commonly regarded as imperceptible to human ear. Noise from mechanical plant during operation has the potential to result in a nuisance to adjacent receptors if not appropriately assessed. However, a noise assessment will be required to ensure appropriate noise limits are devised based on prevailing noise levels in and around the Site. MCC's noise guidance⁸ is based on that laid out in British Standard 4142⁹. MCC requires that the noise rating level from all new mechanical plant is designed to a level no greater than the typical background noise minus 5dB at the nearest residential receiver. This would result in a negligible magnitude of change and therefore not give rise to a significant effect. Noise levels within habitable rooms of the Proposed Scheme will also need to accord with MCC's noise guidance which is based on that laid out in BS 8233: 2014¹⁰. With consideration of the above, effects relating to noise and vibration during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A standalone Noise and Vibration Assessment report to cover operational impacts, as well as a standalone Construction Noise and Vibration Assessment report, will both be prepared and submitted with the Application.	
Socio-Economics and Human Health	Due to the nature of the Proposed Scheme for PBSA for the University of Manchester, there will be no effects on primary and secondary educational facilities. Sustainable travel options^b, open space and sports/recreational facilities are all accessible from the Site, with the Site being located close to town-centre amenities, local bus stops^c, train station^d, Metrolink station^e and public green spaces. The Site is currently vacant land, and the Proposed Scheme will therefore result in no displacement	✘

^b Footways and cycle lanes are provided on both sides of Charles Street providing access to both Oxford Road and Princess Street. The closest National Cycle Network (route number 6) is approximately 345m west of the Site accessible.

^c There is a bus stop immediately adjacent to the Site on the junction of York Street and Charles Street. The 147 links West Disbury to Manchester Piccadilly Train Station.

^d The closest train station is Manchester Oxford Road located approximately 160m to the north west of the Site which has regular connections to the south west, Wales, midlands and the north.

^e The closest Metrolink station is located approximately 560m to the north at St Peter's Square.

Topic	Appraisal of likely effects	Scoped in to this ES?
	of any existing residential communities, business activities, community spaces or social infrastructure. The Site's location within Manchester city centre will enable coherent integration with existing residential and commercial areas and transport links, and local provision of commercial, leisure and other amenity spaces will therefore be accessible for future Site users (i.e. residents, workers and visitors). Whilst a beneficial effect with regard to social cohesion and inclusive design for residents of the Proposed Scheme and existing local communities is therefore anticipated, the level of effect is not considered likely to be significant. Based on single-occupancy of units, the 107 new PBSA units will accommodate 107 residents. As outlined within HUDU¹¹ guidance, the Royal College of GPs recommend a ratio of one GP (assumed FTE) per 1,800 registered patients; this therefore suggests that the Proposed Scheme could generate demand for under 0.1 FTE GPs. There are a number of primary healthcare facilities accessible from the Site, The Docs being the closest (located 270m north of the Site). This surgery and others in the locality, including The Arch Medical Practice (0.6 miles from the Site) and the City Health Centre (also 0.6 away), are confirmed as currently accepting new patients¹², and it is therefore anticipated that local surgeries will be able to meet the demand generated by the population of the Proposed Scheme. Similarly, as a determinant of health, residents would have adequate access to a number of nearby supermarkets/food stores that supply healthy food. The Site will be kept secure during construction to ensure that the potential for crime and anti-social behaviour is minimised. Site security arrangements will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015¹³, including 24-hour on-Site security and CCTV, where required. Once operational, the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (such as CCTV cameras, appropriate security lighting and digital entry systems at each building) to help 'design out' crime, minimising the potential for crime and anti-social behaviour. The Proposed Scheme will have on-Site security staff, with staff present 24 hours a day. Therefore, the Proposed Scheme is not considered to result in a significant change to crime levels or decrease in community safety during the construction and operation of the Proposed Scheme. Employment opportunities will be generated through the construction and operation of the Proposed Scheme. The construction of the Proposed Scheme will lead to the delivery of new construction stage jobs that would	

Topic	Appraisal of likely effects	Scoped in to this ES?
	represent a beneficial effect for the labour force in the local authority area of MCC. However, whilst beneficial, the scale jobs generated by the Proposed Scheme would result only in a small change in the context of the existing 9,000 jobs recorded in Manchester's construction sector as of 2022¹⁴. Therefore, effects related to employment generated during the construction stage are unlikely to be significant. Once operational the Proposed Scheme could deliver new employment opportunities including concierge and maintenance and security employment. However, the number of jobs created is anticipated to be small in scale compared to total employment across Manchester. Whilst again a beneficial effect, their delivery is unlikely to be significant. Overall, effects relating to socio-economics and human health during construction and operation are considered unlikely to be significant and have not been scoped into this ES^f. A standalone Socio-economic Regeneration Impact Statement report will be prepared and submitted with the Application.	
Built Heritage	As there are no heritage assets within the Site, there will be no direct physical change to the fabric of heritage assets. The on-Site construction activities and the gradual creation of built form within the Site will influence the character of the Site. In addition, the completed Proposed Scheme will change the character of the Site from a construction compound to a new high-quality residential-led development. However, due to the distance and screening by existing built form, the heritage assets potentially affected by the construction and operation of the Proposed Scheme are likely to be limited to The Whitworth Conservation Area immediately north of the Site and listed buildings^g within the Conservation Area and on Charles Street. However, based on the significance of these heritage assets and the contribution made by their setting (including the Site), and taking into consideration existing density of modern built form along York Street and Charles Street, it is not considered likely that there	x

^f This is with the exception of potential effects on human health from changes to daylight, sunlight and overshadowing and air quality which will be assessed within **Chapter 6: Daylight, sunlight and Overshadowing** and **Chapters 7: Air Quality**.

^g Lass O Gowrie Public House Grade II Listed Building (circa 60m to the east), Former Refuse Assurance Company Offices Grade II* Listed Building (approximately 60m to the north west), India House (Including Attached Wrought Iron Gateway Linked To Lancaster House), Grade II* listed (approximately 90m north), Lancaster House, Grade II* listed (approximately 120m north-east), Asia House, Grade II* listed, (approximately 100m north-east); and Manchester House, Grade II listed, (approximately 90m north-east) and Manchester South Junction and Altrincham Railway Viaduct, Grade II listed (approximately 5m north).

Topic	Appraisal of likely effects	Scoped in to this ES?
	would be a significant environmental effect on the heritage significance of these assets. With consideration of the above, effects relating to built heritage during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A stand alone Heritage Impact Assessment will be prepared and submitted with the Application.	
Townscape and Visual	The Site does not lie within a statutory designated landscape area. The Site is located in the Manchester Conurbation National Landscape Character Area (NCA) 55, meaning that the Site and the surrounding landscape is already dominated by built form and infrastructure. The Application Site is situated within the 'City Centre' Strategic Character Area as defined in the Strategic Level City-Wide Urban Characterisation for Core Strategy (November 2010). Townscape effects from construction would be experienced directly by the Site and the immediate townscape as a result of the change of use from the existing Site as a construction compound to a construction site. As the effect experienced during construction is short-term and temporary, it is considered unlikely to be significant. In addition, once operational the new built form would be read in conjunction with the already existing built form in the surrounding area and the wider townscape character. With regards to visual effects construction activities (such as the introduction of material stockpiles, and the movement of plant and other construction vehicles, and the progressive construction of the PBSA) are likely to result in adverse effects on visual receptors due to the incomplete nature of the building during this stage. It is likely that temporary fencing/hoarding will be erected around the perimeter of the Site, where necessary. This will help to screen low-level construction activities. In addition, the adoption of general Site tidiness and sensible layout (which will be defined in the CEMP), would all help to mitigate adverse visual changes. As a result, the effects would be temporary and short-term, and are unlikely to be considered significant. Once operational the Proposed Scheme will introduce a new built form into the area which will be visible by local receptors. The Proposed Scheme will comprise of a single building up to a height of 79.705m Above Ordnance Datum (AOD) which, while taller than Bracken House, will be lower in height than the adjacent Maldron Hotel and therefore visually will likely not be out of place in the existing 'context' of the built form and the surrounding area	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	(characterised by a mix of residential, commercial, retail and educational / university buildings). The existing built form and topography are also likely to limit visual effects to the immediate street scene. With consideration of the above, effects relating to townscape and visual receptors during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A standalone Townscape and Visual Impact Assessment report will be prepared and submitted with the Application.	
Archaeology	The Site is not subject to any archaeological designations (i.e. below ground Scheduled Monument). The Site and the immediate surrounding area have been subject to significant development / redevelopment from the 19th century onwards (see Chapter 3: Site Context) and any remains (if present), are likely to have been disturbed / truncated. The significance of any remains is therefore likely to be considered low. A stand alone Archaeological Desk-Based Assessment will be prepared and submitted with the Application.	✘
Biodiversity	There are no ecological designations within the Site or statutory designations within 2km of the Site. The nearest non statutory designated site is the Ashton Canal West Site of Biological Importance¹⁵ (SBI) (circa 940m to the north-east at the closest point). Due to the distance and the intervening urban land uses between the Site and the statutory / non-statutory ecological sites, no adverse effects on these sites are anticipated. The Site itself comprises hard standing with a few opportunistic shrubs and therefore does not provide any significant habitat. Therefore, direct and indirect effects on habitats and species using the Site are likely to be insignificant. Due to the absence of habitats, the site is exempt from Biodiversity Net Gain in line with the Environment Act 2021. Given the lack of buildings or habitats on Site, the Site itself is unlikely to support any protected or notable species. It is possible that birds and bats may be present in the railway arches to the north of the Site with the River Medlock (located approximately 50 m north east of the site) providing a possible commuting line for bats. If present the construction of the Site has the potential to cause disturbance to these species through increased light spill and noise. There is also the potential, although minimal, for impacts via pollution (through dust and surface water runoff). Pollution (through lighting, dust and surface water runoff) can be controlled through standard good practice measures/guidance through a CEMP including:	✘

Topic	Appraisal of likely effects	Scoped in to this ES?
	• Implementation of a construction Dust Management Plan (DMP) (see '<i>Air Quality</i>' below); • Implementation of best practice measures to control lighting in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129¹⁶, ILP GN01-2021¹⁷, BS EN 12464-2:2014¹⁸ and ILP Guidance Note 08/23¹⁹ to reduce light spill and glare; • Preventative measures included within the Chartered Institute of Ecology and Environmental Management²⁰ guidance such as screening stockpiles of materials, deployment of windbreak netting and banksmen and dampening exposed soils/ aggregates as appropriate and set out requirements for ongoing monitoring and liaison with MCC; and • Potential for pollution from surface water runoff will be prevented (See '<i>Ground Conditions and Contamination</i>' below). Adherence to these guidance documents and standards will ensure that disturbance associated with construction on bats and birds will be minimised. During operation, impacts on the potential use of the railway arches by birds and bats will be limited to operational lighting. As detailed within Chapter 4: Development Specification, the lighting design ensures that there will be zero light contributions from additional external lighting towards the railway arches. Therefore, if present, the effects on bats and birds during the operation of the Proposed Scheme are unlikely to be significant. With consideration of the above, effects relating to biodiversity during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A stand alone Phase 1 Ecological Survey will be prepared and submitted with the Application.	
Ground Conditions and Contamination	The Site is not located within a groundwater Source Protection Zone (SPZ), therefore, it is unlikely that the development of this Site will have a significant effect on the groundwater recharge of the underlying Principal and Secondary A Aquifer. The Site lies within an area with the lowest band of radon potential and therefore effects from the potential release of radon during disturbance to the ground from construction activities are not considered significant.	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	It is anticipated that there is historical contamination from previous uses as well as current sources from accidental oil/fuel spills from the adjacent commercial garage to the north of the Site and from vehicles using the Site. Existing ground contamination has the potential to impact the health of construction works and future Site users via exposure to soils through direct contact / ingestion / inhalation of contamination soils and adjacent site users from contaminated dust emissions. Similarly, impacts to groundwater (and surface water quality) may be associated with historical site uses and environmental setting. During the construction stage, there is a potential for contamination to be mobilised during the formation of foundations and migrate vertically into the underlying groundwater and then into nearby surface water bodies, the closest of which is the River Medlock. There is also the possibility that proposed foundations (particularly piled foundations) may create a preferential pathway to the groundwater and for ground gas Throughout the construction stage of the Proposed Scheme, there is a potential for spillages (such as oil, fuel, cement, chemicals etc.), and the generation of suspended solids during construction activities which could affect construction workers, existing residents or nearby controlled waters (i.e. the River Medlock / secondary A Aquifer). If present, asbestos will be identified, removed, handled and disposed of in line with appropriate guidance and Regulations, including The Hazardous Waste (England and Wales) Regulations 2005²¹, Control of Asbestos Regulations 2012²² and CIRIA C733²³. Programmed removal of the identified asbestos materials will be undertaken at the outset of the enabling works under an Asbestos Management Plan (as part of the CEMP). Measures to protect construction workers, local residents and the local community from exposure to any contaminated material which is unexpectedly encountered will be required of the appointed contractor(s) under the Construction (Design and Management) Regulations 2015 and other health and safety legislation. Appropriate strategies / protocols will be put in place through a CEMP in line with relevant legislation and best practice for all activities, including: • Provision of appropriate Personal Protective Equipment (PPE); • Implementation of risk assessments and method statements;	

Topic	Appraisal of likely effects	Scoped in to this ES?
	- Control of dust through the application of management measures in line with IAQM guidance as detailed above; - All construction activities will be undertaken in line with all appropriate Guidance for Pollution Prevention (GPPs); - Bunded storage; - Provision of designated wheel washing areas; - Screening stockpiles of materials; and - Requirements for ongoing monitoring and liaison. With the adoption of the identified mitigation, effects related to the potential migration / release of on-Site contamination are unlikely to be considered significant. In addition, the Site will largely be covered in hardstanding once the Proposed Scheme is complete (and therefore any below ground contamination will be 'capped'). As such, effects related to contamination during the operational stage are unlikely to be considered significant. Regional BGS data is known for the Site (Sandstone); however, site specific ground conditions are not known ground conditions will be identified by an intrusive ground investigation prior to the main construction works to ensure that geotechnical risks are identified. All necessary groundworks and foundation design will be implemented in order to provide suitable construction platforms in line with best practice guidance and applicable British Standards^h. As such, it is anticipated that suitable ground remediation techniques and design can be implemented to negate any likely significant effects related to the presence of geotechnical risks. With consideration of the above, effects relating to ground conditions and contamination during construction and operation are deemed unlikely to be significant and have not been scoped into this ES.	

^h Such guidance and British Standards could potentially include CIRIA report C572: Treated ground engineering properties and performance; BRE document FB75: Building on Fill - Geotechnical Aspects and British Standard 6031:2009: Code of Practice for Earthworks.

Topic	Appraisal of likely effects	Scoped in to this ES?
	The potential for contaminants and requirements for a remediation strategy will be confirmed through a stand alone Phase 1 Desk-based Ground Conditions Assessment (including a Coal Mining Report) and Phase 2 Site Investigation and Remediation Strategy which will be prepared and submitted with the Application.	
Soils and Agriculture	The Site is located in its entirety upon previously developed land within Manchester City Centre. Therefore, its implementation would not involve the loss of agricultural land or affect farm businesses during the construction and operation phases.	✗
Flood Risk and Drainage	The Site is located within Flood Zone 3 (indicating a high risk of fluvial flooding from the River Medlock), low risk from surface water flooding and at risk from reservoir flooding (considered under <i>Major Accidents and Disasters</i>). In addition, construction activities have the potential to cause the release of physical contaminants (i.e. sediments) which could increase sedimentation of nearby controlled waters (the River Medlock). It is assumed that the existing drainage infrastructure within the Site will be used to manage surface water until the controlled surface drainage strategy has been implemented. If required, a temporary drainage system utilising the existing drainage system will be installed to manage the surface water until the permanent drainage strategy has been implemented. Appropriate water management measures will also be implemented as part of the CEMP, including the protection of existing drainage pop-upsⁱ, the regular maintenance of gullies and drainage systems to prevent debris from causing obstructions, awareness training for construction workers and the siting of material storage areas to avoid increasing flood risk off-site. During operation the Proposed Scheme has been designed so that less sensitive development is located on Ground Level and Level 01 with residential accommodation commencing at Level 02 at 38.355AOD (see Chapter 4: Development Specification). In addition, the Proposed Scheme will be required to meet the standards as set out within the Manchester City Council Level 2 SFRA which requires at least a 50% reduction in surface water runoff be provided through SuDS as part of any brownfield development with the aim of reducing to Greenfield runoff rates. This has been provided by using attenuation in the form of a blue roof at Level 09.	✗

ⁱ In line with industry best practice and guidance, including British Standard 8582:2013 — Code of practice for surface water management for development sites.

Topic	Appraisal of likely effects	Scoped in to this ES?
	As such, changes to risk of flooding and surface water flow routes (while beneficial) are unlikely to be considered significant and have not been scoped into this ES. The operation of the Proposed Scheme will put an increase in demand on potable and foul water services. Given the City Centre location, there will be existing potable and foul water infrastructure in the area. According to United Utilities Water Resources Management Plan²⁴, the baseline forecast of the amount of potable water available to meet the projected demand shows a surplus assuming their preferred plan is implemented. It is also anticipated that the increase in foul flows in relation to the foul sewerage capacity within Manchester City Centre will not be significant. Therefore, increased demand on existing potable and foul water infrastructure is considered unlikely to be significant and have not been scoped into this ES. A stand alone Flood Risk Assessment will be prepared and submitted with the Application	
Daylight, Sunlight and Overshadowing	The Applicant's Daylight, Sunlight and Overshadowing consultant found that daylight and sunlight effects would vary throughout the construction stage, and these would gradually increase to reach those caused by the operational Proposed Scheme. As such, the operational stage assessment was considered to provide the worst case scenario for the Proposed Scheme, and construction stage effects were scoped out of the EIA. Given the existing built form, effects from the Proposed Scheme are likely to be limited to receptors within the immediate vicinity of the Site. Sensitive receptors within the immediate vicinity of the Site include commercial, educational and residential uses. The BRE Guidelines²⁵ consider residential properties to have the highest requirement for daylight and sunlight. Therefore, there are potential effects from the Proposed Scheme in relation to reduced daylight and sunlight amenity to residential sensitive receptors and increased overshadowing to surrounding areas of outdoor amenity. The façades of the proposed building comprise mainly of brick with anodised aluminium and glass. Due to the scale of surrounding buildings, the southern and western elevations will be shaded and obscured from view at nearby road and rail locations. The punched windows and angle of eastern elevation within the field of view of drivers would mean solar glare would not impact train drivers on the adjacent railway tracks. The northern elevation is the only elevation that would be visible to train drivers but does not have any windows proposed and	✓

Topic	Appraisal of likely effects	Scoped in to this ES?
	so cannot result in solar glare. Therefore, the effects of the Proposed Scheme on solar glare at sensitive receptors surrounding the Site are not considered significant and have not been scoped into this ES. Effects from daylight, sunlight and overshadowing have subsequently been scoped into the ES and are reported in Chapter 6: Daylight, Sunlight and Overshadowing.	
Wind Microclimate	The introduction of built form on-Site as part of the Proposed Scheme is anticipated to alter the wind environment. Preliminary wind modelling has been undertaken^j using Computational Fluid Dynamics (CFD) to assess wind conditions for the Proposed Scheme. Conditions have been assessed at both ground level and elevated levels within a 400m radius. The results of the assessment conclude that there are no exceedances of safety risk^k or exceedances of the wind comfort criteria^l at the Site (for their intended uses) or in the surrounding area assessed. Therefore, the effects of the Proposed Scheme on wind conditions at sensitive receptors within and surrounding the Site are not considered significant and have not been scoped into this ES. The stand alone Wind Microclimate Assessment report will be prepared and submitted with the Application.	x
Climate Change	The construction of the Proposed Scheme has the potential to release GHG emissions from the use of plant and machinery, and construction traffic. The exact emissions from construction are unclear without full knowledge of materials, their origins and the machinery / plant being used. However, the emissions can be mitigated through careful sourcing of construction materials to reduce associated GHG emissions as well as direct emission-reducing practices. Such measures will be detailed within the CEMP. Considering the scale of the Proposed Scheme and measures to be included in the CEMP, GHG emissions from construction are considered to be limited in the context of overall emissions across MCC and construction sector targets and are unlikely to be significant.	x

^j GIA (November 2023) 'Bracken House Car Park: Initial Wind Microclimate Assessment'

^k Wind safety risks are defined as any location where the mean wind speed exceeds 15m/s for greater than 0.025% of the year (~2hrs) speed exceeds 15m/s for greater than 0.025% of the year (~2hrs)

^l In accordance with the Lawson Comfort Criteria

Topic	Appraisal of likely effects	Scoped in to this ES?
	Once completed, the Proposed Scheme will be required to comply with Part L of the Building Regulations. Greenhouse Gas (GHG) emissions will be released as a result of transportation movements, although this is expected to be limited given the limited vehicle movements associated with the Proposed Scheme (see '<i>Transport and Access</i>') and prominence of active travel options in the immediate locality of the Site. The exact GHG emissions are not understood, nor how these emissions would compare to regional and national budgets. However, the scale of the Proposed Scheme and the anticipated operational traffic movements are small in a regional context and the emissions released from them are considered to be negligible compared to the existing environment. Climate change has the potential to increase summer temperatures which in turn can lead to the overheating of facilities provided as part of the Proposed Scheme. However, the building will be designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes. The effect of climate change has the potential to increase flood risk and damage Site equipment. The Site lies within Flood Risk Zone 3, however potential increase of flooding on off-site receptors and future Site users can be mitigated through the implementation of an appropriate drainage strategy and design of finished floor levels (see Chapter 4: Development Specification) taking into account further effects of climate change. Accounting for the above, effects relating to climate change during construction and operation are considered unlikely to be significant and have not been scoped into this ES. A stand alone Whole Life Carbon Assessment and Circular Economy Statement, Energy and Sustainability Statement, BREEAM Pre-Assessment Report and Green and Blue Infrastructure Statement will be prepared and submitted with the Application.	
Lighting	There are no lighting installations on the Site itself. Lighting installations in the vicinity of the Site include street lighting installations adjacent to the Site on York Street, on the corner of York Street and Charles Street and on Charles Street to the south east corner of the Site. Given the size of the Site, light spill from these sources of street lighting is likely to affect all parts of the Site. Light spill from bulk head lighting installations on the façade of	✘

Topic	Appraisal of likely effects	Scoped in to this ES?
	Paintpots Nursery (which is located on the ground floor of Bracken House) to the east of the Site will also affect the lighting levels currently experienced on the Site. The railway viaduct forms an unlit corridor to the north of the Site. Overall it is considered that the lighting environment within the Site is likely to be representative of an E4 / E3 Environmental Zone ('high / medium district brightness')²⁶. During construction activities, there is anticipated to be task lighting to ensure safe working conditions (particularly during the winter months), which will lead to an increase in lighting on the Site. The nature of the effect and its significance is relative to the existing baseline conditions (i.e. lighting environment experienced by existing receptor) and general proximity to potential light sources, where the greatest effect is felt by receptors adjacent to, or in close proximity to a light source (i.e. within 50m). However, given the presence of existing lighting adjacent to the Site, along with the temporary nature of this lighting, there is unlikely to be a significant change from the baseline environment at nearby sensitive receptors. Nevertheless, the CEMP will include construction lighting measures in line with industry standards and guidance²⁷, including: • The use of sufficient lighting units for the task in hand to avoid the need for tall, wide beam lighting units; • The reduction of fixed lighting outside construction working hours; and • Luminaires to be positioned at the boundaries and orientated inwards to the site, reducing light spill beyond the lit areas. Once operational the Proposed Scheme will introduce lighting to the Site. However, new external lighting is limited and only proposed along the northern façade path. The lighting installations comprise of wall lights with full light cut off to reduce light spill. Although new lighting will alter the lighting environment on-Site, it is not considered to result in a substantial change in lighting environment experienced by existing receptors (or give rise to statutory nuisance), given the existing lighting environment of the Site and the immediate surrounding buildings. Existing street lighting on York Street and Charles Street will be retained, therefore the lighting environment along these frontages will not change. Therefore, changes to light spill / glare due to construction and operational lighting is considered unlikely to be significant and have not been scoped into this ES.	

Topic	Appraisal of likely effects	Scoped in to this ES?
Use of Resources and Waste	Construction will require a quantity of steel, aggregate, cement, concrete, bitumen, wood, glass and plastic etc. However, given the scale of the Proposed Scheme, the volumes of materials that will be utilised are not anticipated to be significant. Measures to reduce material use are detailed below. The Proposed Scheme does not include for basement levels and given the topography of the Site it is assumed that a broad cut and fill balance will be achieved. Therefore, there is unlikely to be a significant volume of material generated that is required to be imported or exported to / from the Site. Other sources of waste during construction include solid wastes such as packaging and leftover construction material. However, due to the modest scale of the Proposed Scheme, the overall volume of waste material generated is considered to be limited in the context of construction arisings / waste from the wider area. From a review of remaining landfill capacity data published by the Environment Agency, last updated at the end of 2022²⁸, a total of five landfill sites located in Greater Manchester alone would each have sufficient capacity to accommodate the inert construction material from Site. Should any hazardous material be identified (during intrusive investigation/remediation of the Site), this will be removed, handled and disposed of in line with appropriate guidance and regulations²⁹. To minimise construction waste a Site Waste Management Plan would be included within the CEMP. This will set out measures / practices to minimise waste generation, including the re-use and recycling of materials where possible. It is assumed that the appointed contractor(s) will manage construction related waste in line with relevant legislation^{30 3132333435} 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. This will ensure that construction waste is appropriately managed / controlled. Waste streams generated by the Proposed Scheme during operation will include commercial (recyclables, mixed-waste etc.) and green waste. Storage and collection facilities will be provided through provision of 4, 1100 litre eurobins based on 70 l/bed with two collections per week provided. It is assumed that all waste storage/handling facilities will be designed in accordance with BS 5906:2005³⁶ and in accordance with MCC's Waste Storage and Collection Guidance³⁷.	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	Accounting for the above, effects relating to the use of resources and increased demand / pressure on local waste facilities from production of waste during construction and operation are considered unlikely to be significant and have not been scoped into this ES.	
Major Accidents and Disasters	The probability, frequency and likelihood of natural disasters arising from climatic occurrences (i.e. hurricanes), geological conditions and earthquakes are considered to be very low, due to the climatic conditions and location of the UK. There are no COMAH sites within or adjacent to the Site and it is also not subject to any HSE Consultation Zones. The Site lies in an area classified as at Moderate risk of uncovering Unexploded Ordnance (UXO). As part of a CEMP, the potential risks of UXO will be communicated to all stakeholders who may be exposed to risks during the works (and consideration of potential risks prior to any works commencing). Provision of safety training by a competent UXO expert and provision of UXO safety monitoring will be implemented. The Site is in an area considered at risk of reservoir flooding. Reservoir systems in the UK are actively managed and subject to strict maintenance and inspection regimes. The probability of a dam failure is therefore considered to be extremely low. As detailed above the Site is located within Flood Zone 3. The Proposed Scheme has been designed so that less sensitive development is located on Ground Level and Level 01. In addition, the Flood Risk Assessment and Drainage Strategy to be submitted in support of the Application will account for the possibility of extreme/climate change-induce rainfall events, in providing appropriate surface water drainage infrastructure. The risk of arson / terrorism is managed at a regional / national level and delivered locally through emergency planning and services / response teams. This aims to reduce the risk as far as possible and allow a safe response to any event. Nevertheless, the Proposed Scheme will contain safety measures in place to deter criminals included in the design such as CCTV operation, security lighting, etc., to deter criminals. During construction the appointed contractor(s) will be required to identify appropriate safe working standards and methodologies taking account of Construction Design and Management Regulations (2015) and other good practice guidance, all of which will be included / managed as part of a CEMP. Works will also be undertaken in line with Fire Prevention on Construction Sites: Joint Code of Practice³⁸. There will be areas for the storage / stockpiling of construction waste. These areas will be managed appropriately and maintained safely in fenced	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	locations away from sensitive receptors (as part of the CEMP). Any hazardous waste (such as ACMs) will be handled and disposed of as required by relevant legislation and guidance. The potential for major transport accidents will be mitigated by the implementation of a traffic management measures as part of the CEMP, which will include measures such as a planned route for traffic to reduce the risk to road users, restricting deliveries to certain periods and ensuring the vehicles are well maintained. Fire prevention/protection measures including a Fire Emergency Evacuation Plan (FEED) 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 Proposed Scheme will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law. The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (such as appropriate lighting and digital entry systems at each building). The Proposed Scheme will have on-Site security staff, with staff present 24 hours a day. As detailed above the presence / absence of unstable and compressible ground will be identified prior to the main construction works to ensure there is no geotechnical risk to foundations. All earthworks and foundation design will be in accordance with relevant industry guidance^h. Accounting for the above, effects relating to major accidents and/or disasters during construction and operation are considered unlikely to be significant and have not been scoped into this ES.	

Summary of Technical Topics to be Included in the ES

2.11 In line with the rationale set out within **Table 2.1**, the following technical topic and their associated likely significant environmental effects have been assessed within this ES:

- Daylight, Sunlight and Overshadowing (**Chapter 6**).

Stakeholder 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. Where this has been undertaken in support of topics scoped into this ES, summaries are provided in **Chapter 6: Daylight, Sunlight and Overshadowing**.

2.13 With respect to engagement with the public, the Applicant has undertaken a neighbourhood briefing and public consultation webinar. In addition, the Project Team has consulted MCC through Pre-Application meetings. Feedback from MCC has fed into the design of the Proposed Scheme, of which further detail is accounted for below within '*Consideration of Alternatives*'.

2.14 A full summary of the stakeholder engagement undertaken is detailed within the Statement of Community Engagement, prepared in support of the Application.

Approach to Assessment

2.15 This section outlines the approach to the assessment of likely significant environment effects adopted, as reported within this ES.

2.16 The exact methodology for the technical assessment of likely significant effects of the Proposed Scheme during the construction and operational stages is detailed in Chapter 6: Daylight, Sunlight and Overshadowing.

2.17 However, an overview to the approach has been accommodated with the approach outlined below.

Consideration of the Full Extent of Development

2.18 The study area includes 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.

Approach to Assessment against a Consistent Baseline

2.19 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)".

2.20 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

relevant technical study areas. Therefore, it is necessary to establish the existing baseline environmental condition of the Site and study area.

- 2.21 The baseline environment comprises the prevailing existing environmental characteristics and conditions of the Site and relevant technical study areas, based upon (where relevant and required):

- 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.

- 2.22 A summary of baseline data sources/surveys for **Chapter 6: Daylight, Sunlight and Overshadowing** is as follows:

- An indicative topographical survey was undertaken to record the Site's topographical context. A 3D model of the Site and surrounding area in the existing baseline environment was then produced to identify the levels of daylight, sunlight and overshadowing experienced by receptors in the existing baseline environment.

- 2.23 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, alongside any limitations or assumptions.

Consideration of the Future Baseline and Receptors

- 2.24 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"

- 2.25 As required under the EIA Regulations, the ES reports the future baseline scenario under a 'do nothing' scenario, which is further discussed in 'Consideration of Alternatives' below. However, the future baseline scenario is discussed within **Technical Chapter 6**. The discussion is associated with how the Site and study area may change assuming the Proposed Scheme was not brought forward, and the existing management regime was maintained.

- 2.26 The assessments presented in the ES are based on the deviation from the existing baseline scenario.

Identification of Sensitive Receptors

2.27 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”

2.28 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 **Technical Chapter 6**. These are summarised in **Table 3.1** in **Chapter 3: Site Context**.

Development Specification and Detailed Plans

2.29 As indicated in **Chapter 1: Introduction**, the Application is detailed in nature with full planning permission sought.

2.30 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.

2.31 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 – 4.11**) which contains all information required to inform the EIA in a single location.

Massing

2.32 The scale and location of development as defined on the Detailed Plans and described in **Chapter 4: Development Specification** are the key parameters used to assess likely significant environmental effects of **Technical Chapters 6**, specifically:

- The massing and orientation of the Proposed Scheme is considered regarding the impacts of overshadowing, particularly in relation to residential dwellings/amenity spaces that directly overlook the Site.

Assessment Scenarios

2.33 As set out in **Chapter 4: Development Specification**, construction anticipated to commence in March 2024 with the construction being completed over approximately 18 months with the Proposed Scheme anticipated to be completed by September 2025. Where relevant, the assessments within **Technical Chapter 6** have therefore considered the construction and operational stage of the Proposed Scheme in line with these dates.

2.34 The cumulative scenario is assessed separately within **Chapter 7: Assessment of Cumulative Effects**.

Implementation of Mitigation and Monitoring

2.35 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.”

2.36 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.

2.37 In accordance with IEMA Guidance, 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; 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 a 90% level of confidence that these will be implemented, and they need to be specific with a clear timescale for implementation and responsibility.

2.38 Those measures considered to constitute tertiary mitigation are also considered part of the Proposed Scheme and set out in **Chapter 4: Development Specification**.

2.39 Therefore, **Chapter 6: Daylight, Sunlight and Overshadowing** have considered relevant primary and tertiary mitigation for both the construction and operational stages (where relevant) 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).

2.40 As detailed above (under ‘Scope of the ES’) where tertiary measures have been considered to scope out environmental effects from this ES, these are clearly stated in **Table 2.1** and also summarised in **Chapter 4: Development Specification**.

- 2.41 The application of secondary and tertiary mitigation is only considered appropriate if there is a high level of confidence (i.e., >90%) in the mechanism for implementation (by the Applicant or third party).
- 2.42 Consideration is then also given to any indirect effects of the secondary mitigation alongside the likelihood and confidence of implementation which is evaluated when determining the residual effect.
- 2.43 The primary, tertiary and secondary mitigation detailed within **Table 2.1** and **Chapter 6: Daylight, Sunlight and Overshadowing** are summarised in **Volume 3: Environmental Management Plan** which is assumed to be secured by a planning condition.

Determining Level of Effect and Significance Criteria

- 2.44 A four-step approach has been adopted to define effects as outlined below.
- 2.45 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 from the baseline conditions, including aspects such as probability / likelihood of occurrence, geographical extent, complexity, duration, frequency and reversibility (i.e. temporary and permanent).
- 2.46 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 Chapter 6**.
- 2.47 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.
- 2.48 The assignment of the level of effect has been based on professional judgement and the matrix below (**Table 2.8**) 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 2.2: Matrix to support determining the level of effect

Magnitude of change	Sensitivity (or value, importance, etc.)				
		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

- 2.49 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 a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
 - **Negligible:** Where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.
- 2.50 For some specific Chapters, guidance on the nature of the effect requires that differing criteria or scales for determining significance are to be used. 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. The assessment methodology adopted is set out in **Technical Chapter 6**.
- 2.51 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).

- 2.52 Effects have also been described in line with the requirements of the EIA Regulations, specifically defining if the effect is direct or indirect; if the temporarily scale of the effect is short / medium / long-term; and if the effect is temporary or permanent.
- 2.53 **Technical Chapter 6** provides a summary of effects table, which outlines the effects assessed, associated sensitive receptors, residual effects and whether the effect is 'Significant' or 'Not Significant'.
- 2.54 Cumulative effects have been considered as a single co-ordinated assessment (**Chapter 7: Assessment of Cumulative Effects**).

Consideration of Alternatives

- 2.55 Paragraph 2, Schedule 4, of the EIA Regulations³⁹ states that an ES should include:
- “...a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.
- 2.56 Planning Practice Guidance (PPG)⁴⁰ indicates that where alternative approaches to development have been considered, the ES should include a description of the reasonable alternatives studied which are relevant to the Proposed Scheme and its specific characteristics. In evaluating the reasonable alternatives studied, an indication should be provided of the environmental effects.
- 2.57 As such, in line with the EIA Regulations, if no alternatives have been studied, the EIA does not necessarily need to report or assess reasonable alternatives.
- 2.58 Neither the EIA Regulations, nor PPG identify a specific methodology for the assessment of alternatives, or the criteria to be used to inform the assessment 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 assessment, in line with PPG.

Approach to Consideration of Alternatives

- 2.59 The methodology adopted is based on professional experience of similar projects and an understanding of the Proposed Scheme and its characteristics, as well as focus on the delivery of a proportionate assessment, in line with PPG.
- 2.60 The consideration of alternatives has followed a two-step approach, set out as follows:
- **Step 1:** Consideration of 'factors' that constitute alternatives and justification / discussion for the inclusion / exclusion from further assessment; and
 - **Step 2:** Assessment of the 'factors' brought forward from Step 1 and, where applicable, comparison of environmental effects.

Step 1: Consideration of 'Factors'

2.61 **Table 2.3** reports Step 1.

Table 2.3: Step 1: Consideration of 'factors'

Alternative 'factors'	Considered at Step 2	Justification / discussion
Alternative sites (location)	✗	Alternative sites have not been considered as the Applicant owns the Site and other sites are outside of the Applicant's control. Given the above, alternative sites were not considered by the Applicant and will not be taken forward to Step 2.
Alternative technologies	✗	Whilst alternative technologies are available in terms of the construction of the Proposed Scheme these are largely dictated by 'build-ability' and cost exercises rather than environmental-focused considerations. The Proposed Scheme is a PBSA development, and given this, alternative 'technologies' are not considered to be applicable as they would be for other types of development (i.e. industrial processes or energy generation). Therefore, alternative technologies were not considered to be applicable and will not be taken forward to Step 2.
Alternative development designs (including size and scale)	✓	The design of the Proposed Scheme has evolved in response to stakeholder engagement, market demand / feedback, technical studies and environmental constraints and opportunities (where present in an urban context). Therefore, a design process has been undertaken where 'alternatives' have been considered and disregarded. Therefore, alternative development designs are considered to be applicable and will be taken forward to Step 2.
'Do nothing' scenario	✗	The EIA (as reported within this ES) has assessed the likely significant effects largely based on a deviation from the baseline environment, which is in essence the current scenario. Technical Chapter 6 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). 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 level of redevelopment occurring within Manchester City Centre.

In addition, given the strategic position of the Site within Manchester City Centre, is considered likely that if the Proposed Scheme was not to come forward, another form of redevelopment would likely be proposed. The environmental effects of any such proposal are unknown, as they would be dependent on a proposal's own nature.

Therefore, the 'do nothing' scenario was not considered to be applicable and will not be taken forward to Step 2.

Step 2: Assessment of 'Factors'

- 2.62 As identified above, 'alternative development designs' is the only 'factor' considered relevant for assessment in terms of alternatives and is reported below.
- 2.63 Overall, as the Site is small and constrained by the presence of a railway line, roads and buildings which border the Site, there have been limited opportunities for major design alternatives. However, the design of the Proposed Scheme has evolved through the design process following technical modelling and in response to feedback from MCC in the form of Pre-Application discussions and the resulting issue of feedback.
- 2.64 The massing of the proposed building has undergone several reiterations to take account of the surrounding buildings including the development of an oversail of York Street to counter the proximity to Bracken House.
- 2.65 In addition to the massing changes made with respect Bracken House, the Proposed Scheme has been subject to wind model testing, to ensure that conditions at the Site/surrounding area will be safe and suitable to for their intended uses.
- 2.66 The external façade has given due regard to its surroundings, including omission of windows adjacent to the railway line thereby minimising risk of solar glare.
- 2.67 The initial PBSA proposals included for 88 beds which have subsequently been increased to 100 beds with the final number of 107 beds forming the Proposed Scheme, responding to market demand.
- 2.68 The design of the Proposed Scheme has also taken into account the location of the Site within Flood Zone 3; such measures to account for this include:
- Inclusion of a setback at Level 09. A blue roof will be installed at Level 09 to allow the required surface water discharge rate to be achieved;
 - Relocation of the winter garden from Level 02 to create a walled garden within the entrance lobby on the GL adjacent to Charles Street to allow the raising of more sensitive uses (office and parcel room) from GL to Level 01; and

- Inclusion of a flood resistant box, in which the lift shafts and M&E services will be located.

2.69 Overall, the Proposed Scheme has evolved through the design process following technical modelling and in response to feedback from MCC. Changes to the massing have been made to take account of the existing development, whilst internal changes have ensured that appropriate flood mitigation measures are included within the design to ensure the Proposed Scheme is suitable for its end use.

Limitations and Assumptions

2.70 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”

2.71 Where **Technical Chapter 6** experiences limitations or are based on assumptions these have been clearly identified within the relevant chapter.

References

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- ¹ Department for Levelling Up, Housing and Communities (2020) Planning Practice Guidance [Online], available at: <https://www.gov.uk/guidance/environmental-impact-assessment>.
- ² IEMA, Environmental Impact Assessment Guide to: Shaping Quality Development, November, 2015.
- ³ IEMA, Environmental Impact Assessment Guide to: Delivering Quality Development, July, 2016.
- ⁴ IEMA (2023) Environmental Assessment of Traffic and Movement, July, 2023.
- ⁵ IAQM “Guidance on the assessment of dust from demolition and construction” v2.1 2023 Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf>
- ⁶ Defra (2022) ‘Local Air Quality Management Technical Guidance Document LAQM.TG (22). Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>
- ⁷ BS 5228-1:2009 + A1:2014 Code of Practice for noise and vibration control on construction and open sites - Part 1 - Noise and Part 2 - Vibration
- ⁸ Manchester City Council (2022) ‘Planning & Noise Technical Guidance’ October 2022
- ⁹ British Standard 4142:2014+A1:2019; ‘Methods for rating and assessing industrial and commercial sound’
- ¹⁰ BS 8233: 2014 Guidance on sound insulation and noise reduction for buildings
- ¹¹ NHS Healthy Urban Development Unit (HUDU) (2019) Rapid Health Impact Assessment Toolkit (4th Edition)
- ¹² NHS (2023). ‘Find a GP’ [Online]. Available at: <https://www.nhs.uk/service-search/find-a-gp>
- ¹³ Construction (Design and Management) Regulations 2015 No. 51.
- ¹⁴ ONS via Nomis (2023) Business Register & Employment Survey: 2022 &c2=2092957698
- ¹⁵ https://mappinggm.org.uk/gmsf-consultation-2019/?lyrs=gmeu_sbi#os_maps_light/15/53.4779/-2.2356

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- ¹⁶ CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas
- ¹⁷ Institute of Lighting Professional (ILP) GN01-2021 Guidance Notes for Reduction of Obtrusive Light
- ¹⁸ BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places
- ¹⁹ ILP Guidance Note 08/23: Bats and Artificial Lighting at Night
- ²⁰ CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- ²¹ The Hazardous Waste (England and Wales) Regulations 2005 No. 894.
- ²² Control of Asbestos Regulations 2012 No. 632.
- ²³ CIRIA (2014) C733 Asbestos in soil and made ground: a guide to understanding and managing risks.
- ²⁴ <https://www.unitedutilities.com/corporate/about-us/our-future-plans/water-resources/water-resources-management-plan/>.
- ²⁵ Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition
- ²⁶ Institution of Lighting Professionals (2021). Guidance Note 01/21: The Reduction of Obtrusive Light.
- ²⁷ ILP Guidance Note 01/21 The Reduction of Obtrusive Light (2021); CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas; and British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places. ILP Guidance Note 08/23: Bats and Artificial Lighting at Night.
- ²⁸ Environment Agency (2023) Landfill capacity – England 2022 – Version 1. Available online: <https://environment.data.gov.uk/portalstg/home/item.html?id=a07458942af14410b54ce8f3758d4bff> [Accessed 17/11/2023].
- ²⁹ CIRIA C741 (2015) Environmental good practice on site
- ³⁰ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>
- ³¹ 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>
- ³² The Waste (England and Wales) Regulations 2011 No 988
- ³³ Controlled Waste (England and Wales) Regulations 2012
- ³⁴ The Hazardous Waste (England and Wales) Regulations 2005
- ³⁵ Control of Asbestos Regulations 2012
- ³⁶ British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice.
- ³⁷ Manchester City Council (2023) 'GD 04 Waste Storage and Collection Guidance for New Developments', Version 7.00
- ³⁸ Fire Protection Association (2023) Fire Prevention on Construction Sites: The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation
- ³⁹ 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: <https://www.legislation.gov.uk/uksi/2017/571/contents> and <https://www.legislation.gov.uk/uksi/2018/695/contents/made> [Accessed: 14/11/2023].
- ⁴⁰ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government: Planning Practice Guidance Environmental Impact Assessment. Available at: <https://www.gov.uk/guidance/environmental-impact-assessment#the-purpose-of-environmental-impact-assessment> [Accessed: 14/11/2023].

3. Site Context

Introduction

- 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 to avoid the need for repetition within **Technical Chapter 6**.
- 3.2 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 Chapter 6**). A summary of the sensitive receptors included in **Technical Chapter 6** is included in **Table 3.1**.

Location and Setting

- 3.3 The Site (**Figure 1.1**) is approximately 0.04ha and currently comprises a being used as a construction compound. The Site is located in the administrative area of MCC. The Site is bound by Bracken House to the east; Charles Street to the south; and York Street to the west.
- 3.4 Bracken House to the east comprises of residential use with the Paintpots day nursery on the ground floor. An external play area lies immediately adjacent to the east of the Site. It is understood that the residential use of Bracken House is currently vacant while works to the cladding of the façade of the buildings are being undertaken.
- 3.5 Within the arches of the raised railway viaduct is a commercial (garage) development which borders the Site to the north at ground level.
- 3.6 The mixed use Circle Square development lies to the south with the Maldron Hotel and Oxford Road to the west and Oxford Road Station to the north-west. A surface level car park, York Street Car Park is located north of the railway viaduct with the River Medlock forming the northern boundary of this car park.

Historic Context

- 3.7 The earliest available ordnance survey (OS) map for the Site is dated 1845¹ and shows that the Site was partially developed with four rows of buildings situated parallel to Charles Street with part of a larger building to the north of the Site.
- 3.8 By 1849² the Manchester South Junction and Railway is shown to the north of the Site and several buildings are present on the Site. The Medlock New (cotton) Mill is shown to the North of the Manchester South Junction and Railway line.
- 3.9 By 1889³ there are buildings shown on the majority of the Site; the Site remains relatively unchanged till 1955⁴ where the OS maps show a reconfiguration of buildings on the Site with only buildings in the south west corner of the Site remaining by 1972⁵.

Topography

- 3.10 The topography across the Site is generally flat at approximately 31.6m Above Ordnance Datum (AOD). The surrounding topography gently slopes down from south to north.

Sensitive Receptors Considered Within the EIA

- 3.11 **Table 3.1** lists the sensitive receptors at which likely significant effects may^a occur and their relationship to the aspects of the environment outlined in Schedule 4 of the EIA Regulations⁶.

Table 3.1: Identified Sensitive Receptors

Chapter	Sensitive Receptors Identified for Assessment in this ES	Schedule 4 'factor'
Chapter 6: Daylight, Sunlight and Overshadowing	- Residential receptors in Circle Square Block 5 & 6, Bracken House and Circle Square Plot 9. - Bracken House Nursery Playground	Population and Human Health

References

¹ OS (1848) 6 inches to the mile England and Wales, 1842-1952. Surveyed 1845

² OS (1851) Town Plans of England and Wales, 1840s-1890. Surveyed 1849

³ OS (1891) Town Plans of England and Wales =, 1840s – 1890s. Surveyed 1889

⁴ OS (1956) National Grid Maps 1944 – 1972. Surveyed 1955

⁵ OS (1972) National Grid Maps 1944 – 1972. Surveyed / Revised 1949 to 1972

⁶ 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/2017/571/contents> and <https://www.legislation.gov.uk/uksi/2018/695/contents/made> [Accessed: 19/09/2023].

^a The level of effects and significance upon the identified receptors is detailed within the relevant technical chapters.

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 Chapter 6**.

4.2 The Proposed Scheme is described as:

“Full planning permission for the erection of 15-storey purpose-built student accommodation building, including site preparation works, works over the public highway and associated works.”

4.3 All temporary and permanent works will take place within the Site boundary, as shown on **Figure 4.2: Existing Site Plan / Application Location Plan**. The description of the completed project should be read in conjunction with the supporting detailed plans, as follows:

- **Figure 4.1: Existing Site Plan / Site Location Plan (10489-SHP-ZZ-A-B5D8-G100-XP-00-001);**
- **Figure 4.2: Existing Site Plan (10489-SHP-ZZ-A-B5D8-G100-XP-00-002);**
- **Figure 4.3: Demolition Plan (Existing) (10489-SHP-ZZ-A-B5D8-JC20-XP-XX-001);**
- **Figure 4.4: General Arrangement Plan (Ground Floor) (10489-SHP-ZZ-A-B5D8-G200-PL-00-001);**
- **Figure 4.5: General Arrangement Plan (Level 01) (10489-SHP-ZZ-A-B5D8-G200-PL-01-001);**
- **Figure 4.6: General Arrangement Plan (Level 02) (10489-SHP-ZZ-A-B5D8-G200-PL-02-001);**
- **Figure 4.7: General Arrangement Plan Typical Levels 03 – 08 (Level 03 shown) (10489-SHP-ZZ-A-B5D8-G200-PL-TY-001);**
- **Figure 4.8: General Arrangement Plan Typical Levels 09 – 14 (Level 09 shown) (10489-SHP-ZZ-A-B5D8-G200-PL-TY-002);**
- **Figure 4.9: Proposed Site Plan (Roof) (10489-SHP-ZZ-A-B5D8-G200-PL-RF-001);**
- **Figure 4.10: General Arrangement Plan (Roof) (10489-SHP-ZZ-A-B5D8-G200-PL-RF-002);**
- **Figure 4.11: General Arrangement Section AA (10489-SHP-ZZ-A-B5D8-G200-SE-AA-001);**

- **Figure 4.12: Façade Detail Charles Street abd North Elevations Ground Floor (10489-SHP-ZZ-A-B5D8-G251-DE-XX-007);**
- **Figure 4.13: Façade Detail East Elevation Ground Level (10489-SHP-ZZ-A-B5D8-G251-DE-XX-009);**
- **Figure 4.14: Façade Detail Charles Street Lower Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-002);**
- **Figure 4.15: Façade Detail Charles Street Upper Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-001);**
- **Figure 4.16: Façade Detail North Elevation Typical (Parapet) (10489-SHP-ZZ-A-B5D8-G251-DE-XX-003);**
- **Figure 4.17: Façade Detail East Elevation Typical (Parapet) (10489-SHP-ZZ-A-B5D8-G251-DE-XX-006);**
- **Figure 4.18: Façade Detail York Street Ground Floor (10489-SHP-ZZ-A-B5D8-G251-DE-XX-008);**
- **Figure 4.19: Façade Detail York Street Lower Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-004); and**
- **Figure 4.20: Façade Detail York Street Upper Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-005)**

4.4 The Application is supported by additional plans to those set out above, however, they have not been included for the ES as the information presented within them are appropriately provided in the above listed plans.

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 (Sui Generis) – up to 107 units; and
- 147m² GIA amenity space.

4.6 Single bed occupancy units will be provided across Levels 02 up to Level 14. Typical arrangements are set out within **Figures 4.6, 4.7 and 4.8.**

4.7 As defined on **Figures 4.4, 4.5 and 4.6** supporting ancillary amenity uses will be located at Ground Level (GL), and Level 01 and Level 02 (i.e., plant areas, waste storage, cycle storage, office, meeting rooms, laundry facilities, amenity spaces).

Layout / General Arrangement and Amenity Space

4.8 The Proposed Scheme will comprise a singular building comprising ground floor plus 14 storeys. The building provides for three volumes, with an undercut at GF and Level 01 and a set back at Level 09. The proposed uses for each level comprise of the following:

- Ground Level (**Figure 4.4**): walled garden entrance, plant areas, waste storage and cycle stores;
- Level 01 (**Figure 4.5**): plant areas, laundry facilities, parcel room, meeting room, office and amenity space;
- Level 02 (**Figure 4.6**): amenity area and 5 standard studio student accommodation;
- Level 03 – 08 (**Figure 4.7**): 8 standard studios and two large studios ;
- Level 09 – 14 (**Figure 4.8**): 5 standard studios, 1 accessible studio and 1 large studio; and
- Roof (**Figure 4.9 and 4.10**): further plant will be located on the roof of the building.

Heights

- 4.9 As set out within **Figure 4.11**, the Proposed Scheme comprises of a single building comprising of GL, 14 Storeys plus roof level. The tallest element of the Proposed Scheme (the parapet) will extend up to a maximum height of 79.705m AOD.
- 4.10 The proposed finished floor level at GL is set at 31.900m AOD, which is 300mm above the pavement on Charles Street, to allow for internal ramped disabled access.

Table 4.1: Proposed heights of finished floor levels

Finished Floor Levels	Height (m AOD) ^a
Level GL	31.900
Level 01	35.000
Level 02	38.355
Level 03	41.280
Level 04	44.205
Level 05	47.130
Level 06	50.055
Level 07	52.980
Level 08	55.905
Level 09	58.830
Level 10	61.755
Level 11	64.680
Level 12	67.605
Level 13	70.530

Finished Floor Levels	Height (m AOD) ^a
Level 14	73.455
Roof	76.380

a – heights specified are at the floor level.

Building Materials

- 4.11 The proposed tower will generally be constructed using concrete to create the superstructure of the tower element and provide the necessary structural stability of the building.
- 4.12 The external façade of the building will differ slightly depending on the elevation and to reflect the three distinct volumes of the building. Materials include:
- Light bronze anodised aluminium;
 - Buff cream textured facing brick;
 - Green flat panel glazed terracotta;
 - Buff cream glazed brick;
 - Triangular profited glazed terracotta extrusion; and
 - Buff cream wirecut facing brick.

The details of materials used for each façade are shown on **Figures 4.12 to 4.20**.

Operational Access and Parking

- 4.13 There will be no specific vehicular access to the Site. There are currently 14 car parking spaces on York Street and it is proposed that two of these parking bays are reallocated as one disabled bay with loading bay to allow for an appropriate delivery and servicing point (including for refuse collection purposes).
- 4.14 Residents will be able to access the entrance lobby of the Proposed Scheme from Charles Street.
- 4.15 The proposed cycle store for 28 bikes is located on Level GL (**Figure 4.4**) accessible externally from York Street.

Operational Traffic

- 4.16 As there will be no provision/access to the Site for vehicles, traffic movements associated with the Proposed Scheme will be limited to those for waste collections, deliveries and maintenance (approximately 10 off peak vehicle movements).
- 4.17 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 implement a management plan ensuring that suitable management measures are 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.

- 4.18 Further details are provided in the Transport Statement and Interim Travel Plan submitted with the Application.

Operational Hours

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

Lighting Strategy

- 4.20 Artificial lighting will largely be contained to the interior of the building and the pathway to the north of the Site. Existing lighting on the surrounding road network (York Street and Charles Street) will be retained.
- 4.21 The additional external lighting is with regards to the pathway to the north of the Site which provides access between York Street to the stairwell at the nursery situated at the ground level of Bracken House. Lighting installations along this pathway will comprise of wall lights with full light cut off. The lighting design comprises of Thorn Cesar LED spotlights which have shown Lux levels to be approximately <0.5 lux at 1 m above ground and 0 lux from around 2 m above ground.
- 4.22 Further details can be found in the Design and Access Statement, submitted with the Application.
- 4.23 Lighting is assumed to be operational 24 hours a day to provide a 'safe place' for pedestrians and future users of the Site (i.e. reduction in crime measures) as well as to ground the Proposed Scheme within the context of the surrounding urban realm.

Building Safety

- 4.24 The operator of the facility, once appointed, is expected to have in place the required emergency producers/practices (i.e. Fire Emergency Evacuation Plan (FEEP)) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for these uses. In addition, the buildings will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law.
- 4.25 The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (including appropriate lighting and digital entry systems at each building).
- 4.26 Plant rooms and equipment will be designed to contain any spills through bunds and prevent infiltration into ground.

Surface Water Drainage Strategy

- 4.27 The Flood Risk Assessment, submitted with the Application provides details of proposed the proposed surface water drainage strategy. A summary of the drainage strategy which is assumed to be implemented as part of the Proposed Scheme is provided below.

- 4.28 Surface water flows resulting from the building's roof area will discharge into the public surface water sewer located at the north of York Street. Surface water discharge rates must be restricted to a minimum of 50% compared to the existing situation during the 1 in 100 year + 50% climate change event. This equates to 2.5l/s for the Site. Flows in excess of this will be attenuated within a blue roof at Level 09. Full details regarding the installation of a blue roof will be finalised during the detailed design phase. However, the design will be in accordance with CIRIA proposal 3084¹.
- 4.29 Should flooding from the River Medlock to the north occur, most of the ground floor level of the building will be allowed to flood via perforated panels or another venting system. This will allow water to penetrate this area during a flood event and allow it to drain back out again once the flood had subsided.
- 4.30 There will be a proportion of the ground floor level which will not be allowed to flood, this area will comprise of lift shafts and M&E service area. The total footprint of the flood exclusion area is approximately 10m x 8m. Below the ground floor level will be an undercroft with the full 350m² area available to flood at all times via flood venting system. The soffit of the ground floor level will be set at a level no less than 31.400m AOD, which is higher than the 1 in 100 year flood level associated with the River Medlock.

Foul Water Strategy

- 4.31 There will be a separate foul and surface water drainage system.
- 4.32 The proposed drainage system will be designed in accordance with BS EN 752:2017, Building Regulation Approved Document Part H.
- 4.33 The proposed connection to the public sewer system will be into the public combined sewer networks either within York Street or Charles Street, subject to agreement with United Utilities under a Section 106 Agreement.

Potable Water Strategy

- 4.34 United Utilities will be consulted prior to construction to assess the impact of this increase in the water supply and ensure that the supplies can be met without creating a noticeable effect on local residents or at source.

Energy Strategy

- 4.35 The Proposed Scheme will conform to the requirements set out in Parts L2A (Conservation of Fuel & Power) of the Building Regulations 2021 and Woking Councils key Local and Core Strategy policies.
- 4.36 The energy strategy provides for an all electric with Variable Refrigerant Flow (VRF) type space heating and cooling and an Air Source Heat Pumps (ASHP) for Domestic Hot Water (DHW), as well as highly efficient fabric. It is assumed that there will be a requirement for a gas fired backup provided for the DHW but this is intended just for backup or very cold external temperatures.

Waste Arisings and Strategy

- 4.37 An operational waste strategy will be developed in line with the British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice and in accordance with MCC's Waste Storage and Collection Guidance².
- 4.38 Storage and collection facilities will be provided through provision of 4, 1100 litre eurobins based on 70 l/bed with two collections per week provided.

Resilience to Climate Change

- 4.39 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:
- The Building Regulations³ will be considered in relation to the impact of ground movement in foundation design.
 - The building will be designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes.
 - Provision of water efficient fixtures and fittings, i.e. low flow taps and low water use WCs.
 - In accordance with national guidance the mitigation proposed in the Flood Risk Assessment will take into account the potential effects of climate change to minimise risk of flooding. This includes:
 - Ground floor level of the building set at 31.900m AOD, which is 300mm above the pavement on Charles Street, to allow for internal ramped disabled access;
 - Inclusion of a void (undercroft) underneath the ground floor slab with cladding around the envelope of the building designed with flood vents to allow flood waters to pass through the undercroft unimpeded in the event of a flood. The soffit of the ground floor slab will be set no less than 31.400m AOD (higher than 1 in 100 year on-site flood level).
 - The ground floor of the building will also be designed to allow flood waters to enter via flood vents, however a small area of approximately 10m x 8m will be flood proofed which will not be able to flood, in which the lift shafts and M&E services will be located.
 - The ground floor level will only be used for less vulnerable uses, the student accommodation will be located at first floor level and above. The first floor level of the building will be set at 35.000m AOD.

- The building will be designed to include flood proofing measures in accordance with CIRIA C624 'Development and Flood Risk Guidance for the Construction Industry'.

Construction of the Proposed Scheme

Construction Programme and Phasing

4.40 The Proposed Scheme will be delivered in one phase, with initial site works anticipated to commence in March 2024 with completion of the Proposed Scheme by September 2025.

4.41 Construction works are anticipated to comprise the following key stages, broadly in chronological order:

- Demolition and enabling works, including Site securement and formation of construction access(s) and temporary construction compound (within the Site) (see **Figure 4.3**);
- Site preparation works, including removal of existing low level fencing / brick walls along the boundary of the Site, vegetation clearance works, utilities diversions (where appropriate), provisions for retained features, etc.;
- Site clearance works, including hardstanding and other features to be removed, utilities (where applicable) and below-ground services / structures (where applicable);
- Earthworks and infrastructure, including remediation (if required), formation of drainage features, utilities installation and re-profiling to create development platform levels;
- Foundations and substructure installation;
- Construction of building (including facades) and associated infrastructure (i.e. services and plant);
- Internal fit-out; and
- Implementation of proposed landscaping, lighting, internal and external finishing.

4.42 Where appropriate, these activities are discussed in further detail below. Where assumptions have been made these have been clearly stated.

4.43 A commitment has been made to a number of environmental mitigation measures to be adopted throughout the construction stage, intended to be secured and managed through a Construction Environmental Management Plan (CEMP).

Site Securement

4.44 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

- 4.45 Access during construction will be taken from York Street. Temporary secure access gates will be provided to manage the movement of vehicles, plant and personnel into/out of construction working areas.
- 4.46 It is assumed that York Street and Charles Street will remain open and protected with temporary protective barriers, to be installed between the public and construction activities. There may be instances where these roads require temporary closure (in their entirety) (i.e., delivery of large machinery) however, this will be managed in conjunction with MCC to limit road closures.
- 4.47 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.
- 4.48 It is assumed that the Proposed Scheme would generate no more than 30 (with an approximate 1:3 Heavy Good Vehicles to Light Good Vehicles ratio) vehicular movements per day.

Construction Compound

- 4.49 During construction, a construction compound, welfare facilities and other temporary infrastructure required for the contractor and appointed subcontractors (i.e., material laydown / storage areas, waste handling areas etc.) will be established within the Site. The exact location of the construction compound(s) is unknown at this time, but it will be within the Site.
- 4.50 The principal contractor will identify the proposed compound location within a Site Layout Plan as part of a CEMP for submission and approval by MCC prior to commencement of construction activities on-site.

Temporary Drainage Strategy

- 4.51 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).
- 4.52 Changes to surface water flood risk during the construction stage will be managed through appropriate drainage strategies, using either existing (until removed) and / or temporary drainage systems (before the permanent drainage strategy is installed). Management of surface water will also take account of industry best practice and guidance (i.e. British Standard 8582:2013 — Code of practice for surface water management for development sites⁴, Guidelines for Pollution Prevention⁵ and The SuDS Manual (C753)⁶). In addition, the following further measures will be implemented as part of the CEMP:
- Storage of all materials appropriately to avoid increasing flood risk off-site;

- Awareness training for construction workers;
- Regular maintenance of gullies and drainage systems to prevent debris from causing obstructions;
- Protection of existing drainage pop-ups (which discharge into combination of existing private sewers) to prevent surface water from running off-site uncontrolled; and
- Dewatering to sewers will only be carried out under a licence from United Utilities as the statutory undertaker.

4.53 Measures will be implemented through the CEMP to minimise the risk of detrimental effects on water quality from construction activities, including the use of specific method statements and adherence to good-site practices as well as:

- Wheel washing facilities;
- Screening stockpiles and materials;
- Use of sediment traps on surface water drains;
- Safe storage of materials, fuels and oils (including bunded storage);
- Washing down / equipment cleaning associated with concrete or cementing processes and provision of facilities to remove sediment prior to disposal;
- Earth movements will be controlled to reduce the risk of silt combining with run-off and implementation of protection measures to minimise silts and construction arisings;
- Use of impermeable materials to prevent ingress into the ground; and
- Regular sweeping to remove loose sediments and prevent build-up of dust and mud.

4.54 For piled foundations, the method of construction will be carefully selected to ensure that the potential migration of any physical contamination into the underlying ground is kept to a minimum. Such activities will be undertaken in line with approved guidance.

Utilities Strategy

4.55 The Proposed Scheme will apply for new mains cold water and new electrical supplies into the building. Applications will be made with the network operators to obtain details and agree final locations and details.

4.56 Any utilities requiring diversion, stopping up or temporary relocation will be undertaken in line with an agreed strategy with the relevant network operators.

4.57 The works / route of any new connections is not fully known at this stage. However, it is assumed that the works will be limited in nature, temporary and short-term, for a

limited time within the overall construction programme. In addition, a small number of receptors (predominantly comprising pedestrians, cyclists and drivers of vehicles) would be likely be affected. Therefore, no significant effects are anticipated to arise.

Features for Retention / Removal

- 4.58 No features on Site will be retained. **Figure 4.3 Demolition Plan (Existing)** shows the removal of the car park surface, the low level fencing / brick walls and the ramp/stairs to the south east of the Site will be removed.
- 4.59 In conjunction with and/or following ground investigation work(s) and remedial activities; a layer of ground may need to be stripped from the Site.

Earthworks, Levels and Material Management

- 4.60 Given the topography and size of the Site, it is anticipated that ground levels will remain broadly the same and that a broad cut and fill balance will be achieved.
- 4.61 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.
- 4.62 All waste arisings during construction are to be controlled through the implementation of a CEMP and a best practice waste management strategy.

Remediation Strategy

- 4.63 A Remediation Strategy has been prepared and submitted with the Application and will be agreed with MCC prior to commencement of remediation works.

Foundations Solution

- 4.64 Foundation design will be undertaken in accordance with relevant industry guidance including CIRIA Report C572⁷ and BRE FB75⁸.
- 4.65 Given the anticipated loading of the proposed building, along with the likely ground conditions on the Site, it is anticipated that piled foundations will be required for the construction of the buildings. It is assumed that bored piles will be installed using continuous flight auger (CFA) techniques or using rotary augured piles drilled using a support fluid (as appropriate). Ground improvement techniques (e.g. vibro-compaction) may also be required.

Cranes

- 4.66 The use of mobile cranes and tower cranes is anticipated for the construction of the Proposed Scheme.

Working Hours

- 4.67 Construction working hours⁹ (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

- 4.68 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

- 4.69 Sources of waste during the construction stage are assumed to relate to 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.
- 4.70 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.
- 4.71 The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going management responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste.

Construction Environmental Management Commitments

- 4.72 The proposed construction works will be carried out by a competent contractor, who will comply with current legislation (including the Health and Safety at Work etc. Act 1974, the Control of Pollution Act 1974 and Construction (Design and Management) Regulations 2015). This will be captured within the CEMP, the contract documents, methods statement and risk assessments issued by the appointed contractor(s) ahead of the works.
- 4.73 A commitment has been made to a number of environmental measures and management practices during the construction stage and, where appropriate, these have been set out as part of the CEMP and will be agreed with MCC.
- 4.74 The final working CEMP will include the following:
- 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 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;
- 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.

4.75 Full details of the measures committed to are provided within **Volume 3: Environmental Management Plan (EMP)**.

References

¹ CIRIA proposal 3084 (April 2019) 'Guidance on the delivery of blue roofs'

² Manchester City Council (2023) 'GD 04 Waste Storage and Collection Guidance for New Developments', Version 7.00

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf

⁴ 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/Products/BS-8582-2013)

⁵ <https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/guidance-for-pollution-prevention-gpps-full-list/>.

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

⁷ CIRIA Report C572: Treated ground engineering properties and performance

⁸ British Research Establishment document FB75: Building on Fill - Geotechnical Aspects

⁹ Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](#)

¹⁰ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>

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>

5. Air Quality Screening Evaluation

Introduction

- 5.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to air quality.

Summary of Consultation

- 5.2 **Table 5.1** provides an overview of the consultation that has been undertaken to inform the likely significant effects and the methodology for assessment.

Table 5.1: Summary of Consultation

Body Organisation	/ Contact	Date and Form of Consultation	Summary
MCC	Environmental Health Officer.	Email, 14 November 2023. Email, 16 November 2023.	Consultation regarding scope and methodology with respect to the assessments for construction dust emissions, road traffic emissions and emissions from the railway line. No specific feedback received to date.

Evaluation of Potential Effects

Nuisance and disturbance as a result of dust from construction activities [existing residential receptors within 250 m of the Proposed Scheme]

- 5.3 Construction activities have the potential to result in nuisance and or adverse health effects due to dust deposition arising from on-site construction activities, resulting in the soiling of surfaces; visible dust plumes and elevated PM₁₀ concentrations as a result of dust-generating activities on-site.
- 5.4 It is anticipated that dust and particulate matter (PM) emissions produced during construction activities will be controlled through the implementation of a CEMP. This CEMP will be informed by an assessment completed following Institute of Air Quality Management (IAQM) guidance¹ and will include prevention measures, such as screening stockpiles of materials and setting out requirements for ongoing monitoring and liaison with the local community, and MCC. The construction assessment has been completed and both the assessment and the resulting mitigation is provided in **Appendix 5.1**. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the Environmental Management Plan (see **Volume 3: Environmental Management Plan**).

- 5.5 As part of the CEMP, all non-road mobile machinery (NRMM) will comply with the standards set within the IAQM guidance.
- 5.6 Therefore, nuisance and disturbance as a result of dust from construction activities to existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Traffic-related air pollution as a result of construction activities [existing residential receptors]

- 5.7 Vehicle emissions from road traffic associated with the construction phase of the Proposed Scheme have the potential to result in an increase in air pollution. In terms of traffic generation during the construction phase of the development, it is anticipated that there will not be a change in:
- Light-duty vehicle (LDV) flows of more than 100 annual average daily traffic (AADT) on roads with relevant receptors; and
 - Heavy-duty vehicle (HDV) flows of more than 25 AADT on roads with relevant receptors.
- 5.8 EPUK and IAQM guidance² indicates that the likely impacts of operational traffic on local air quality will not, therefore, be significant. Therefore, traffic-related air pollution from the operational phase on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Traffic-related air pollution as a result of the operational phase of the Proposed Scheme [existing residential receptors]

- 5.9 Vehicle emissions from road traffic associated with the operational phase of the Proposed Scheme have the potential to result in an increase in air pollution. The Proposed Scheme does not have any parking spaces. In terms of traffic generation during the operational phase of the development, it is anticipated that there will not be a change in:
- LDV flows of more than 100 AADT on roads with relevant receptors; and
 - HDV flows of more than 25 AADT on roads with relevant receptors.
- 5.10 EPUK and IAQM guidance² indicates that the likely impacts of operational traffic on local air quality will not, therefore, be significant. Therefore, traffic-related air pollution from the operational phase on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the heating system associated with the Proposed Scheme [existing residential receptors]

- 5.11 Combustion appliances used to heat buildings, such as gas-fired boilers, have the potential to impact air quality². However, the domestic hot water and heating / cooling systems for the Proposed Scheme will be electric. Therefore, the effect of emissions from the heating system associated with the Proposed Scheme on existing residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emergency generator associated with the Proposed Scheme [existing residential receptors]

- 5.12 An emergency generator will be installed to provide power in the event of a power failure. The emergency generator associated with the Proposed Scheme will be gas fired and, thus, has the potential to increase levels of NO₂ and particulate matter PM₁₀ and PM_{2.5}.
- 5.13 It is anticipated that the emergency generator will be tested for approximately 30 minutes per month. This equates to six hours annually.
- 5.14 The short-term nitrogen dioxide (NO₂) objective is that the 1-hour mean of 200 µg/m³ not be exceeded more than 18 times per year³. Consequently, the testing of the emergency generator will not result in exceedances of the short-term NO₂ objective because it will run for less than 18 hours annually.
- 5.15 Therefore, the effects of emissions from the emergency generator associated with the Proposed Scheme on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emissions from the railway line adjacent to the Proposed Scheme [new residential receptors]

- 5.16 Stationary diesel locomotives can give rise to high short-term NO₂ and SO₂ concentrations near railway stations or depots. Additionally, moving locomotives can contribute to elevated short-term NO₂ and SO₂ concentrations close to the track. The Manchester Piccadilly to Manchester Deansgate rail line borders the northern boundary of the Proposed Scheme; future occupants will be within 30 m of the railway line.
- 5.17 There are unlikely to be stationary locomotives adjacent to the Proposed Scheme but this railway line is identified by Defra as having significant diesel locomotive use³ and thus has the potential to have a significant effect on air quality at the Proposed Scheme.
- 5.18 Defra Guidance LAQM.TG (22)³ provides a methodology for the assessment of railway emissions (Paragraphs 7.21 to 7.22 and Table 7.2 of LAQM.TG (22)) which uses background annual mean NO₂ concentrations as an indication of the potential for significant effects. Defra advises that, if the background annual mean NO₂ concentration is below 25 µg/m³, a detailed assessment of the railway line can be screened out i.e. the effects will be not significant.
- 5.19 Following the guidance³, Defra background concentrations of NO₂ have been used⁴, alongside results from the automatic monitoring at Manchester Piccadilly⁵, to calculate the background concentrations at the development site in the opening year of the development.
- 5.20 A factor for adjusting the Defra background data for 2026 has been calculated using the following formula:

$$\text{Factor} = \frac{\text{Monitored concentration in 2022}}{\text{DEFRA Map 2022 Concentration}}$$

- 5.21 This factor has then been applied to the 2026 Defra background concentration data. The results are shown in **Table 5.2**.

Table 5.2: Calculated Background NO₂ Concentrations for 2026

Monitoring location	Monitored NO ₂ background concentration for 2022	Defra background NO ₂ concentration for 2022	Adjustment factor	Defra background NO ₂ concentration for 2026 at the Site	Calculated background NO ₂ concentration for 2026 at the Site
Manchester Piccadilly	29	26.25	1.105	21.85	24.14
(Grid reference 384310,398337)					

- 5.22 Both the Defra and the calculated background concentration of annual mean NO₂ for 2026 are less than 25µg/m³. Following Defra guidance, therefore, the impact of the railway adjacent to the Proposed Scheme on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of emissions from existing road traffic to the Proposed Scheme [new residential receptors]

- 5.23 Vehicle emissions from road traffic on roads adjacent to the Site have the potential to impact the Proposed Scheme. There will be no residential units on the ground or first floor but at second floor level and above, residential accommodation is proposed.
- 5.24 The Site is located within the Greater Manchester Air Quality Management Area (AQMA). The Greater Manchester AQMA has been declared based on the outputs of air dispersion modelling for the year 2016 at a height of 0 m. This modelling work was completed by Transport for Greater Manchester (TfGM). All locations across Greater Manchester that were predicted to be above a NO₂ annual mean of 35 µg/m³ were included within the AQMA. The annual mean objective is 40 µg/m³ and the selection of 35 µg/m³ as the threshold was selected to account for model uncertainty.
- 5.25 The TfGM modelling results for the Site, shown in **Figure 5.1⁶**, indicate that the NO₂ annual mean concentrations along Charles Street and thus the front façade of the building were in the region of 43 µg/m³ at a height of 0 m at the time of modelling (2016). This is 3 µg/m³ (8%) above the relevant air quality objective.
- 5.26 The Greater Manchester 2022 Air Quality Status Report⁵, however, states that long-term trends show that there has been an improvement in air quality within Greater Manchester. In order to assess likely levels of NO₂ when the Proposed Scheme is operational, monitoring results for 2016 and 2017 have been obtained from the GMCA (2021) 2020 Air Quality Annual Status Report

(ASR)⁷ and the results from 2018 to 2022 were obtained from the GMCA (2023) 2022 Air Quality Annual Status Report (ASR)⁵.

- 5.27 MCC monitors NO₂ and PM₁₀ at an automatic monitoring station, Oxford Road, approximately 190 m southwest of the Site. There are two NO₂ diffusion tube sites, including a triplicate tube monitoring location within 200 m of the Site. These identified roadside and kerbside monitoring sites are located along the B5117, Oxford Street and Oxford Road, which is a busy and congested road. Comparatively, the Site is located on a minor road, approximately 80 m east of the B5117 and 100 m west of the A34.
- 5.28 There is an urban background monitoring location approximately 830 m northeast of the Site which consists of an automatic monitoring station, Manchester Piccadilly, and triplicate NO₂ diffusion tubes. Manchester Piccadilly automatic monitoring station monitors NO₂, PM₁₀ and PM_{2.5}. There is also an urban background NO₂ diffusion tube, MAN72, approximately 520 m southeast of the Site.
- 5.29 Consequently, there are no monitoring sites representative of the Site. However, the identified monitoring locations indicate air quality in the general area and how it has changed since 2016. The results from the monitoring sites are shown in **Table 5.3** and the monitor locations are shown in **Figure 5.2**.

Table 5.3: Annual Mean NO₂ Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean NO ₂ Concentrations (µg/m ³)							
		2016	2017	2018	2019	2020	2021	2022	
Oxford Road (Kerbside)	384233, 397287	66	65	62	59	36	44	43	
Manchester Piccadilly (Urban Centre)	384310, 398337	40	36	35	36	27	30	29	
MAN72 Lockton Close (Urban background)	384761, 397384	40.0	34.6	33.4	32.8	24.5	27.5	26.3	
MAN82-MAN 84 Oxford Rd co-located tubes (Roadside)	384239, 397276	60.2	56.2	54.0	52.0	33.9	40.7	42.6	
MAN59-61 Manchester Piccadilly co-located tubes (Urban background)	384310, 398337	40.8	35.7	31.6	33.1	22.3	24.6	25.3	
MAN29 (Roadside)	384119, 397503	66.2	57.7	58.8	55.4	39.0	44.8	49.8	
Annual Mean NO ₂ air quality objective		40 µg/m ³							

- 5.30 The monitoring results in **Table 5.3** indicate that annual mean concentrations of NO₂ range from below the annual average air quality objective to well above it depending on proximity to road traffic emissions. The 2020 results show the impact of Covid-19 and reduced traffic flows. In 2021, when lockdown restrictions began to be lifted in earnest, concentrations increased at all sites, although did not rise as high as concentrations measured in 2019.
- 5.31 The monitoring results in **Table 5.3** corroborate the conclusion within the Greater Manchester 2022 Air Quality Status Report⁵ that there has been an improvement in air quality within Greater Manchester since 2016. Annual average concentrations at all of the diffusion tubes have fallen by at least 10 µg/m³. Therefore, the NO₂ concentrations at the Site are expected to have improved compared to those predicted in the TfGM model outputs.
- 5.32 The GMCA Air Quality Annual Status reports provide the number of hours that the 1-hour mean has exceeded 200 µg/m³. Since 2016, Manchester Piccadilly has only recorded one hour in which the 1-hour mean exceeded 200 µg/m³, which was in 2017. Therefore, since 2016, the short-term objective for NO₂ has not been exceeded at the Manchester Piccadilly automatic monitoring station.
- 5.33 In 2016, the 1-hour mean exceeded 200 µg/m³ 90 times at the Manchester Oxford Road automatic monitoring station. Since 2017, the greatest number of times the 1-hour mean has been exceeded at the Manchester Oxford Road automatic monitoring station was six times in 2017. Therefore, since 2017, the short-term objective for NO₂ has not been exceeded at the Manchester Oxford Road automatic monitoring station.
- 5.34 MCC monitors PM₁₀ at two automatic monitoring stations, Oxford Road and Manchester Piccadilly, within 830 m of the Site. The Manchester Piccadilly automatic monitoring station also monitors PM_{2.5} concentrations. The results from the monitoring stations are shown in **Table 5.4**, **Table 5.5** and **Table 5.6**; the locations of the monitors are shown in **Figure 5.1**.

Table 5.4: Annual Mean PM₁₀ Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean PM ₁₀ Concentrations (µg/m ³)							
		2016	2017	2018	2019	2020	2021	2022	
Oxford Road (Kerbside)	384233, 397287	27	27	30	26	18	18	18	
Manchester Piccadilly (Urban Centre)	384310, 398337	20	20	21	20	15	15	17	
Annual Mean PM ₁₀ air quality objective		40 µg/m ³							

Table 5.5: 24-Hour Mean PM₁₀ Concentrations Monitored by MCC

Site ID (Classification)	Location	Number of 24-Hour Mean PM ₁₀ > 50 µg/m ³							
		2016	2017	2018	2019	2020	2021	2022	
Oxford Road (Kerbside)	384233, 397287	16	15	15	18	5	2	8	
Manchester Piccadilly (Urban Centre)	384310, 398337	3	3	2	7	1	2	4	
24-Hour Mean PM ₁₀ air quality objective		not to be exceeded more than 35 per year							

Table 5.6: Annual Mean PM_{2.5} Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean PM ₁₀ Concentrations (µg/m³)						
		2016	2017	2018	2019	2020	2021	2022
Manchester Piccadilly (Urban Centre)	384310, 398337	10	8	11	12	8	9	10
PM _{2.5} Target Level		25 µg/m³						

- 5.35 The results indicate that since 2016 the PM₁₀ annual mean and 24-hour mean objective have not been exceeded at either automatic monitoring station and the PM_{2.5} concentrations at Manchester Piccadilly are below the PM_{2.5} target level.
- 5.36 In addition, pollutant concentrations, such as NO₂, decrease as the distance from the source increases³. Thus, as height (and distance from the source) increases air quality, air quality improves. The evidence from existing information sources is that the ground and first floor levels of the Proposed Scheme are likely to experience levels of NO₂ below the one-hour mean objective. Proposed residential dwellings on the second floor and above are likely to experience levels of NO₂ and PM₁₀ below the annual mean and short-term objectives for the pollutants and below the annual mean target for PM_{2.5}.
- 5.37 Therefore, the impact of road traffic emissions associated with the existing road network adjacent to the Proposed Scheme on future residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emissions from the commercial garage adjacent to the Proposed Scheme [new residential receptors]

- 5.38 There is a commercial garage, DC Motor Engineers, adjacent to the north of the Site which has the potential to impact on air quality adjacent to the Site due to emissions from vehicles within the garage. Via a phone call⁸ it was confirmed that the garage does not offer any vehicle spray painting services nor do they carry out any activity which requires extraction systems within their premises. On an average day, they have six vehicles on site.

5.39 Therefore, the effects of emissions from the commercial garage on new residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Summary

5.40 There are no air quality effects associated with the Proposed Scheme which are considered likely to be significant, therefore air quality is not considered further in the ES.

Technical Competence

5.41 **Table 5.7** provides a summary of technical competence in air quality and EIA.

Table 5.7: Technical Competence in Air Quality and EIA

Technical Competence in Air Quality		
	Lead Author	Reviewer
Name	Melody Horan	Lesley Goodall
Company	Miller Goodall Ltd	
Qualifications / Accreditations Relevant to Technical Area	MSc Environmental Science BSc (Hons) Environmental Science Member of the Institute of Air Quality Management	MSc Environmental Protection BSc(Hons) Environmental Health Member of the Institute of Air Quality Management Member Chartered Institution of Environmental Health
Does the practitioner hold any IEMA qualification?	No	No
Company hold IEMA QMark?	No	
Years Technical Experience (in Technical Area)	6 years	31 years
Number of EIA's Delivered to Date	1	10

References

¹ IAQM (2023) Guidance on the assessment of dust from demolition and construction. Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf> [Accessed: 21/11/2023].

² EPUK and IAQM (2017) Land Use Planning and Development Control: Planning for Air Quality (v1.2). Available at: <https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed: 21/11/2023].

³ Defra (2022) 'Local Air Quality Management Technical Guidance Document LAQM.TG (22). Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf> [Accessed: 21/11/2023].

⁴ Defra (2020) online support tool Background pollution concentrations. Available at: <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018> [Accessed:22/11/2023]

⁵ GMCA (2023) 2022 Air Quality Annual Status Report for Greater Manchester

⁶ TfGM screenshot provided by Ian Hull, Geospatial Team Leader, at Transport for Greater Manchester via email on the 09/11/2023.

⁷ GMCA (2021) 2020 Air Quality Annual Status Report for Greater Manchester Available at https://assets.ctfassets.net/tlpgbvy1k6h2/4IY6QAZe4MdkqcedBlbgE8/a343eef4385f33f4710bb9f08c70f59f/GM_2020_Air_Quality_Annual_Status_Report.pdf [Accessed 27/11/2023]

⁸ Phone call between DC Motor Engineers Director Colin Comerford and Miller Goodall Ltd. on 24/11/2023.

6. Daylight, Sunlight and Overshadowing

Introduction

- 6.1 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.
- 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).
- 6.4 This Chapter, and its associated **Appendix 6.1- 6.3**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 6.5 In addition, this Chapter should be read in conjunction with **Chapter 7: Assessment of Cumulative Effects**.

Summary of Consultation

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

Scope of the Assessment

Effects Not Considered to be Significant

- 6.7 The following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this.

Effects upon the daylight and sunlight amenity within commercial properties

- 6.8 The BRE Guidelines¹ consider that residential properties have the highest requirement for daylight and sunlight. As such, daylight and sunlight effects to commercial buildings surrounding the Site are not considered to be significant and will not be considered further in the ES.

Reduced daylight and sunlight amenity within surrounding residential receptors during demolition and construction

- 6.9 Owing to the evolving and changing nature of construction activities, the assessment of potential effects during construction of the Proposed Scheme on daylight and sunlight to surrounding

properties will not be modelled.

- 6.10 Since the potential daylight and sunlight effects relating to construction works will vary throughout the construction programme and gradually increase to the potential effects identified for the completed Proposed Scheme, the interim construction effects will not be assessed quantitatively as it is considered that the completed Proposed Scheme represents the worst-case assessment in terms of likely daylight and sunlight.
- 6.11 Therefore, reduced daylight and sunlight amenity within the surrounding residential receptors during the construction stages is not considered to be significant (or if it is, only on parity with the completed Proposed Scheme) and will not be considered further in the ES.

Effects Considered Likely to be Significant

- 6.12 **Table 6.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 6.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Reduced daylight amenity	Circle Square Block 5 & 6 Bracken House Circle Square Plot 9	Operation
Reduced sunlight amenity	Bracken House	Operation
Increased Shadow	Bracken House Nursery Playground	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

- 6.13 There is no legislation that governs daylight and sunlight. The criteria for assessment relating to daylight and sunlight is covered by national and local policy in addition to BRE guidance as set out below.
- 6.14 The following legislation and policy have informed the assessment of effects within this Chapter:
- Revised National Planning Policy Framework 2023²;
 - National Planning Policy Guidance 2021³;
 - Manchester Core Strategy (2012 – 2027)⁴; and
 - Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007)⁵.
- 6.15 The following guidance has informed the assessment of effects within this Chapter:

- BRE 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (2022).

Defining the Study Area

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

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

6.17 There is no specific guidance relating to the extent of a study area. The scope of residential properties that have been assessed has been determined through professional judgement, considering their orientation and proximity to the Site. In relation to the Proposed Scheme, the sensitive receptors fall within 130m from the centre of the Site.

6.18 The location of the surrounding sensitive receptors can be seen in the drawings in Appendix 6.1

Background Studies to Inform the ES / Establish the Baseline

6.19 **Table 6.2** summarises all analysis undertaken to inform the assessment presented within this Chapter.

Table 6.2: Background Technical Analysis

Analysis	Overview	Date of Completion
Daylight, sunlight and shadow baseline assessment	An assessment of the baseline daylight, sunlight and shadow levels to the surrounding sensitive receptors	November 2023

Assessment Process

Methodology for Determining Operational Effects

6.20 The following approaches are undertaken to assess the daylight, sunlight and shadow effects upon the surrounding sensitive receptors when the Proposed Scheme is completed and operational:

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

Outline Approach for Daylight, Sunlight and Shadow Assessments

6.21 The technical analyses carried out to inform the daylight, sunlight and shadow assessments have

been undertaken by creating a digital three-dimensional (3D) model of the existing Site and Proposed Scheme, based on 3D photogrammetry.

- 6.22 The 3D model uses Waldram Diagrams to establish the VSC and 3D geometric calculations for daylight distribution. This model (which is orientated to north using Ordnance Survey (OS) information) enables the path of the sun to be tracked throughout the year to establish the shadow cast by the existing and proposed buildings and thus calculate the sun hours on ground in each scenario.
- 6.23 In accordance with the BRE Guidance, only those surrounding properties which have windows facing towards the Site and are residential in usage were included in the assessment. If a nearby residential property has no windows facing the Site or cannot see the Site, these properties would not be affected by the Proposed Scheme in terms of light.

Daylight

- 6.24 The assessment of changes to the availability of daylight presented within this Chapter has been informed by two common methods, as set out below.

Vertical Sky Component (VSC) Method

- 6.25 The VSC method of assessment is defined in the BRE Guidelines as the:

“ratio of that part of illuminance at a point on a given vertical plane that is received directly from a CIE standard overcast sky, to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky”.

- 6.26 This ratio is the percentage of the total unobstructed view that is available, once obstructions (e.g. the Proposed Scheme), are placed in front of the point of view.
- 6.27 The assessment is calculated from the centre of a window on the outward face and measures the amount of light available on a vertical wall or window following the introduction of visible barriers, such as buildings. The VSC has been calculated using a 'Waldram Diagram'.
- 6.28 The Waldram Diagram is effectively a snapshot taken from that point of the sky in front of the window, together with all relevant obstructions to it, i.e. the buildings. For calculation purposes, trees may be ignored unless they form dense continuous belts.
- 6.29 Due to the limitations of peripheral vision, the maximum VSC value is almost 40% for a completely unobstructed vertical wall or window. In terms of assessment criteria, the BRE Guidelines state that:

“if the VSC, with the development in place, is both less than 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window may appear more gloomy and electric lighting will be needed more of the time”.

No Sky Line (NSL) Method

- 6.30 The BRE Guidelines provide that where room layouts are known, the effect on the daylight

distribution can be calculated by plotting the NSL. In terms of the surrounding receptors, it has not been possible to obtain room layouts for all of the properties and therefore layouts have been assumed where information is not available.

- 6.31 The NSL method is a measure of the distribution of daylight at the 'working plane' within a room. The 'working plane' means a horizontal 'desktop' plane 0.85m in height for residential properties. The NSL divides those areas of the working plane which can receive direct sky light from those which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light), then the distribution of daylight in the room will be poor and supplementary electric lighting may be required.
- 6.32 The potential effects of daylighting distribution in an existing building can be found by plotting the NSL in each of the main rooms. For houses, this will include living rooms, dining rooms and kitchens. Bedrooms should also be analysed, although the BRE state that they are less important. The BRE Guidelines identify that if the area of a room that does receive direct sky light is reduced to less than 0.8 times its baseline value, then this would be noticeable to its occupants.
- 6.33 In regard to deep rooms which are lit by windows on one side, the BRE Guidelines state (para.2.2.10):

"If an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable."

Sunlight

Annual Probable Sunlight Hours (APSH) Method

- 6.34 Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of APSH. Therefore, where no obstruction exists the total annual probable sunlight hours would amount to 1486, and each spot equates to 14.86 hours of the total annual sunlight hours.
- 6.35 In determining the effects of a development on the availability of sunlight, the assessment considers the number of spots calculated in the Baseline scenario compared to the scenario with the Proposed Scheme in place. Furthermore, assessment considers scenarios during the year and during the winter period, and a comparison made between the two. This provides a percentage of APSH for each of the time periods for each window assessed.
- 6.36 The BRE Guidelines note that:

"In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon."

"all main living rooms of dwellings...should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun".

"If the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be

checked.”

“...a south facing window will, in general, receive most sunlight, while a north facing one will receive it only on a handful of occasions. East and west facing windows will receive sunlight only at certain times of day”.

6.37 In regards to existing surrounding receptors, the BRE Guidelines provide that a window may be adversely affected if a point at the centre of the window receives less than 25% of the APSH, including at least 5% of the APSH during the winter months (21 September to 21 March), or less than 0.8 times its baseline sunlight hours during either period, or if there is a reduction in total APSH which is greater than 4%.

6.38 At Section 3.1.12 the BRE states that:

“If a room has multiple windows, the amount of sunlight received by each can be added together provided they occur at different times and sunlight hours are not double counted.”

Overshadowing

6.39 The method for assessing hours in sun is the ‘sun-on-ground indicator’. The assessment applies to both to new and existing gardens/amenity areas, which are affected by new developments. The BRE Guidelines suggest that the Spring Equinox (21st March) is a suitable date for the assessment. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

6.40 The BRE Guidelines recommend that at least half of a garden or amenity area should receive at least 2 hours of sunlight on March 21st or the area which receives 2 hours of direct sunlight should not be reduced to less than 0.8 times its former value (i.e. there should be no more than a 20% reduction).

Receptor Modelling

6.41 Where a residential sensitive receptor has rooms with windows which face the Site, any mitigating/dual aspect windows will also be modelled.

6.42 The following residential sensitive receptors have been modelled to publicly available floor plans:-

- Circle Square Block 5 & 6;
- Bracken House; and
- Circle Square Plot 9.

6.43 Where information to identify habitable rooms was unavailable, room uses and layouts were assumed to be habitable and their sizes and layouts assumed using professional judgement. In relation to sunlight modelling and analysis, where floor plans are not available and so making it difficult to determine room uses or confirm which window should be considered as the ‘main windows’, all the rooms with windows facing the Site and within 90 degrees of due south have been considered in the assessment.

- 6.44 Windows that do not face within 90 degrees of due south do not have a realistic expectation of direct sunlight, due to their orientation and the sunlight path in the northern hemisphere.

Summary of Criteria for Daylight, Sunlight and Overshadowing

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

Table 6.3: Summary of Daylight and Sunlight Assessment Criteria

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.
SHOG	An area of outdoor amenity space may be adversely affected if less than 50% of its total area is unable to benefit from at least 2 hours of sunlight on 21st March and if the reduction in sunlight is greater than 20% of the baseline level.

Reporting of the Environmental Effect and Significance Criteria

- 6.46 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

- 6.47 The sensitivity of affected receptors has been considered on a scale of **high, medium, low or negligible**.
- 6.48 It is important that the location and nature of the Site and surroundings are considered when determining the sensitivity of the receptors identified. The BRE Guide is very clear that the targets provided are not mandatory. The location of the Proposed Scheme could be deemed to be special circumstances in which the planning authority may wish to use different target values. This scope and view should also be followed through to the sensitivity of the surrounding receptors. There should be an expectation that a higher degree of obstruction is inevitable in an area with modern high-rise buildings. This point is also made in the NPPF and PPG.
- 6.49 For these reasons, the surrounding receptors may have a lower sensitivity to change in an urban location than those located in suburban, less dense areas. Therefore, for the purpose of this assessment sensitivity classification has been assigned based on how the receptor is able to

accommodate or adapt to the effect of the development, given that the existing residential receptors surrounding the Site are in a city centre location where there is an expectation for a higher density of development.

6.50 Based on the above, the sensitivity of identified receptors considered within this assessment are defined below.

6.51 The following receptors are defined as having a medium sensitivity:

- Circle Square Block 5 & 6;
- Bracken House;
- Circle Square Plot 9; and
- Bracken House Nursery Playground.

Determining the Magnitude of Change

6.52 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**.

6.53 For daylight and sunlight, the BRE Guidelines outline the approach within the accompanying appendix, in terms of assigning criteria to assess the effects. Where the BRE guidance refers to the magnitude of impacts (referred to in this ES Chapter as 'magnitude of change') as major, moderate, minor and negligible below, these should be read as large, medium, small and negligible respectively:

"Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required...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 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 in this book, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- *Only a small number of windows are affected;*
- *The loss of light is only marginally outside the guidelines;*
- *An affected room has other sources of skylight or sunlight; and*
- *The affected building only has a low level of requirement for skylight or sunlight."*

6.54 The classification of major adverse is documented within Paragraph 7 of the BRE Guidelines:

“Factors tending towards a major adverse impact include:

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

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building. Beneficial impacts should be worked out on the same principals as adverse impacts.”

- 6.55 The BRE Guidelines do not provide any guidance on what constitutes a moderate (i.e. medium) magnitude of change.
- 6.56 Therefore, best practice guidance and professional judgment will be used to determine any impacts based on the guidance set out in Appendix I of the BRE Guidelines.
- 6.57 The initial numerical criteria for determining the magnitude of change is based on percentage alterations, as follows:

Table 6.4: Summary of Daylight, Sunlight and Overshadowing Assessment Criteria

Magnitude of Change	Percentage Alteration from Baseline
Negligible	0-20%
Small	20-29.9%
Medium	30-39.9%
Large	40%+

Determining the Level of Effect

- 6.58 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 6.5** has been a tool which has assisted with this process.
- 6.59 Whilst **Table 6.5** 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 6.5: Matrix to Support Determining the Level of Effect

		Sensitivity (or value / importance)			
		High	Medium	Low	Negligible
Magnitude of Change / Impact	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

6.60 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.

6.61 Appendix F of the BRE guidelines provides an alternate baseline VSC value for city centre regions of 18% rather than the 27% referenced through the body of the document which is the level of VSC to be expected in an environment where the neighbouring construction angle is around 25° ie a more suburban location.

6.62 18 is 67% of 27. 67% of the BRE target value for NSL (80%) is 53.6% Therefore, as the Proposed Scheme is in a more urban location, if the changes in VSC and/or NSL should breach the standard BRE guidelines beyond a small extent, the level of effect is still considered to be of minor significance provided that the windows either experience no change or retain 18% VSC and the

rooms retain at least 53.6% NSL.

- 6.63 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

- 6.64 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.
- 6.65 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.
- 6.66 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

Daylight and Sunlight

- 6.67 The full Baseline daylight and sunlight results can be found in **Appendix 6.2** and are summarised in **Table 6.6** below.

Table 6.6: Baseline Daylight and Sunlight results to surrounding residential sensitive receptors

Address	Windows that meet VSC Criteria		Rooms that meet NSL Criteria		Rooms that meet APSH Criteria	
	Total	Pass	Total	Pass	Total	Pass
Circle Square Block 5 & 6	182	60	140	82	-	-
Bracken House	46	1	44	19	44	0
Circle Square Plot 9	96	68	96	74	-	-
Total	324	129	280	175	44	0

Note: As per Table 6.1, the assessment of sunlight availability has only considered Bracken House.

- 6.68 A total of 324 windows facing the Site serving 280 rooms within 3 buildings were assessed for VSC and NSL for daylight and 44 rooms were assessed for APSH for sunlight within the 1 building which is material for consideration in sunlight terms i.e. its windows are orientated to within

90° of due south.

- 6.69 Out of the 324 windows assessed for daylight, 129 (40%) meet the BRE guidelines for VSC. For NSL, 175 (63%) of the 280 rooms assessed meet the BRE criteria. For sunlight, none of the 44 rooms assessed meet the BRE criteria for either Winter or Annual APSH.
- 6.70 The reason for the low baseline daylight and sunlight compliance levels is due to the dense urban location of the surrounding residential sensitive receptors.

Overshadowing

- 6.71 The full Baseline overshadowing results can be found in **Appendix 6.3** and are summarised in **Table 6.7** below.

Table 6.7: Baseline levels of SHOG within the surrounding sensitive receptors

Area Name	Area benefitting from 2 hours of SHOG on 21st March (%)	Meets SHOG Criteria?
Bracken House Nursery Playground	0	No

- 6.72 In accordance with the BRE Guidelines, as less than 50% of the playground area will be able to benefit at least 2 hours of SHOG on 21st March, it is unlikely to be adequately sunlit throughout the year in the baseline situation.
- 6.73 The reason for the low baseline SHOG levels is due to the dense urban location of the surrounding sensitive receptor.

Future Baseline

- 6.74 If the Proposed Scheme was not constructed the baseline daylight, sunlight and overshadowing levels would remain the same as there are no 'natural' factors that would influence baseline conditions, only human induced changes (i.e. development). With respect to human induced changes, any proposed development of the Site could influence the baseline conditions of varying degrees, as any drivers for change in baseline conditions would be linked to massing and layout of any development.

Primary and Tertiary Mitigation

Operational Stage

- 6.75 No primary or tertiary mitigation has been considered as part of the operational stage assessment.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

- 6.76 The results of the daylight and sunlight (where relevant) assessment modelling has been presented below together on a receptor-by-receptor basis, for ease of understanding of effects occurring at the specified receptors.

Reduced daylight and sunlight amenity

- 6.77 The outputs of the computer modelling for both daylight and sunlight is provided in full within **Appendix 6.2**, with the key metrics provided in **Tables 6.8** to **6.11** below.
- 6.78 A total of 324 windows facing the Site serving 280 rooms within 3 buildings were assessed for VSC and NSL for daylight and 44 rooms were assessed for APSH for sunlight within the 1 building which is material for consideration in sunlight terms i.e., its windows are orientated to within 90° of due south.
- 6.79 The breakdown of the baseline results against the Proposed Scheme for each of the individual buildings forming part of this assessment are discussed in more detail below.

Table 6.8: Summary of VSC Daylight Results

Address	Total No. of windows	No. of windows that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Circle Square Blocks 5 & 6	182	129	27	24	2
Bracken House	46	1	0	1	44
Circle Square Plot 9	96	87	7	2	0
Total	324	217	34	27	46

Table 6.9: Summary of NSL Daylight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Circle Square Blocks 5 & 6	140	122	9	7	2
Bracken House	44	9	1	0	34
Circle Square Plot 9	96	89	4	2	1
Total	280	220	14	9	37

Table 6.10: Summary of Annual Sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Bracken House	44	1	0	0	43
Total	44	1	0	0	43

Table 6.11: Summary of Winter Sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Bracken House	44	31	0	4	9
Total	44	31	0	4	9

Circle Square Blocks 5 & 6***Daylight***

- 6.80 A total of 182 windows serving 140 rooms were assessed for daylight within this property.
- 6.81 Any changes in daylight amenity (VSC & NSL) to 84 of the 140 rooms assessed will be fully BRE compliant. The magnitude of change to the daylight amenity within these 84 rooms is therefore considered to be negligible.
- 6.82 In accordance with the assessment methodology above, the magnitude of VSC and/or NSL change within 31 of the remaining 56 rooms will be small.
- 6.83 8 of the remaining 25 rooms are all served by 2 or 3 windows, all of which have baseline VSC levels of below the BRE recommended 27%. As a result of these low baseline values, the no greater than 9.2% absolute VSC changes caused by the Proposed Scheme to one of the windows serving each room will, when expressed as a percentage of the baseline value, present itself as being medium to large in magnitude of change terms. The other window/s serving each room will all experience BRE compliant (negligible) changes in VSC, all of which are less than 1%. All 8 rooms will experience BRE compliant (negligible) changes in NSL and retain daylight distribution to between 74% and 88% of the room area. The overall magnitude of change to the daylight amenity within these 8 rooms is considered to be small.
- 6.84 10 of the remaining 17 rooms are bedrooms, which all have, by virtue of their usage, a lesser requirement for daylight amenity. Construction of the Proposed Scheme will result in the windows serving these 10 bedrooms experiencing changes in VSC which are medium in magnitude of change terms and changes in NSL which are negligible to small in magnitude of change terms. In view of the usage of these 10 rooms, the overall magnitude of change to the

daylight amenity within these 10 bedrooms is considered to be small.

- 6.85 The remaining 7 rooms are all combined lounge kitchen dining rooms whose windows will experience VSC changes which are medium in magnitude with the rooms experiencing changes in NSL which range from negligible to large in magnitude. The overall magnitude of change to the daylight amenity within these 7 rooms is considered to be medium.
- 6.86 The sensitivity of Circle Square Blocks 5 & 6 is considered to be medium. In view of the isolated number of rooms which will experience changes in daylight amenity which are medium in magnitude, the overall magnitude of change to the daylight amenity in this building is considered 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

- 6.87 No secondary mitigation or enhancement is required.

Residual Effect

- 6.88 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Bracken House

Daylight

- 6.90 A total of 46 windows serving 44 rooms were assessed for daylight within this property.
- 6.91 The majority of the VSC & NSL changes caused by the Proposed Scheme will be medium to large in magnitude of change terms. It should be noted, however, that, in the context of the surrounding buildings, the Site is undeveloped.
- 6.92 Manchester City Centre has experienced considerable change over recent years. The City Centre has always been a focus for new development, an approach in line with national planning policy on delivering development in the most sustainable locations. With this in mind, it should be anticipated that any vacant or underutilised Site in the City Centre should come forward for development. This means that, within a city centre context, the Site's current open nature creates an 'artificial baseline' for surrounding buildings, which experience improved levels of sunlight and daylight compared with what should reasonably be expected and existing daylight levels at surrounding receptors are not currently representative of city centre living within Manchester. In planning for a higher density city centre there must be an expectation of a trade-off between high levels of sunlight and daylight and convenient access to a growing and extensive range of amenities.
- 6.93 It is also worth noting that the relationship between Bracken House and the Proposed Scheme is very similar to that of Oxford Place and the Maldron Hotel. The retained levels of daylight amenity within Bracken House are also commensurate with those in Oxford Place.

- 6.94 The sensitivity of Bracken House is considered to be 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

- 6.95 No secondary mitigation or enhancement is required in view of the retained values being commensurate with the surrounding context.

Residual Effect

- 6.96 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Sunlight

- 6.98 A total of 46 windows serving 44 rooms were assessed for sunlight within this property.
- 6.99 The changes in sunlight amenity to all of the 44 rooms are similar in scale to the changes in daylight amenity for the same reasons.
- 6.100 The sensitivity of Bracken House is considered to be 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

- 6.101 No secondary mitigation or enhancement is required in view of the retained values being commensurate with the surrounding context.

Residual Effect

- 6.102 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Circle Square, Plot 9

Daylight

- 6.104 A total of 96 windows serving 96 rooms were assessed for daylight within this property.
- 6.105 Any changes in daylight amenity (VSC & NSL) to 83 of the 96 rooms assessed will be fully BRE compliant. The effect upon the daylight amenity within these 83 rooms is therefore considered to be negligible.
- 6.106 In accordance with the assessment methodology, the magnitude of VSC and/or NSL change within 8 of the remaining 13 rooms will be small.

6.107 The remaining 5 rooms are all studio apartments whose windows will experience VSC changes which are negligible to medium in magnitude with the rooms experiencing changes in NSL which range from negligible to large in magnitude. The overall magnitude of change to the daylight amenity within these 5 rooms is considered to be medium.

6.108 The sensitivity of Circle Square, Plot 9 is considered to be medium. In view of the isolated number of rooms which will experience changes in daylight amenity which are medium in magnitude, the overall magnitude of change to the daylight amenity in this building is considered 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

6.109 No secondary mitigation or enhancement is required.

Residual Effect

6.110 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Increased Shadow

6.112 The outputs of the SHOG analysis is provided in full within **Appendix 6.3**, with a summary provided in **Table 6.12** below.

Table 6.12: Summary of SHOG Results

Area Name	Baseline area benefitting from 2 hours of SHOG on 21st March (%)	Proposed area benefitting from 2 hours of SHOG on 21st March (%)	Meets BRE Criteria ?
Bracken House Nursery Playground	0	0	Yes

6.113 As there will be no change in the area of the playground that will be able to benefit from at least 2 hours of SHOG on the 21st March in the proposed scenario, the change is BRE compliant. The playground will continue to be inadequately sunlit throughout the year.

Limitations and Assumptions

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

- Where actual room layouts were available on the planning portal, these have been considered in regard to the modelling of the internal layouts within the existing

surrounding properties. Where layout information was not available, assumptions have been made as to the use and internal configuration of the rooms (from external observations during a site inspection) behind the fenestration observed.

- Floor levels have been assumed for adjoining properties assessed, where access has not been obtained. This dictates the level of the working plane which is relevant for the NSL assessments.
- The Proposed Scheme has changed since the modelling and analysis which informed this Chapter was completed. The maximum height increase from 142.221m AOD to 143.525m AOD is, however, unlikely to materially alter the significance of effect conclusions reached.

Summary

6.115 **Table 6.13** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

6.116 The table only provides a summary of the residual effects identified within the assessment. Details of all primary, secondary and tertiary mitigation (where applicable) 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 6.13: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Reduced daylight amenity	Circle Square Blocks 5 & 6	Minor Adverse	No
	Bracken House	Moderate Adverse	Yes
	Circle Square Plot 9	Minor Adverse	No
Reduced sunlight amenity	Bracken House	Moderate Adverse	Yes
Increase Shadow	Bracken House Nursery Playground	Negligible	No

Technical Competence

6.117 **Table 6.14** provides a summary of technical competence in daylight, sunlight and overshadowing and EIA.

Table 6.14: Technical Competence in Daylight, Sunlight and Overshadowing and EIA

Technical Competence in Daylight, Sunlight and Overshadowing		
	Lead Author	Reviewer
Name	Nicola Hensey	Michael Beatty
Company	GIA	
Qualifications / Accreditations Relevant to Technical Area	LLB (Hons)	BSc (Hons) MRICS
Does the practitioner hold any IEMA qualification?	No	No
Company hold IEMA QMark?	No	
Years Technical Experience (in Technical Area)	15	9
Number of EIA's Delivered to Date	30	15

References

¹ Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition

² Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. 2023.

³ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021). National Planning Policy Guidance. 2021.

⁴ Manchester City Council (2012). Manchester Core Strategy (2012 – 2027).

⁵ Manchester City Council (2007). Guide to Development in Manchester Supplementary Planning Document and Planning Guidance Adopted April 2007

7. Assessment of Cumulative Effects

Introduction

- 7.1 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”.

- 7.2 To accord with the EIA Regulations (Schedule 4, Paragraph 5), 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 local area; and
- **In-combination interactions:** the combination of environmental effects of the Proposed Scheme with existing or approved projects affecting the same receptor.

- 7.3 The scope of the ES as outlined in **Chapter 2: Approach to the EIA** confirms that there is only one technical chapter (**Chapter 6: Daylight, Sunlight and Overshadowing**) assessed within this ES. Therefore it is only this single topic that has been considered as part of this Chapter, based on the assessment methodology set out below.

Legislative Framework and Guidance

- 7.4 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 current methodology or best practice for the assessment of cumulative effects. As such, the methodology has been based on previous experience and knowledge at Turley, the types of receptors being assessed and the nature of the Proposed Scheme.

Assessment Methodology

- 7.5 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 also 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.

Effect Interactions

- 7.6 Given the singular technical topic scoped into the ES, (i.e. **Chapter 6: Sunlight, Daylight and Overshadowing**), the assessment of effect interactions has focused on the conclusions of this chapter (specifically the identified residual effects) with respect to changes in daylight and sunlight availability at a common residential receptor or outdoor amenity spaces. Where a residual effect is concluded in **Chapter 6: Sunlight, Daylight and Overshadowing** to be negligible, then this has been excluded from further assessment. 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. Where residual effects have been considered to be 'minor' or greater, these have been considered further within the assessment of effect interactions.
- 7.7 Where effect interactions have been identified, a qualitative appraisal has been undertaken taking account of the following:
- Magnitude of change for each residual effects;
 - Sensitivity/value/importance of the receptor/receiving environment to change; or/and
 - Duration and reversibility of effect.
- 7.8 This process has been documented within the Assessment of Effect Interactions section of this Chapter.

In-Combination Effects

- 7.9 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

- 7.10 A review of planning applications submitted to MCC was undertaken to identify an initial list of projects (referred to as 'Approved Projects') that could give rise to in-combination effects with the Proposed Scheme. The review primarily 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.
- 7.11 Applicable projects for consideration of in-combination effects were determined using the following criteria:
- Permitted application(s) either under construction or not yet implemented;
 - Submitted application(s) not yet determined but have the potential to be determined prior to the submission of the Proposed Scheme;
 - All refusals subject to appeal procedures not yet determined but have the potential to be determined prior to the submission of the Proposed Scheme;
 - Located in common geographical area, taken to be within 0.5km of the Site;

- The project being of a relevant scale, the minimum threshold for this has been projects that have been or would be considered Schedule 1 developments within the EIA Regulations, or Schedule 2 developments, at which there is a potential for 'likely significant effects'. This threshold was be applied with caution.

7.12 In the application of these criteria, if a planning application had not been supported by an EIA it has been assumed that MCC had undertaken a screening exercise upon receipt of the application or issued a screening opinion and concluded that an EIA is not required and therefore the project was not considered to result in 'likely significant effects' (i.e. not EIA development).

7.13 The final list of Approved Projects is set out in **Table 7.1** and shown on **Figure 7.1**.

Step 2: Assessment of In-Combination Effects

7.14 Given the singular technical topic scoped into the ES, (i.e. **Chapter 6: Sunlight, Daylight and Overshadowing**), the assessment of in-combination effects has only considered the potential for an in-combination effect with respect to this technical topic. As such, a qualitative evaluation of the potential in-combination effects between the Proposed Scheme and identified Approved Projects (**Table 7.1**) has been undertaken using professional judgement.

7.15 In the first instance the assessment has considered the potential for a common receptor between the Proposed Scheme (i.e., those assessed within **Chapter 6: Sunlight, Daylight and Overshadowing**) and the identified Approved Projects (**Table 7.1**), based on a technical understanding of the nature of daylight and sunlight effects (i.e., how development impacts upon receptors, including consideration of distances and positioning of Approved Projects relative to receptors).

7.16 Where a common receptor is identified, the qualitative evaluation at the receptor level has considered the following:

- Combined magnitude of change of all Approved Projects;
- Sensitivity/value/importance of the receptor/receiving environment to change; or/and
- Duration and reversibility of effect.

7.17 Through a combination of the qualitative evaluation and mitigation presented in the ES, conclusions have been drawn as to the likelihood for significant in-combination environmental effects.

Table 7.1: List of Approved Projects for In-Combination Assessment

ID	Planning Ref and Address	Description	Distance/direction from the Site	EIA/Not EIA	Status
1	134288/FO/2022 Replacement of 125451/FO/2019 No.3 Circle Square Land Bounded By Princess Street, Newman Street (Formerly Brancaster Road) And Cloak Street Manchester M1 7ED	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	150m south east	EIA	Commencement of Construction
2	136170/FO/2023 Land Bounded By River Street To The North, River Street And Vacant Lane To The East, Hulme Street To The South And Plot 10A Of The First Street Masterplan To The West 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)	445m south west	EIA	Approved
3	136043/FO/2023 Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The South And The Development Plot 9A To The West Manchester	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)	445m south west	EIA	Approved
4	125573/FO/2019 Plot 11 First Street Comprising Land Bound By Hulme Street To The North, Wilmott Street To The East, The Unite Parkway Gate Development And	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	445m south west	EIA	Approved

ID	Planning Ref and Address	Description	Distance/direction from the Site	EIA/Not EIA	Status
	Mancunian Way To The South, And Medlock Street To The West Manchester	(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			
5	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	450m south east	EIA	Awaiting decision
6	136874/FO/2023 Echo Street Manchester M1 3QJ	Erection of 3 interlinked towers ranging from 27, 21 and 16 storeys together with intermediary link buildings (15 and 11 storeys) to form Purpose Built Student Accommodation (Sui Generis) with associated amenity space and external landscaping and other associated works	480 north east	EIA	Approved

Assessment of Effect Interactions

- 7.18 A summary of the conclusions of **Chapter 6: Daylight, Sunlight and Overshadowing**, specifically the identified effects, receptors, and residual effects, is presented in **Table 7.2**.

Table 7.2: Summary of assessment conclusions from Chapter 6

Effect	Receptor	Residual Effect	Significance
Reduced daylight amenity	Circle Square Blocks 5 & 6	Minor Adverse	No
	Bracken House	Moderate Adverse	Yes
	Circle Square Plot 9	Minor Adverse	No
Reduced sunlight amenity	Bracken House	Moderate Adverse	Yes
Increase Shadow	Bracken House Nursery Playground	Negligible	No

- 7.19 It should be noted that the assessment within **Chapter 6** has focused solely on operational stage effects, as it is judged that construction stage effects would occur gradually over time, reaching its greatest level of impact as the massing of the Proposed Scheme is completed. At which point the effect would be the same as that identified at the operational stage. Therefore, the assessment of effect interactions set out below is representative of both the construction and operational stage, albeit at the construction stage the effects would likely only occur for a short period of the overall construction stage.
- 7.20 As set out within **Table 7.2**, only Bracken House experience both changes in the availability of daylight and sunlight, and therefore experience an effect interaction. Changes in daylight and sunlight will generally be experienced in the same way (i.e. the perception that natural light levels are reduced) and the results identified that a moderate adverse and significant effect would occur for both effects. On this basis the effect interaction is also considered to be moderate adverse and significant.
- 7.21 It is noted that the effects on Bracken House with respect to daylight and sunlight are contextual of the urban context of Manchester as part of the assessment within **Chapter 6: Daylight, Sunlight and Overshadowing**.

Assessment of In-Combination Effects

- 7.22 Approved Projects identified for the assessment of in-combination effects are detailed **Table 7.1** and shown on **Figure 7.1**. A review of the Approved Projects by GIA (technical authors of **Chapter 6: Daylight, Sunlight and Overshadowing**) has confirmed that due to distance from the Site (including with respect to Approved Project 1, which

is located closest to the Site¹), as well as intervening built form, that there will be no common receptors and therefore no in-combination effects from sunlight, daylight and overshadowing.

Summary

Effect Interactions

- 7.23 The assessment of effect interactions centred on the interaction of daylight and sunlight effects reported separately within **Chapter 6: Daylight, Sunlight and Overshadowing**, as this was the only technical topic assessed as part of the ES.
- 7.24 When reviewing the outputs of the assessment, only a single receptor was assessed for both a reduction in daylight and sunlight availability and therefore the only receptor considered to experience and effect interaction. The effect interaction was judged to be the same as the individual effects and thus moderate adverse and significant.
- 7.25 It is noted that the effects on Bracken House with respect to daylight and sunlight are contextual of the urban context of Manchester as part of the assessment within **Chapter 6: Daylight, Sunlight and Overshadowing**.

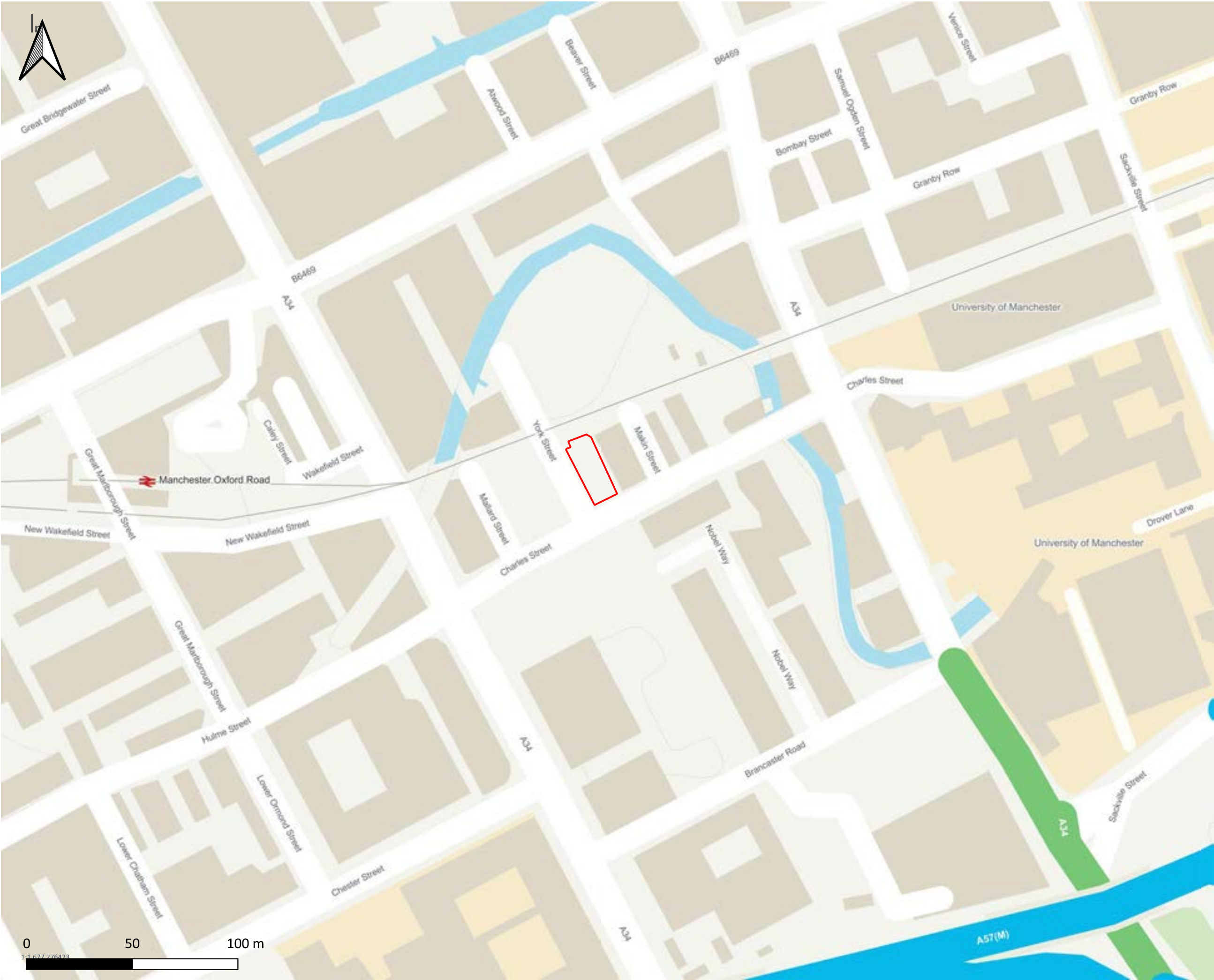
In-Combination Effects

- 7.26 The assessment of in-combination effects considered 6 Approved Projects in relation to sunlight, daylight and overshadowing. Through a review of the Approved Projects relative to the Proposed Scheme, it was confirmed through professional judgement that there was no common receptor and as such no potential for in-combination effects.

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/environmental-impact-assessment) [Accessed: 21/11/23].

¹ The receptors considered within the daylight, sunlight and overshadowing assessment for Approved Project 1 included, Vita Living, Montana House and Princess House. None of which have been assessed as part of **Chapter 6: Daylight, Sunlight and Overshadowing**.



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 Site Boundary

CLIENT:
Jadebricks Manchester Limited

PROJECT:
Charles Street, Manchester

DRAWING:
Site Location Plan

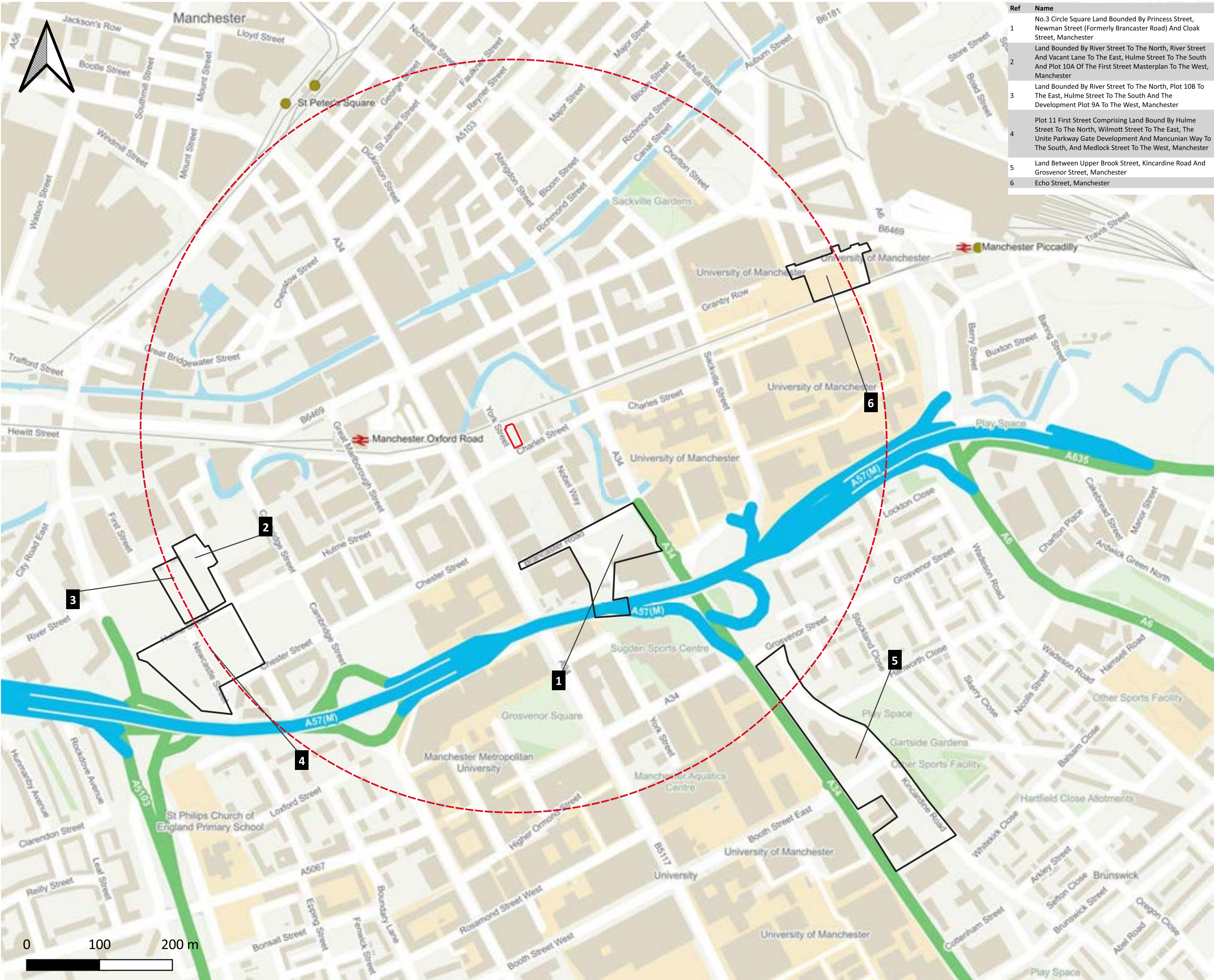
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Figure 1.1 ET

REVISION: STATUS:
1.0 Final

DATE: SCALE:
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Ref	Name
1	No.3 Circle Square Land Bounded By Princess Street, Newman Street (Formerly Brancaster Road) And Cloak Street, Manchester
2	Land Bounded By River Street To The North, River Street And Vacant Lane To The East, Hulme Street To The South And Plot 10A Of The First Street Masterplan To The West, Manchester
3	Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The South And The Development Plot 9A To The West, Manchester
4	Plot 11 First Street Comprising Land Bound By Hulme Street To The North, Wilmott Street To The East, The Unite Parkway Gate Development And Mancunian Way To The South, And Medlock Street To The West, Manchester
5	Land Between Upper Brook Street, Kincardine Road And Grosvenor Street, Manchester
6	Echo Street, Manchester

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Site Boundary

Approved Project

500m Buffer

CLIENT:
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PROJECT:
Charles Street, Manchester

DRAWING:
Approved Project Plan

PROJECT NUMBER:
JADM3002

DRAWING NUMBER:
Figure 7.1

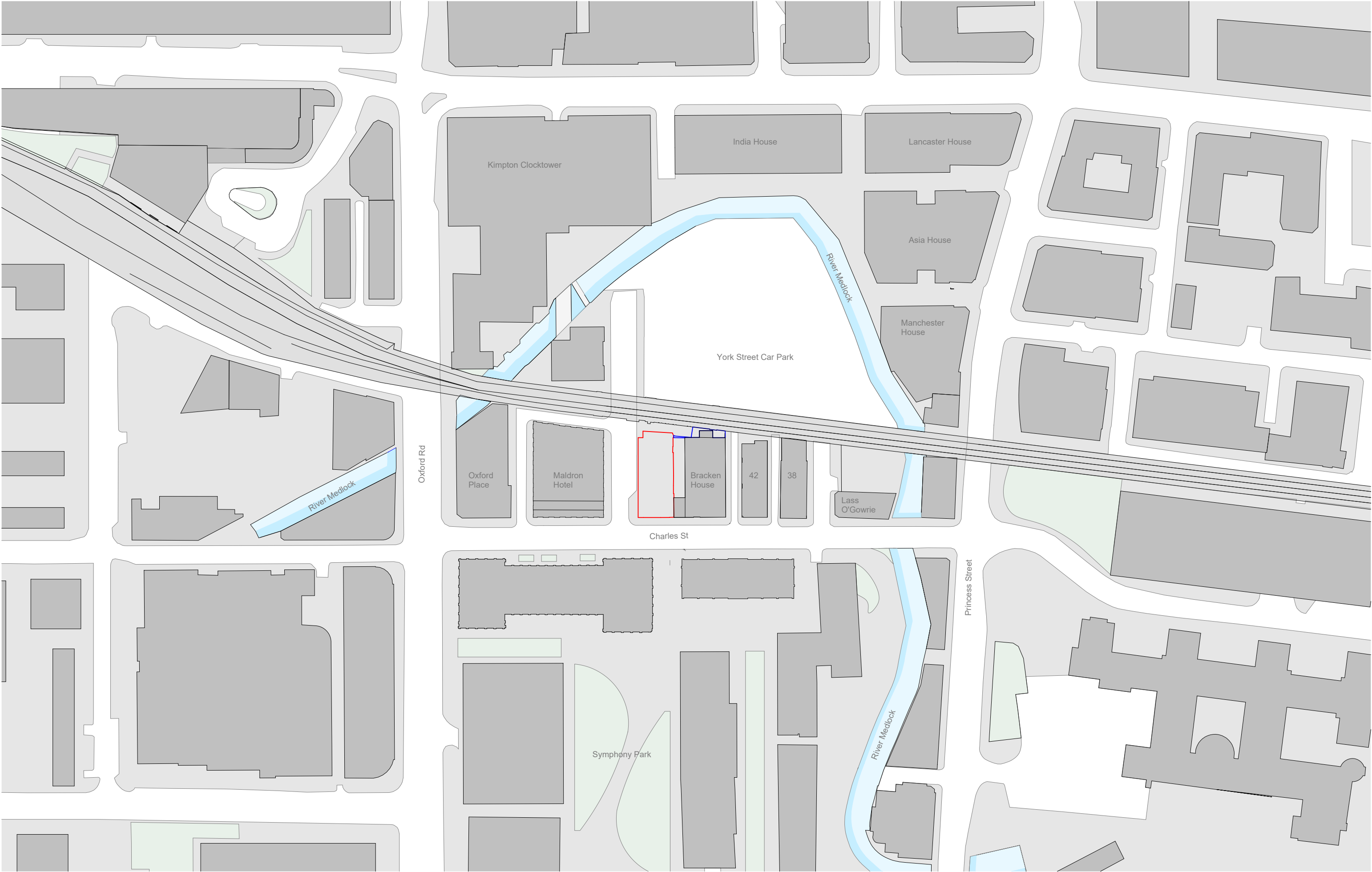
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Drawing Title Existing Site Plan Site Location Plan	
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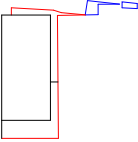
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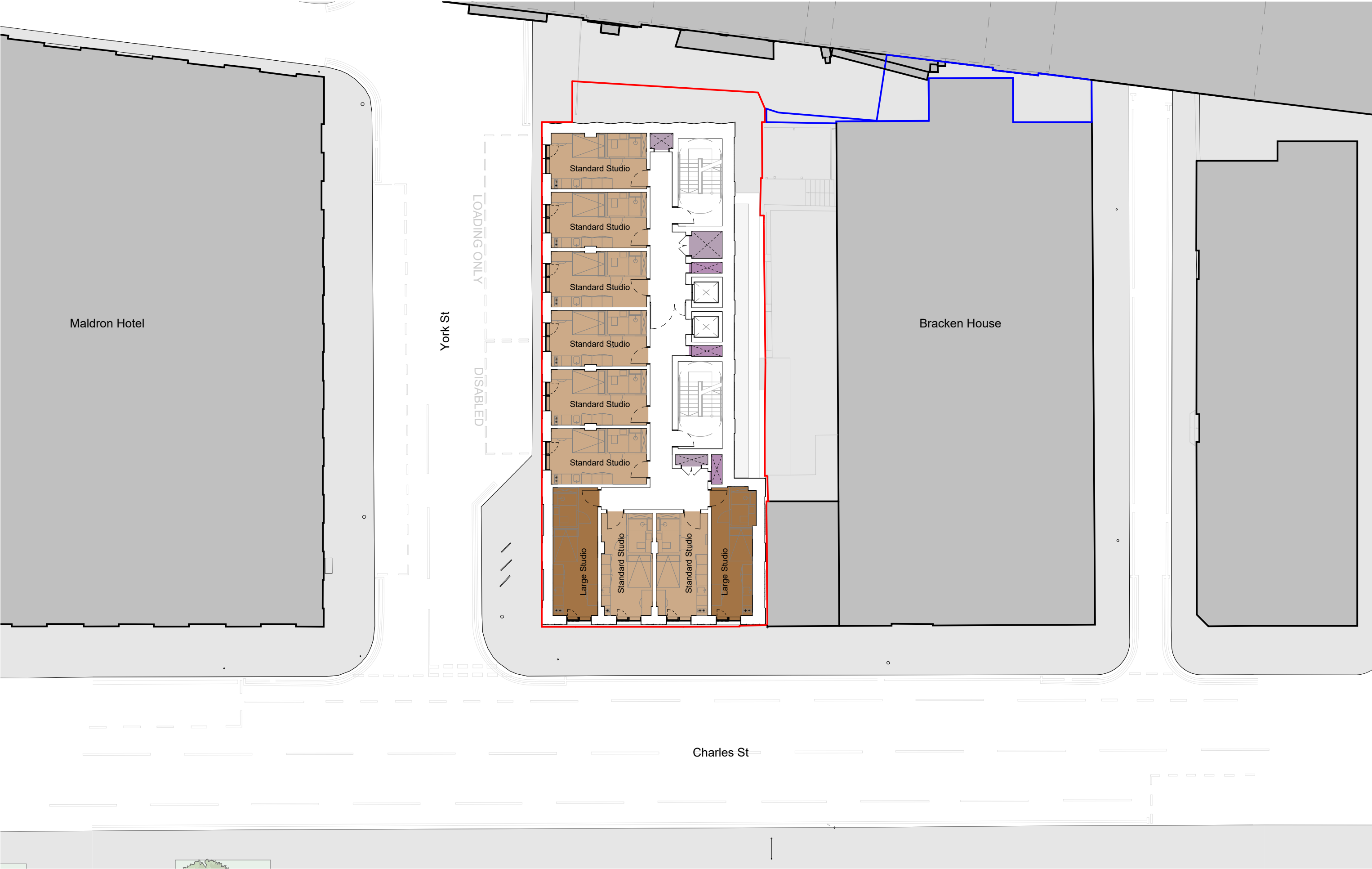
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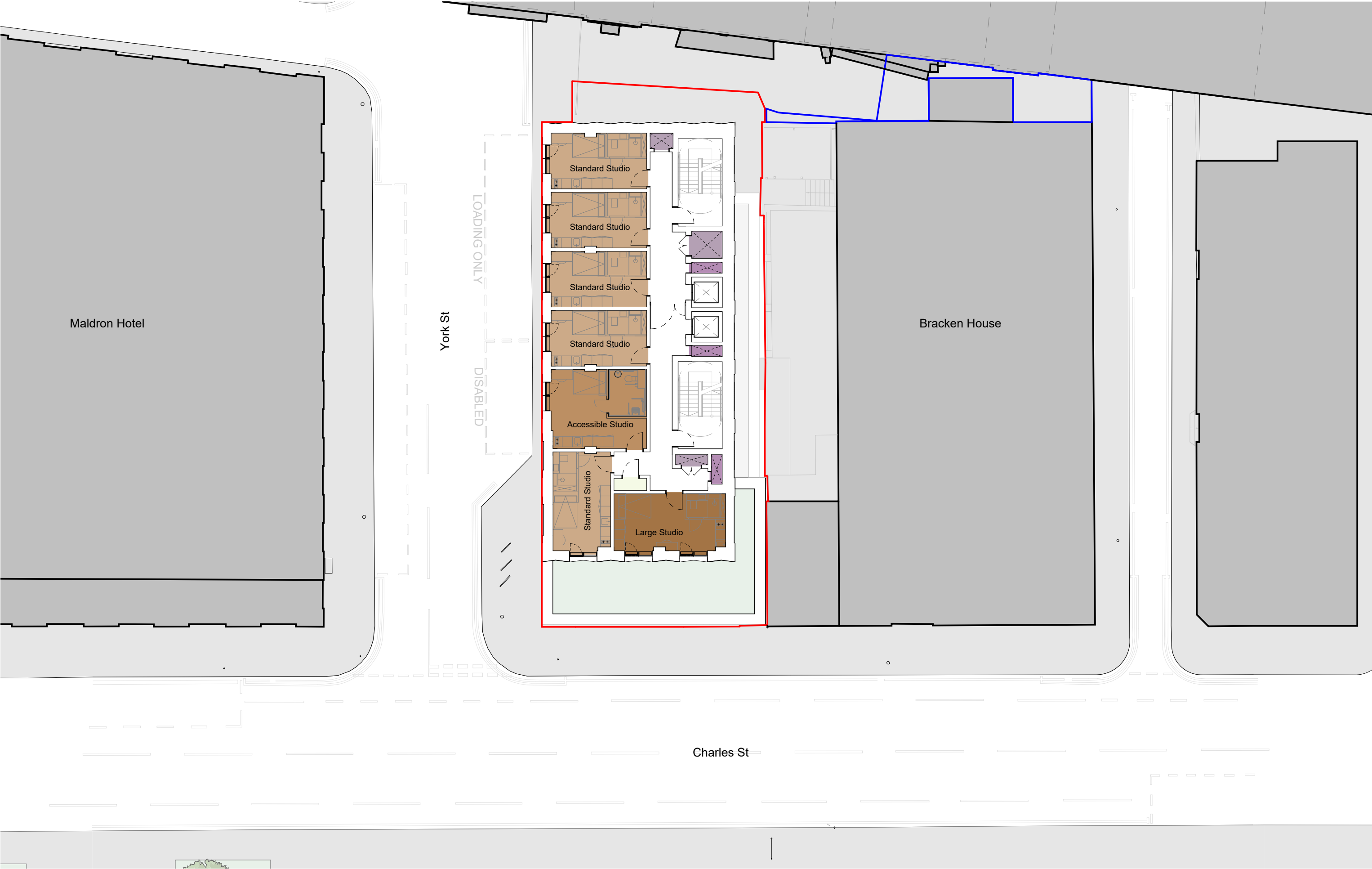
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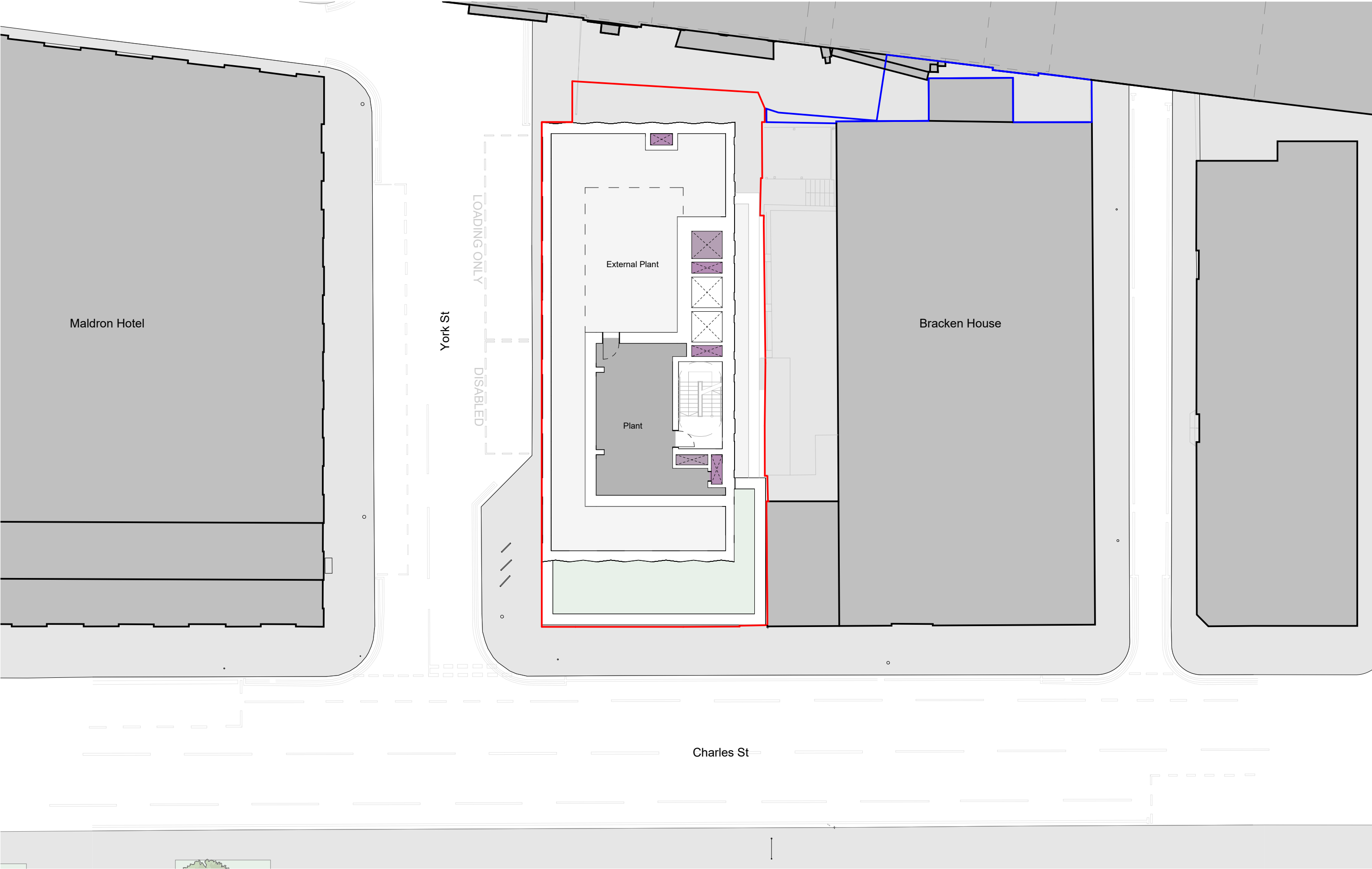
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Drawing Title
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Status
Planning

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Plan
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Rev	Date	Description
P01	2023-12-05	PLANNING ISSUE

Project Title
**Charles Street
Manchester**

Status
Planning

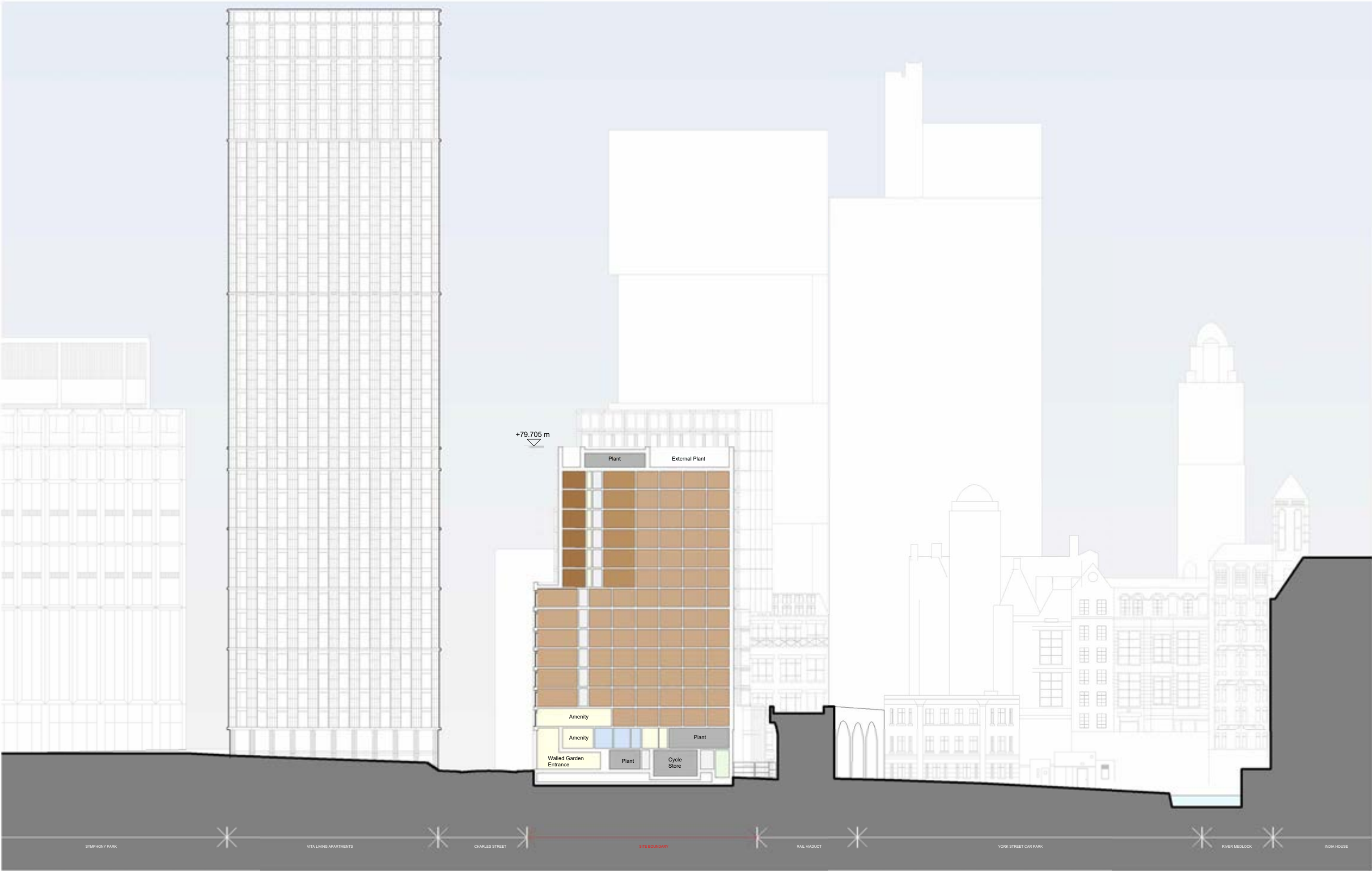
Drawing Title
**General Arrangement
Plan
Roof Parapet**

Project No 10489	Scale 1 : 200 @ A3
SHP Drawing Code 10489-SHP-ZZ-A-B5D8-G200-PL-RF-002	Revision P01

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Rev	Date	Description
P01	2023-12-05	PLANNING ISSUE

Project Title
Charles Street Manchester

Status
Planning

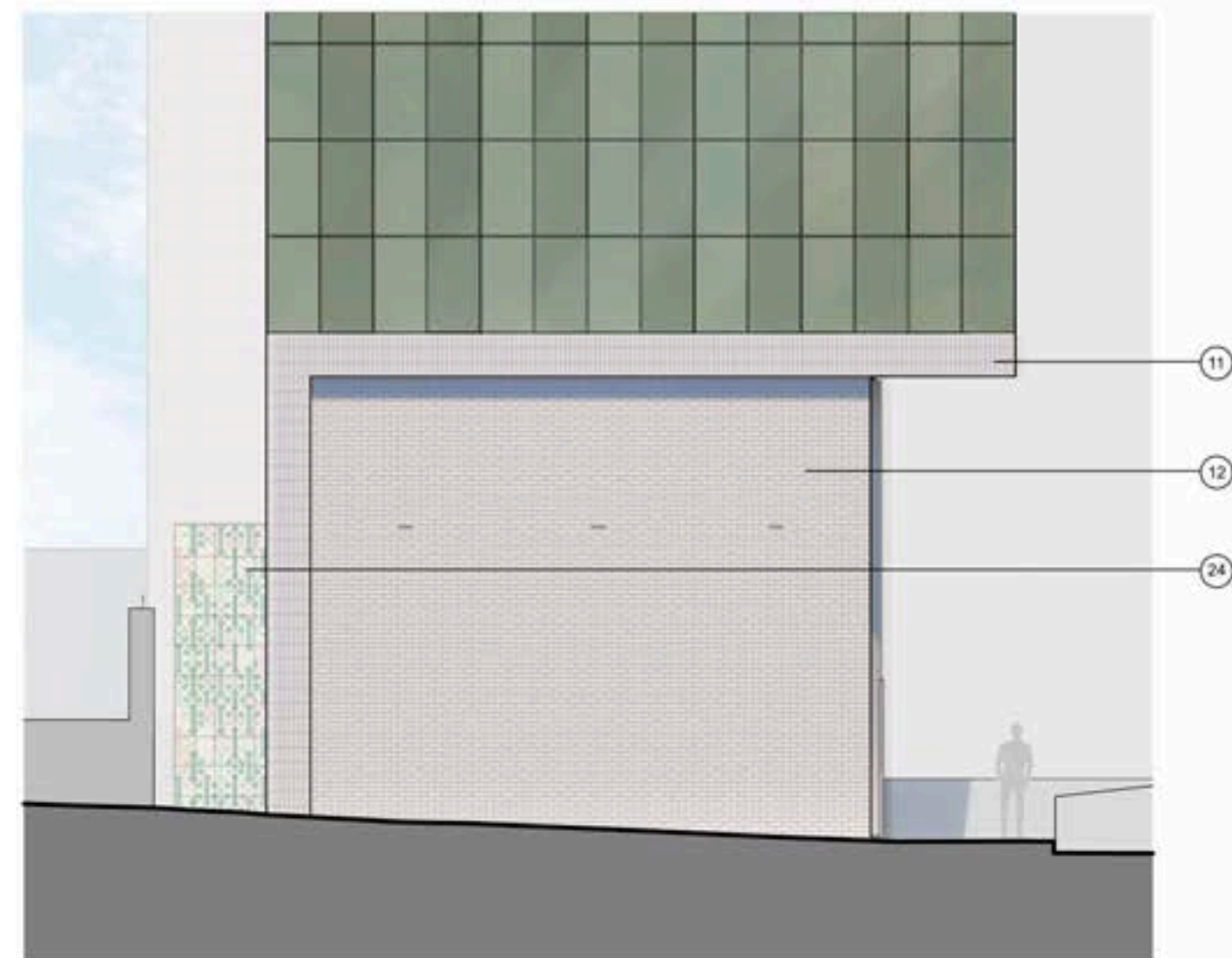
Drawing Title
General Arrangement Section AA

Project No 10489	Scale 1 : 500 @ A3
SHP Drawing Code 10489-SHP-ZZ-A-B5D8-G200-SE-AA-001	Revision P01

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KEY:

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REV	DATE	BY	CHKD	DESCRIPTION																																																										



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Rev	Date	Description
P01	2023-12-05	PLANNING ISSUE

Project Title
**Charles Street
Manchester**

Status
Planning

Drawing Title
**Facade Detail
East Elevation
Ground Floor**

Project No
10489

Scale
1:100 @ A3

SHP Drawing Code
10489-SHP-ZZ-A-B5D8-G251-DE-XX-009

Revision
P01

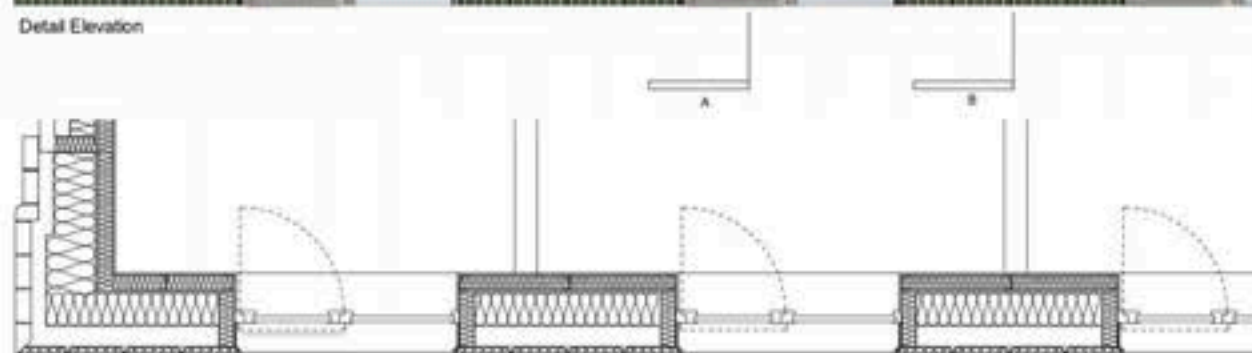
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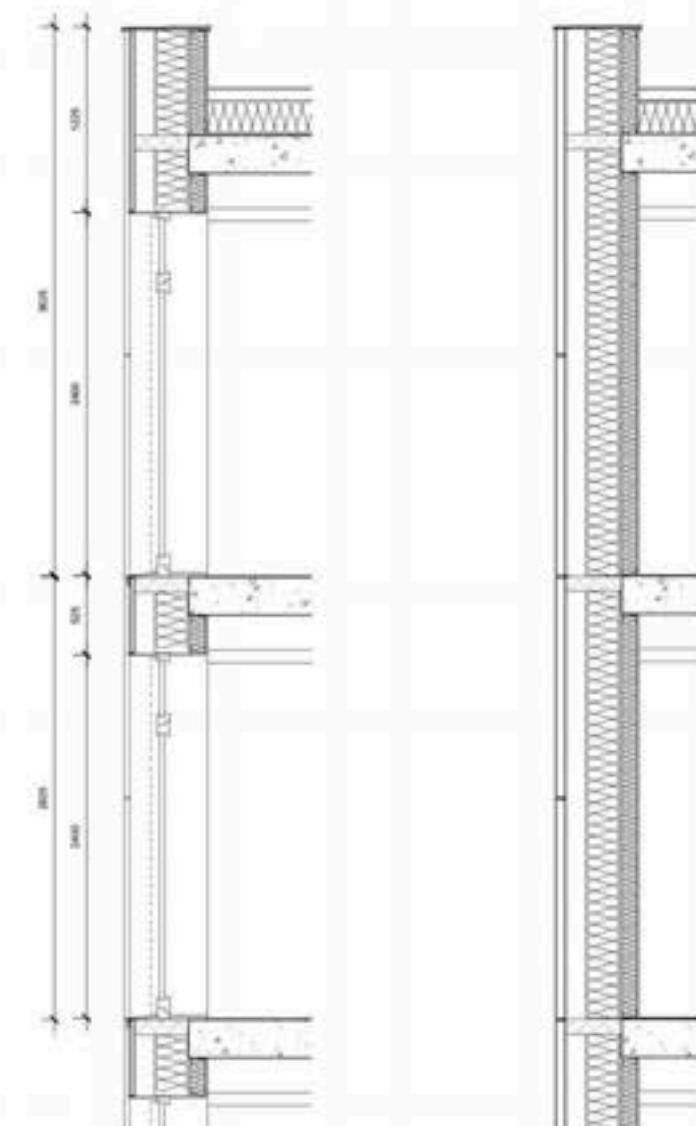
London
+44 (0)20 7549 4000



Detail Elevation



Plan CC



Section AA

Section BB

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Rev	Date	Description
1	2021-12-01	ISSUED FOR BIDDING

Project Title
Charles Street
Manchester

Status
Planning

Drawing Title
Facade Detail
Charles Street Lower Typical

Project No
10489

Scale
1:50 @ A3

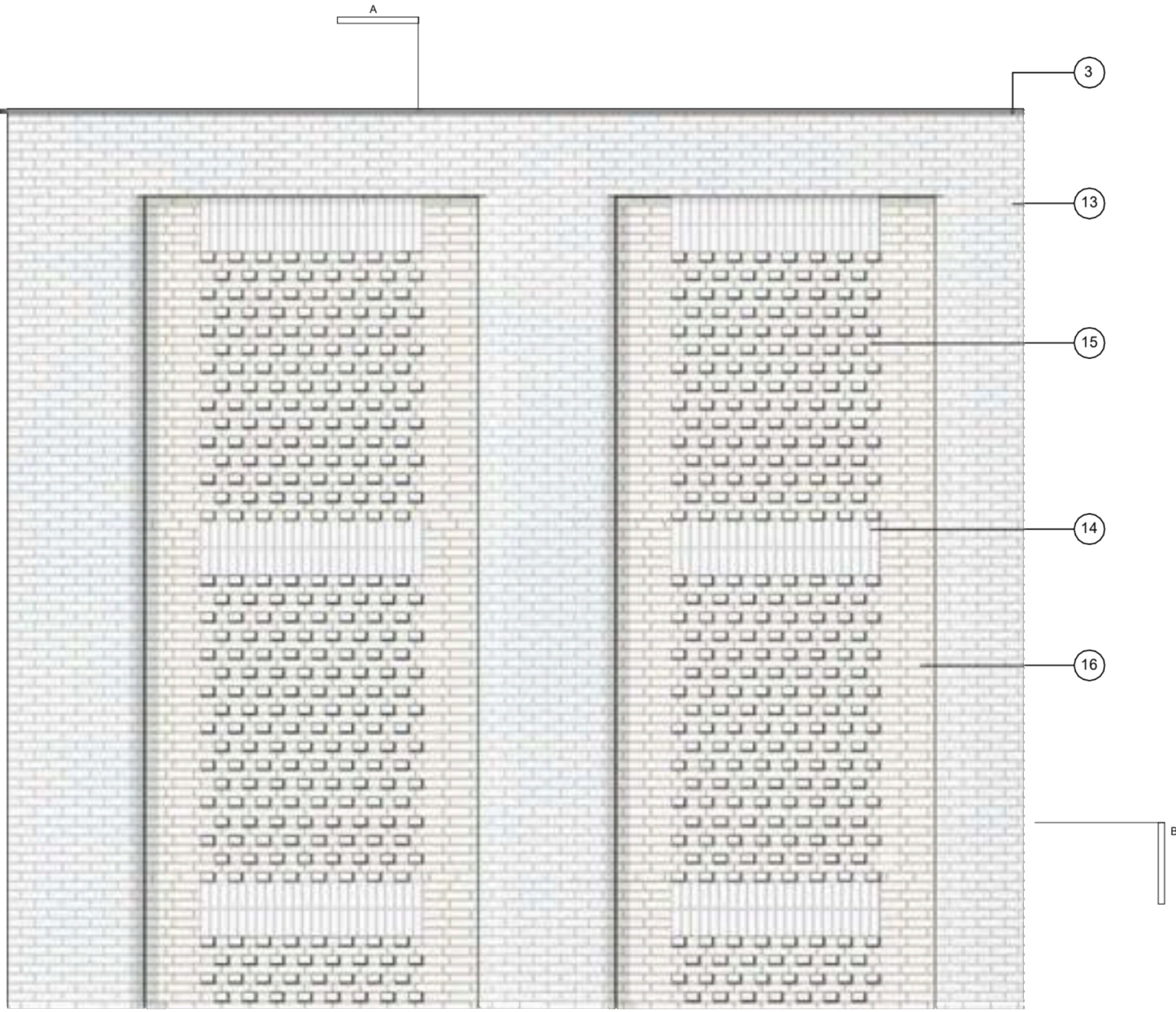
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Revision
P01

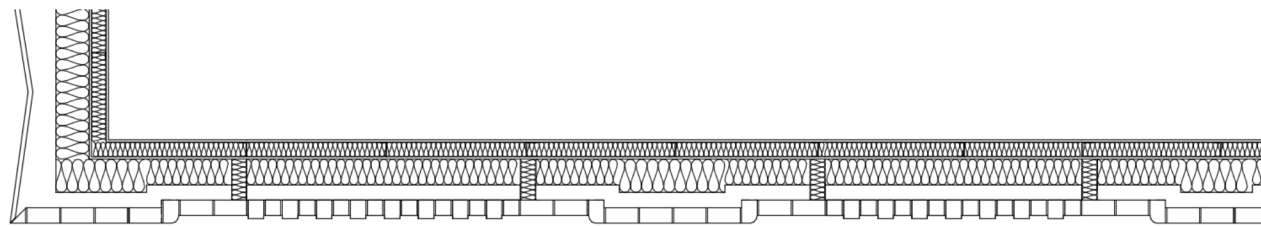
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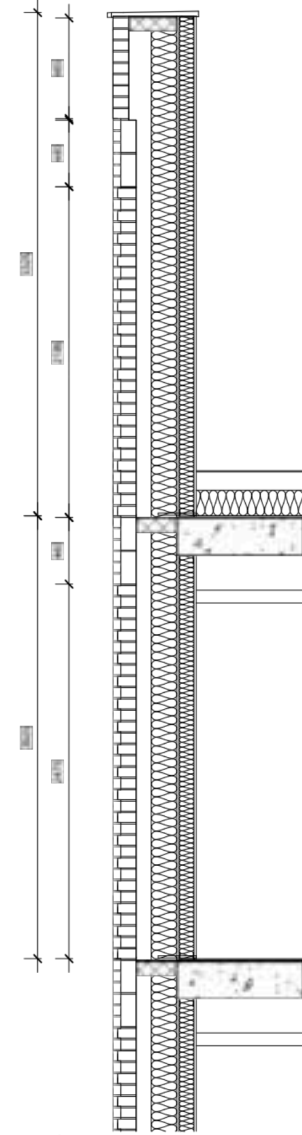
London
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Detail Elevation



Plan BB



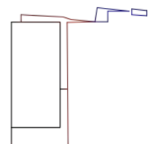
Section AA

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Rev	Date	Description
P01	2023-12-05	PLANNING ISSUE

Project Title
Charles Street
Manchester

Drawing Title
Facade Detail
East Elevation Typical (Parapet)

Project No
10489

Scale
1:50 @ A3

Status
Planning

SHP Drawing Code
10489-SHP-ZZ-A-B5D8-G251-DE-XX-006

Revision
P01

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Rev	Date	Description
1	2023-10-26	PLANNING ISSUE

Project Title
Charles Street
Manchester

Phase
Planning

Drawing Title
Facade Detail
York Street
Ground Floor

Project No
10489

Scale
1:100 @ A3

SHD Drawing Code
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Revision
P01

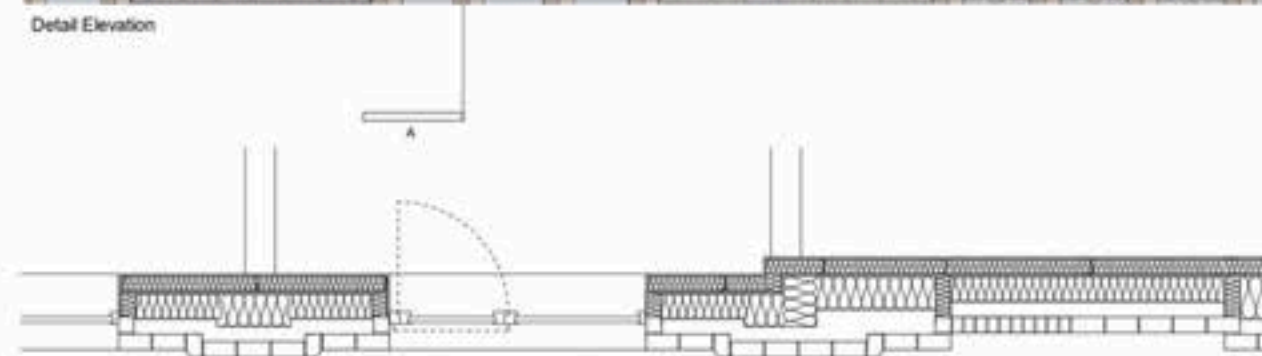
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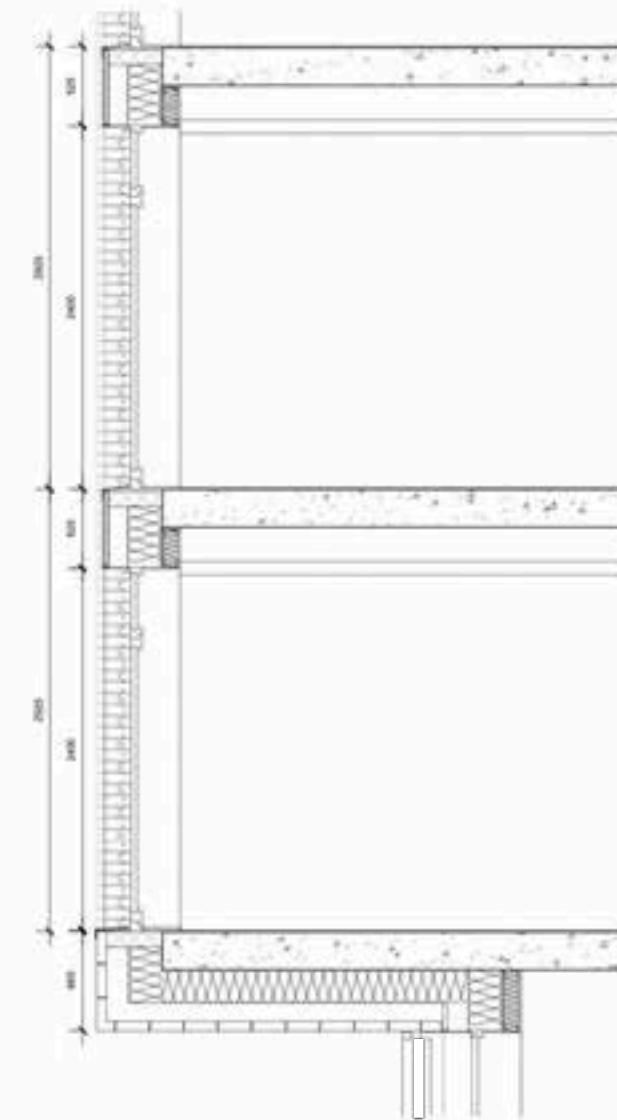
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Detail Elevation



Plan BB



Section AA

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Ref	Rev	Description
1	1	ISSUED FOR PLANNING

Project Title
Charles Street
Manchester

Phase
Planning

Drawing Title
Facade Detail
York Street Lower Typical

Project No
10489

Scale
1:50 @ A3

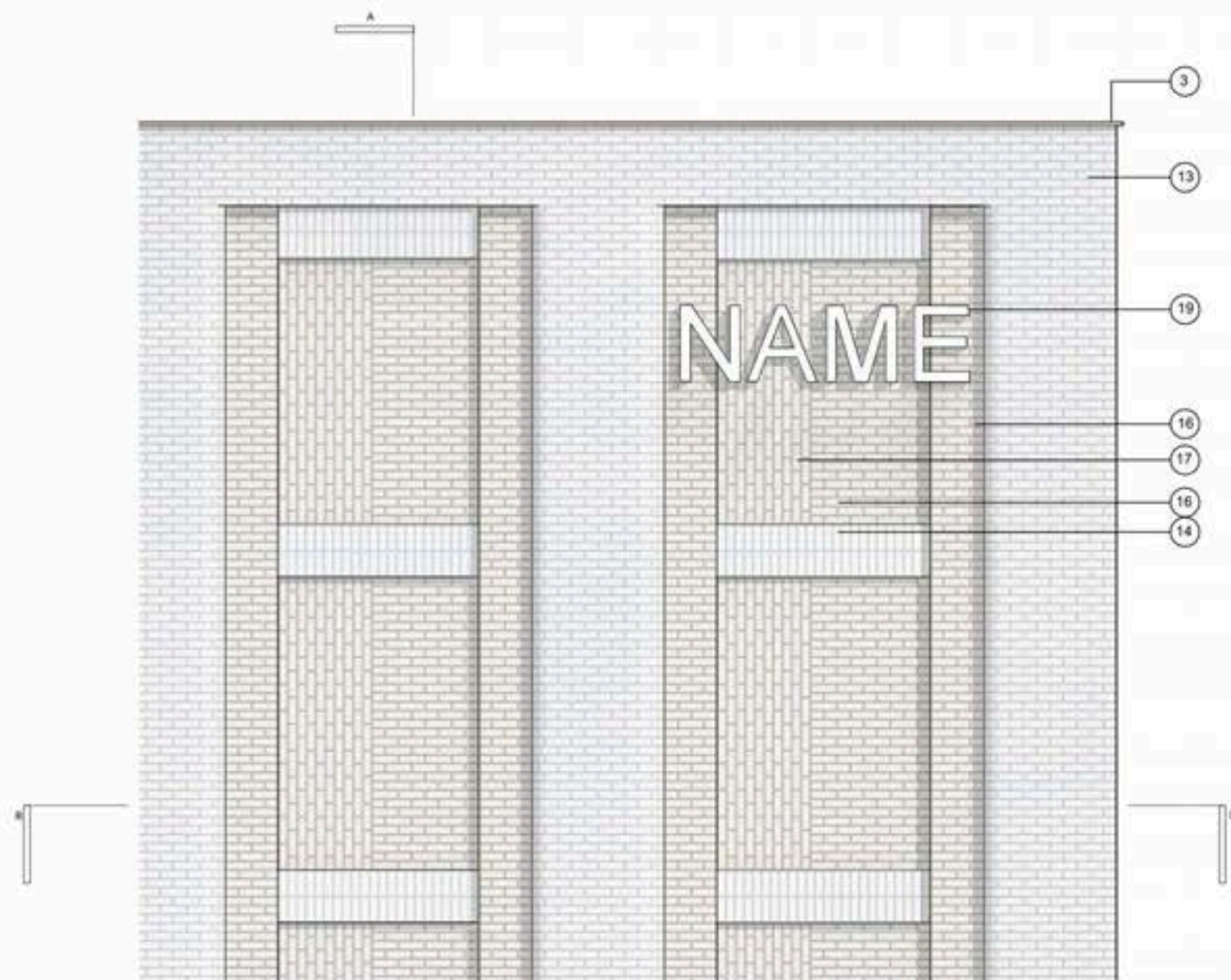
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Revision
P01

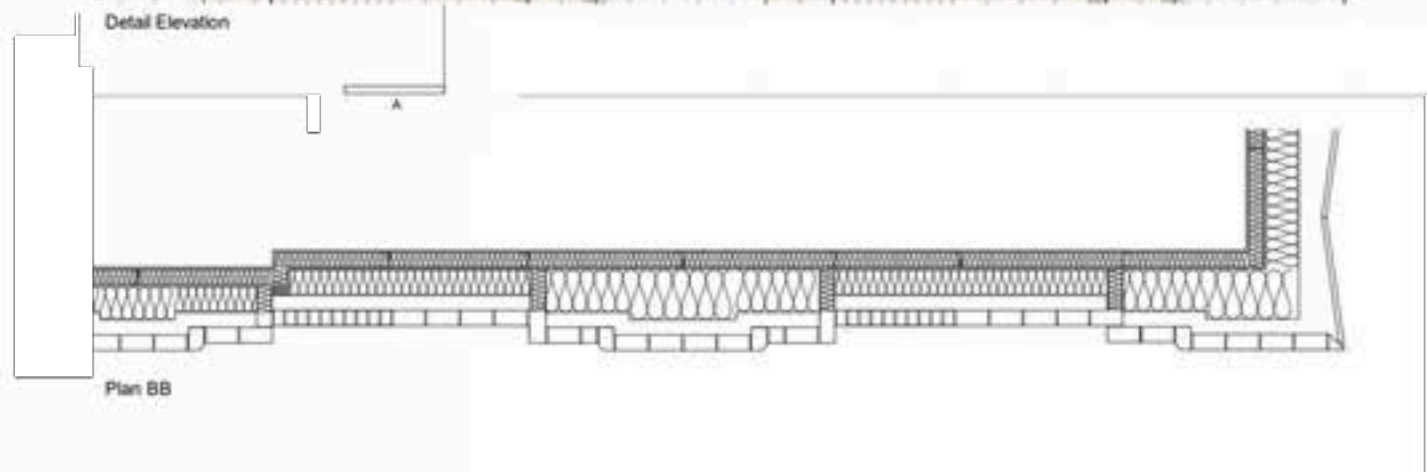
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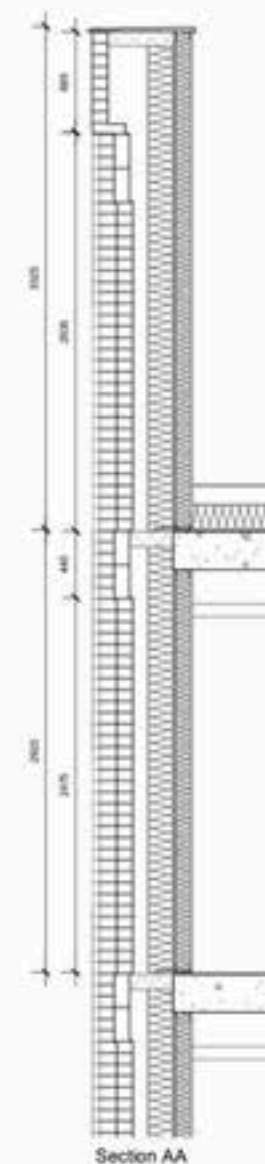
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+44 (0)20 7543 4330



Detail Elevation



Plan BB



Section AA

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Rev	Date	Description
1	10/10/2023	ISSUED FOR TENDER
2	10/10/2023	ISSUED FOR TENDER
3	10/10/2023	ISSUED FOR TENDER
4	10/10/2023	ISSUED FOR TENDER
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10	10/10/2023	ISSUED FOR TENDER

Project Name
Charles Street
Manchester

Work
Planning

Drawing Title
Facade Detail
York Street Upper Typical

Project No
10489

Scale
1:50 @ A3

SHD Drawing Code
10489-SHP-ZZ-A-B5D8-G251-DE-XX-005

Revision
P01

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Figure 5.1: TfGM Model Output

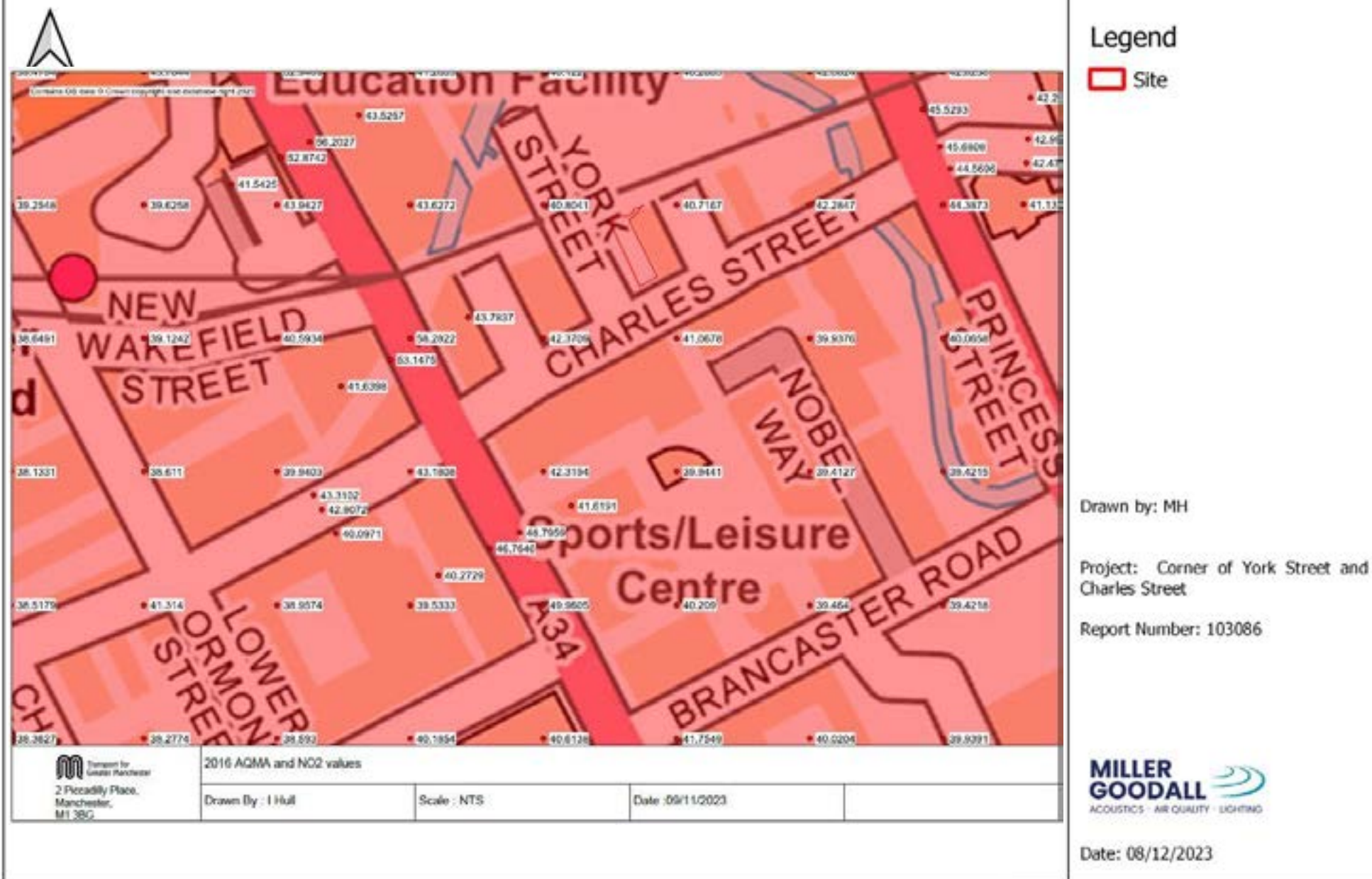
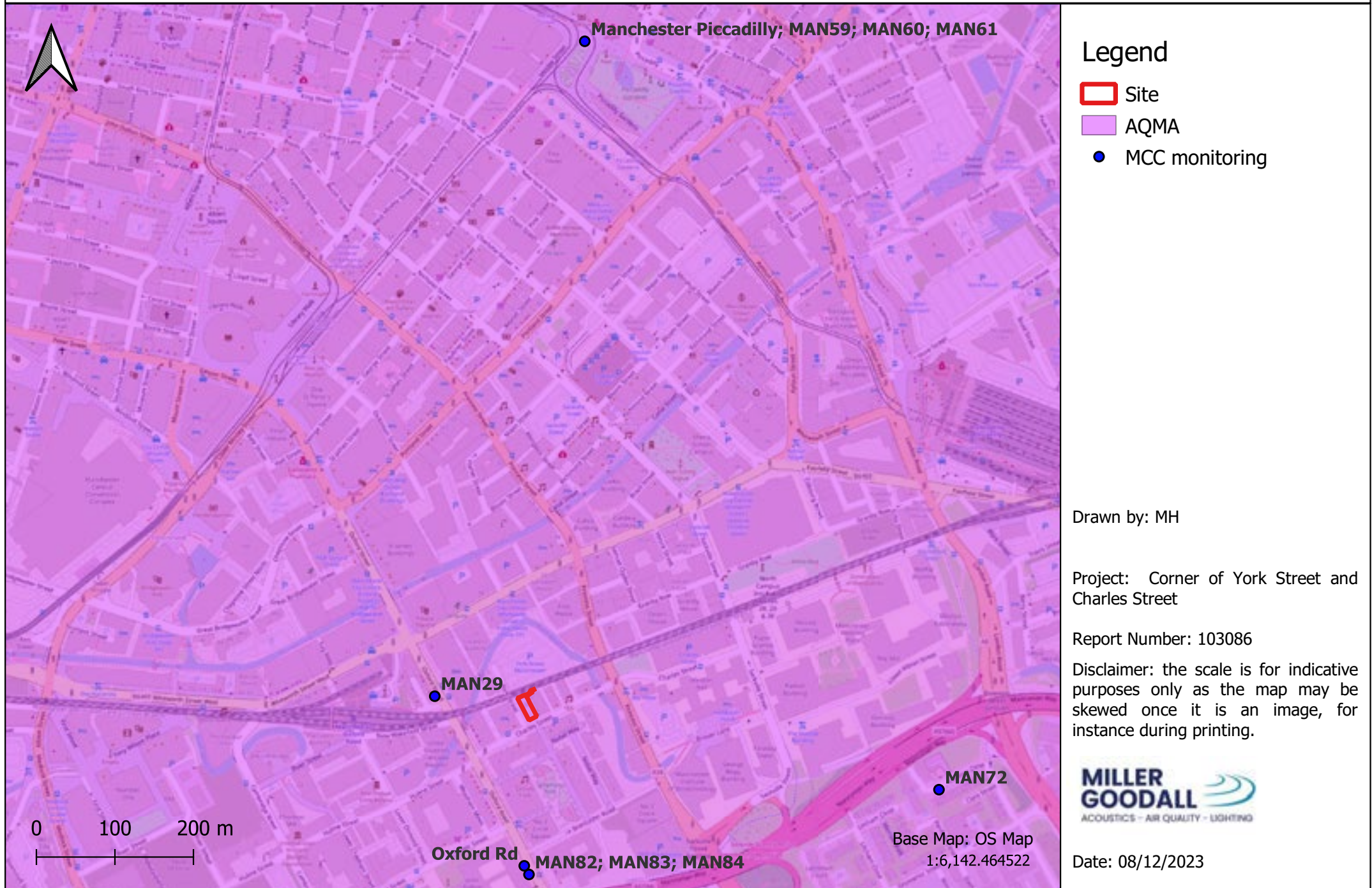


Figure 5.2: Location of Site, AQMA and MCC monitoring



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 Jadebricks Manchester Limited (hereafter referred to as the 'Applicant') for a purpose built student accommodation (PBSA) development (hereafter referred to as the 'Proposed Scheme'). The Proposed Scheme is for up to 100 purpose built student accommodation units (Use Class Sui Generis).

1.2 The Proposed Scheme will be delivered on an approximately 0.04 hectare (ha) site, which is currently being used as a construction compound (hereafter referred to as the 'Site') (as defined on **Figure 1.1: Site Location Plan**). The Site is bound by a commercial garage (DC Motor Engineers) beyond which is a raised railway viaduct to the north; Bracken House to the east; Charles Street to the south; and York Street to the west.

1.3 Turley are commissioned by the Applicant to undertake an Environmental Impact Assessment (EIA) and subsequent ES for the Application, with the support of a competent project team (as set out in **Table 1.2**). The ES reports the assessment of likely significant effects of the construction and operation of the Proposed Scheme. For the purpose of planning permission, the Proposed Scheme is defined as:

"Full planning permission for the erection of 15-storey purpose-built student accommodation building, including site preparation works, works over the public highway and associated works."

1.4 Further details of the Proposed Scheme are set out within **Chapter 4: Development Specification**.

1.5 This ES is one of the documents submitted in support of the Application and has the status of a material consideration during the determination of the Application¹ by Manchester City Council (MCC), who are the determining authority. The ES is the output of the EIA process undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (SI2017/571)² (hereafter referred to as the 'EIA Regulations').

1.6 The remainder of this Chapter is structured as follows:

- Definition of EIA;
- Legal Framework for the EIA;
- Planning Context;
- The Project Team and Their Roles;
- Application Reports and Plans;
- Structure of the ES; and

- Availability of the ES.

Definition of EIA

- 1.7 The term 'EIA' has the meaning given by Regulation 4 of the EIA Regulations, as *"a process consisting of-*
- (a) the preparation of an environmental statement;*
 - (b) any consultation, 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)".*
- 1.8 Under Regulation 4(2), the 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;*
 - (e) the interaction between the factors referred to in sub-paragraphs (a) to (d)."*
- 1.9 The aim of EIA, as defined by online national Planning Practice Guidance (PPG)³ 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".*

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 project listed within Schedule 1 of the EIA Regulations. Following an appraisal against Schedule 2 of the EIA Regulations, the Proposed Scheme is considered to fall below the thresholds of Schedule 2, 10(b)(ii): ‘urban development projects’.
- 1.12 The threshold/criteria does 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*”, normally presented within an EIA Screening Report and submitted to the determining authority for their opinion. An EIA Screening Report was intended to be undertaken; however, through consultation with MCC, the need for an EIA was established to support the Application with regards to concerns regarding potentially significant effects on daylight, sunlight and overshadowing and air quality. Further details are provided in **Chapter 2: Approach to EIA and Consideration of Alternatives**.

Stage 2: EIA Scoping

- 1.13 As set out within Paragraph 036 of PPG, there is no legal requirement for the Applicant to consult with or seek a formal scoping opinion from MCC. Instead, the scope of the ES has been informed by advice received from the Applicant’s consultant team, pre-application engagement with MCC as well as an internal scoping process completed by the project team. Ultimately it was determined that a single technical topic was scoped into the Environmental Statement, requiring further assessment. Further details are provided in **Chapter 2: Approach to EIA and Consideration of Alternatives**.

Stage 3: Environmental Statement

- 1.14 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 and Consideration of Alternatives, Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing**.
- 1.15 **Table 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.

Table 1.1: Required information, as Specified by the EIA Regulations, and its Location within the ES

Regulation 18	Schedule 4	Location within this ES
(3) an environmental statement is a statement which includes at least - (a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development.	(1) A description of the development, including in particular: (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational stages; (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.	Chapter 3: Site Context, Chapter 4: Development Specification; Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant.
(3)(b) a description of the likely significant effects of the proposed development on the environment.	(5) a description of the likely significant effects of the development on the environment resulting from, inter alia: (a) the construction and existence of the development, including, where relevant, demolition works; (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; (c) the emissions of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste; (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;	Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant and Chapter 7: Assessment of Cumulative Effects.

Regulation 18	Schedule 4	Location within this ES
	(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; and (g) the technologies and the substances used. The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effect and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC and Directive 2009/147/EC.	
(3)(c) a description of any features of the proposed development, or measure envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.	(7) a description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational stages.	Chapter 4: Development Specification, Chapter 5: Air Quality Screening Evaluation, Chapter 6: Daylight, Sunlight and Overshadowing where relevant and Chapter 7: Assessment of Cumulative Effects.
(3)(d) a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the	(2) a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 2: Approach to EIA and Consideration of Alternatives.

Regulation 18	Schedule 4	Location within this ES
development on the environment.		
(3)(e) a non-technical summary of the information referred to in sub-paragraph (a) to (d).	(9) a non-technical summary of the information provided under paragraphs 1 to 8.	Volume 4: Non-Technical Summary.
(4) an environmental statement – must— (a) where a scoping opinion or direction has been issued in accordance with regulation 15 or 16, be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction¹); (b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and		Chapter 2: Approach to EIA and Consideration of Alternatives, Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing where relevant.

¹ This is further discussed in **Chapter 2: Approach to the EIA.**

Regulation 18	Schedule 4	Location within this ES
(c) be prepared, taking into account the results of any relevant UK environmental assessment, which are reasonably available to the person preparing the environmental statement, with a view to avoiding duplication of assessment.		
(5) In order to ensure the completeness and quality of the environmental statement -	–	Chapter 1: Introduction
(a) the developer must ensure that the environmental statement is prepared by competent experts; and		
(b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.		
–	(3) a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 3: Site Context, Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.

Regulation 18	Schedule 4	Location within this ES
–	(4) a description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	Chapter 3: Site Context, Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
–	(6) a description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the new required information and the main uncertainties involved.	Chapter 2: Approach to EIA and Consideration of Alternatives, Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
–	(8) a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the details of preparedness for and proposed response to such emergencies.	Chapter 2: Approach to EIA and Consideration of Alternatives; Chapter 5: Air Quality Screening Evaluation and Chapter 6: Daylight, Sunlight and Overshadowing.
	(10) a reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Chapters 1 – 7 (at the end of each Chapter with references made throughout).

Competent Expertise

- 1.16 Regulation 18, Paragraph 5(a) of the EIA Regulations requires the ES to be prepared by competent experts.
- 1.17 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.
- 1.18 All technical assessment has been undertaken by a suitably qualified project team, inclusive of a thorough technical review to assure technical credibility, followed by a subsequent procedural review by the EIA coordination team and EIA Project Director.



Planning Context

- 1.19 The EIA Regulations do not require the ES to assess planning policy or guidance with respect to the Proposed Scheme. The **Planning Statement**, which accompanies the Application, examines the merits of the Proposed Scheme against the relevant national, regional and local planning policy context.
- 1.20 Where planning policy has informed assessments, this has been clearly referenced within **Technical Chapter 6**.

The Project Team and Their Roles

- 1.21 Turley have been responsible for the coordination of the ES in conjunction with a full project team. The full project team are identified within **Table 1.2**.

Table 1.2: Project Team

Team Member	Role
Jadebricks Manchester Limited	Applicant
Simpson Haugh	Architect
Gardiner & Theobald	Project Manager and Quantity Surveyor
DP Squared Ltd	Structural Engineers
Caldwell Consulting / BPP Energy	MEP, BREEAM, Vertical Transportation
OFR Consultants	Fire Engineer
Project Four	Principal Designer / CDM Advisor
GTech Surveys	TV and Radio and Reception
Horus	Security Consultant
Turley	Planning, EIA, Strategic Communications, Socio-Economics, Heritage and Townscape and Visual.
Curtins	Transport and Access consultants

Team Member	Role
Hann Tucker Associates	Noise and Vibration consultants
GIA	Daylight, Sunlight and Overshadowing and wind consultants
E3P	Biodiversity consultants
Oxford Archaeology	Archaeology consultants
Miller Goodall	Air Quality
DP Squared	Drainage and Flood Risk
GeoAssist	Ground Conditions and Contamination consultants

Application Reports and Plans

- 1.22 As stated, the ES is one of the supporting documents submitted in support of the Application. For a full list of documents and plans and their planning status (i.e. for approval or supporting information) please refer to the **Planning Application Cover Letter**.
- 1.23 Those application plans and reports that have been used to inform this ES, in terms of baseline, assessment or secondary mitigation, are detailed below. Reference to these is clearly identified and signposted throughout the ES. All information for the assessment within the ES is provided as part of the ES.
- 1.24 In addition, we have set out other application reports submitted that do not inform the ES but provide additional detail for information purposes.

Plans

- 1.25 The ES has been based on the detailed plans which are submitted for approval as part of the Application.
- 1.26 The detailed plans have informed the ES and are presented as part of **Chapter 4: Development Specification**.

Application Reports

- 1.27 The following reports are appended to the ES in **Volume 2: Technical Appendices**:
- **Appendix 5.1: Construction Dust Assessment;**
 - **Appendix 6.1: Drawings,**
 - **Appendix 6.2: Daylight and Sunlight Results; and**
 - **Appendix 6.3: Overshadowing results**
- 1.28 The above document technically informs the evidence within the ES.
- 1.29 There are a number of other documents which provide a greater level of detail on how the Proposed Scheme is likely to come forward, how the Proposed Scheme complies with policy

or provide assessments for technical topics for which no likely significant effects are considered to arise. Where information from these documents has informed 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 so they do not feature in the ES. These documents are therefore submitted as standalone Application Reports:

- Archaeological Desk Based Assessment;
- Crime Impact Statement;
- Design and Access Statement;
- Socio-economic Regeneration Impact Statement;
- Flood Risk Assessment and Drainage Strategy;
- Whole Life Carbon Assessment and Circular Economy Statement;
- Energy and Sustainability Statement;
- BREEAM Pre-Assessment Report;
- Fire Statement;
- Heritage Statement;
- Environmental Noise Survey and Noise Impact Assessment Report;
- Construction Noise and Vibration Assessment;
- Train Induced Vibration Assessment Report;
- Phase 1 Desk Study and Preliminary Contaminated Land Risk Assessment;
- PBSA Needs Assessment;
- Preliminary Ecological Appraisal;
- Planning and Tall Building Statement;
- Statement of Community Engagement;
- Townscape and Visual Impact Assessment;
- Neighbour Interface Statement;
- Piling Methodology;
- Transport Statement;
- Interim Travel Plan;

- TV Reception Survey;
- Broadband Connectivity Assessment;
- Ventilation Design Strategy;
- Wind Microclimate Assessment Report; and
- Construction Environmental Management Plan (CEMP).

Structure of the ES

1.30 The ES is provided in four parts:

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

1.31 **Volume 1: Primary Report and Supporting Graphics** provides the main text of the ES which is divided into 'Chapters' which are supported by a series of figures and technical appendices as required (see **Volume 2: Technical Appendices** below).

1.32 The structure of **Volume 1: Primary Report and Supporting Graphics** is outlined in **Table 1.3**.

Table 1.3: Structure of Volume 1: Primary Report and Supporting Graphics

Chapter No.	Chapter Title	Description of Content
1	Introduction	Introduction to the ES, including definitions of EIA, legal procedure and requirements of EIA and setting out the structure of the ES.
2	Approach to EIA and Consideration of Alternatives	Description of the overall method adopted through the EIA process and presented within the ES, including justification for the scope of the ES and the assessment criteria for determining sensitivity, magnitude, level of effect and significance, alongside adherence to best practice guidance. Outline of the main alternatives considered by the Applicant as required by Schedule 4 of the EIA Regulations.
3	Site Context	Overview of the location of the Site, and the sensitive receptors for assessment within this ES.
4	Development Specification	Comprehensive description of all elements of the Proposed Scheme including its physical characteristics across the construction and operational stages. It is this description which has

Chapter No.	Chapter Title	Description of Content
		informed the assessment undertaken as part of the EIA. This description is inclusive of committed primary and tertiary mitigation considered in Chapter 6: Daylight, Sunlight and Overshadowing .
5	Air Quality Screening Evaluation	Presentation of evidence base for the evaluation of potentially significant effects arising from the Proposed Scheme.
6	Daylight, Sunlight, and Overshadowing	Presentation of assessment of likely significant effects arising from the Proposed Scheme and secondary mitigation required to avoid, offset or reduce anticipated adverse effects or improve beneficial effects.
7	Assessment of Cumulative Effects	Provides a single and comprehensive assessment of cumulative effects, including effect interactions and in-combination effects.

- 1.33 **Volume 2: Technical Appendices** encompasses the technical reports which have informed the technical assessments presented in Volume 1: Primary Report and Supporting Graphics. The full suite of technical appendices is listed in the Environmental Statement Contents Page.
- 1.34 **Volume 3: Environmental Management Plan** provides a schedule of the mitigation committed to throughout the ES. This acts as the checklist for all mitigation which is required to be implemented as part of the approved plans and planning conditions (or other appropriate mechanism) and acts as an Environmental Management Plan (EMP) which can be updated throughout subsequent stages of the project.
- 1.35 **Volume 4: Non-Technical Summary** provides a summary of the ES in non-technical language to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

Availability of the ES

- 1.36 The Application will be submitted as digital copy to MCC. All documentation, including the ES will be published on the MCC website for viewing and downloading.
- 1.37 A digital file can be requested for £15, via the following contact details:

Turley EIA Team

EIA Team
1 New York St
Manchester
M1 4HD

Tel: 0161 233 7676

- 1.38 During the determination of the Application, members of the public may view and comment on the Application via MCC, either in writing or through the MCC Public Access website. Comments can be sent via the following contact details:

Manchester City Council

Town Hall Extension
Albert Square
Manchester
M2 5DB
Tel: 0161 234 4490

References

¹ The Town and Country Planning Act 1990. Available at:

<http://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed: 10/11/2023].

² The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) Statutory Instrument 2017/517. Available at:

<http://www.legislation.gov.uk/uksi/2017/571/contents> [Accessed: 10/11/2023].

³ 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> [Accessed: 10/11/2023].

2. Approach to EIA and Consideration of Alternatives

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;
 - Scope of the ES, including approach to determining scope of topics to be assessed;
 - Stakeholder engagement, summarising the level of engagement with statutory and non-statutory consultees, and other forms of engagement; and
 - Approach to the assessment of likely significant effects, specifically covering: consideration of the full extent of the development; approach to the assessment against a consistent baseline; consideration of future baseline and receptors; development specification and detailed plans; quantum of development; massing; assessment scenarios; implementation of mitigation and monitoring; determining the level of effect and significance criteria; and limitations and assumptions.

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 Regulations.
- 2.4 In addition, the EIA (and therefore the ES) has been undertaken with due consideration of the following guidance documents:
- Department for Levelling Up, Housing and Communities, Planning Practice Guidance (PPG)¹;
 - IEMA, EIA Guide to Shaping Quality Development²; and
 - IEMA, EIA Guide to Delivering Quality Development³.

Context for the Scope of the ES

- 2.5 As set out within Paragraph 036 of PPG, there is no legal requirement for the Applicant to consult with or seek a formal scoping opinion from MCC. As outlined within **Chapter**

1: Introduction, an EIA Screening Report was intended to be undertaken; however, MCC have requested that an EIA be undertaken to support the Application.

- 2.6 The scope of the ES, in terms of the technical topics requiring assessment as part of the EIA and reporting in this ES, has been informed by an internal EIA scoping process undertaken with the Applicant's project team and pre-application engagement with MCC who were seeking reassurance regarding the potentially significant effects on daylight, sunlight and overshadowing and air quality.

Scope of the ES

- 2.7 Based on an appraisal of the current baseline environment of the Site and the characteristics of the Proposed Scheme, the Applicant's consultant team have undertaken an EIA Scoping process to determine the likely significant environmental effects to be assessed within this ES.
- 2.8 **Table 2.1** summarises the outcomes of this EIA Scoping process for each of the technical topics appraised.
- 2.9 The EIA Scoping process has also taken into account primary and tertiary mitigation measures (discussed in more detail below within (*'Implementation of Mitigation and Monitoring'*). Tertiary mitigation measures have only been considered if they are specific, easily achievable and if there is a high degree of confidence in their effectiveness and implementation. Where standard measures have been considered in order to mitigate the environmental effects associated with the Proposed Scheme, these are clearly stated in **Table 2.1**. Details of these mitigation measures are provided in **Volume 3: Environmental Management Plan**, which is assumed to be secured by a planning condition.
- 2.10 Due to specific concerns raised on potential effects from air quality by MCC, particular attention has been given to this topic which has been provided in **Chapter 5: Air Quality Screening Evaluation**.

Table 2.1: Outcomes of the EIA Scoping process

Topic	Appraisal of likely effects	Scoped in to this ES?
Transport and Access	The number of traffic movements associated with the construction of the Proposed Scheme will vary depending on the stage of construction. No information regarding the number and type of vehicle trips are known at this stage. However, construction traffic will be associated with movement of plant / machinery, workers (including subcontractors) and deliveries / collections. Based on experience of similar PBSA in Manchester (for approximately 107 units) it is unlikely that the Proposed Scheme would generate more than 30 (with an approximate 1:3 Heavy Good Vehicles to Light Good Vehicles ratio) vehicular movements per day. This number of vehicles are therefore anticipated to be below both the 500 annual average daily traffic (AADT) light duty vehicle (LDV) and 100 AADT HDV thresholds set out by IEMA guidance⁴. Similarly, given the low generation of construction traffic movements, drivers on the local road network are not anticipated to be significantly delayed, and pedestrians/cyclists are not anticipated to experience significant effects relating to delay, severance, fear and intimidation, loss of amenity or accidents and safety. Furthermore, a Construction Transport Management Plan (CTMP) will be prepared in line with best practice guidelines. Specifically, the CTMP will set out the following: • Delivery timings and associated control mechanisms for all construction traffic. Delivery of large, oversized plant/machinery to the Site should take place outside of peak highway hours (where possible); • Management of all construction related traffic, including details of HGV Booking/management systems; • Proposed construction vehicle routing to and from the Site; • Necessary temporary signage on the local road network; • Set out specifics of temporary parking for all construction staff, deliveries and sub-contractors; and • Provision of alternative pedestrian / cycle routes (including diversions, where required) with appropriate signposting. Given the above, significant effects during construction are not anticipated.	✗

Topic	Appraisal of likely effects	Scoped in to this ES?
	The Proposed Scheme does not provide for any car parking on Site. It is proposed that of the 17 on-street car parking spaces on York Street, two of these will be reallocated to facilitate a dedicated disabled bay and one loading bay along the site frontage. Vehicle movements associated with the operation of the proposed development would be limited to those for waste collections and maintenance (approximately 10 off peak vehicle movements). There will be additional traffic movements on specific days of the year when students arrive / depart at the beginning and end of term. The Applicant will implement 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. Overall, the number of vehicle movements on the local road network generated by the Proposed Scheme is anticipated to be limited and is unlikely to represent a greater than 10% change on the local road network given the current use of the Site. Therefore, it is considered unlikely that changes to traffic flows in the operational stage will cause a significant effect. The Proposed Scheme would not result in a change or loss to existing public transport provisions that currently service the area. The Proposed Scheme may generate an indirect demand on public transport. The Site is well served by existing public transport with cycle lanes and bus stops along Charles Street and Oxford Road Rail Station and St Peter's Square Metrolink station approximately 160m and 560m respectively from the Site. Due to the proposed use of the Site for student accommodation and the close proximity to the University of Manchester and Manchester Metropolitan University campuses on Oxford Road, the majority of movements are likely to be pedestrian and given the existing provision of public transport it is unlikely that the Proposed Scheme will have a significant effect on public transport services. As a result of the above, effects to the public transport system, road users, cyclists and pedestrians during construction and operation are considered unlikely to be significant and have not been scoped in to this ES. A stand alone Transport Statement and Interim Travel Plan report will be prepared and submitted with the Application.	
Air Quality	There is potential for dust and particulate matter emissions associated with construction activities on Site. Such emissions will be short-term and temporary and could be managed through the implementation of a Dust Management Plan (DMP) delivered through a CEMP, which will include dust management measures in line with	✓

Topic	Appraisal of likely effects	Scoped in to this ES?
	IAQM Guidance⁵. Therefore, nuisance and disturbance as a result of dust from construction activities to existing residential receptors are not considered to be significant. During operation, the Proposed Scheme will be primarily supplied with energy via an all-electric connection to the local District Heat Network. There is an emergency generator associated with the Proposed Scheme which will be tested for approximately 30 minutes per month. This equates to six hours annually. The short-term NO₂ objective is that the 1-hour mean of 200 µg/m³ not be exceeded more than 18 times per year. Consequently, the testing of the emergency generator will not result in exceedances of the short-term NO₂ objective because it will run for less than 18 hours annually. During the construction and operation of the Proposed Scheme vehicle movements to and from the Site have the potential to increase pollutant concentrations (NO_x, NO₂, and PM₁₀) from exhaust emissions. As discussed above, traffic flows associated with the Proposed Scheme are anticipated to be less than the daily thresholds outlined in the Environmental Protection UK and Institute of Air Quality Management guidance^a (i.e. 100 Light Duty Vehicle (LDV) flows and 25 Heavy Duty Vehicle (HDV) flows). There is a railway line within 30 m of the Proposed Scheme. This railway line has been identified by Defra as having significant diesel locomotive use⁶ and thus has the potential to have a significant effect on air quality at the Proposed Scheme. Due to the opening year background NO₂ concentrations at the Proposed Scheme being below 25 µg/m³, a detailed assessment of the railway line can be screened out i.e. the effects will be not significant. The Transport for Greater Manchester 2016 modelling screenshot of the Site and its surrounding area has been examined in conjunction with monitoring in the local area. Through analysing this data, it can be concluded that the impact of road traffic emissions associated with the existing road network adjacent to the Proposed Scheme on future residential receptors is not considered to be significant. There is a commercial garage adjacent to the north of the Site which has the potential to impact on air quality adjacent to the Site due to emissions from vehicles within the garage. Due to the size of the garage and its activity,	

^a The thresholds for requiring an air quality assessment in Environmental Protection UK and Institute of Air Quality Management (2017) Land-Use Planning & Development Control: Planning for Air Quality.

Topic	Appraisal of likely effects	Scoped in to this ES?
	the effects of emissions from the commercial garage on new residential receptors are not considered to be significant. However, to provide further reassurance on the potential effects, further evaluation of air quality has been undertaken and reported in Chapter 5: Air Quality Screening Evaluation.	
Noise and Vibration	There is a potential for a temporary increase in noise and vibration associated with construction activities. The existing noise environment at and in the vicinity of the Site is likely to be influenced by road and rail movements and commercial activities. The closest and most sensitive noise receptors are likely to be residents at Bracken House, and the ground floor nursery also within Bracken House. Construction noise and vibration can be controlled through adherence to Best Practicable Means and methods set out in British Standard 5228-1:2009 + A1:2014⁷ as part of a CEMP. It is assumed that the construction working hours would be 08:00 to 18:00 Mondays to Fridays; 08:00 to 13:00 on Saturday; and it is anticipated that there will be no construction on Sundays or Bank Holidays. The implementation of such best practice measures (defined by an understanding of the activities / methodologies) will be prepared by the appointed contractor(s) and submitted to MCC for approval prior to the commencement of on-site activities. Noise will also be generated by construction traffic movements on the local road network which has the potential to impact surrounding receptors. However, given the scale of the Proposed Scheme, the temporary nature of the construction activities, and the maximum number of construction vehicles (<10 HGVs and <20 LGVs a day) which represents a 0.2% increase in traffic on Oxford Road and a 0.1% increase on Princess Road, additional noise generated by construction traffic movements will not lead to a significant increase above the existing noise levels. Although vehicle type affects noise increase, a 25% increase in traffic would be needed to result in approximately a 1dB increase in noise (imperceptible to human ear), and a 100% increase in traffic would result in approximately a 3dB increase in noise (just perceptible to human ear). As outlined above it is likely that traffic movements associated with the Proposed Scheme will be limited to those for waste collections and maintenance. Given this and the existing traffic flows on the surrounding local road network, it is considered unlikely that traffic movements generated by the Proposed Scheme will represent a	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	change of + 25% (and therefore a noise change of 1 decibel (dB) at receptors where road traffic noise is dominant). A 1dB increase is commonly regarded as imperceptible to human ear. Noise from mechanical plant during operation has the potential to result in a nuisance to adjacent receptors if not appropriately assessed. However, a noise assessment will be required to ensure appropriate noise limits are devised based on prevailing noise levels in and around the Site. MCC's noise guidance⁸ is based on that laid out in British Standard 4142⁹. MCC requires that the noise rating level from all new mechanical plant is designed to a level no greater than the typical background noise minus 5dB at the nearest residential receiver. This would result in a negligible magnitude of change and therefore not give rise to a significant effect. Noise levels within habitable rooms of the Proposed Scheme will also need to accord with MCC's noise guidance which is based on that laid out in BS 8233: 2014¹⁰. With consideration of the above, effects relating to noise and vibration during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A standalone Noise and Vibration Assessment report to cover operational impacts, as well as a standalone Construction Noise and Vibration Assessment report, will both be prepared and submitted with the Application.	
Socio-Economics and Human Health	Due to the nature of the Proposed Scheme for PBSA for the University of Manchester, there will be no effects on primary and secondary educational facilities. Sustainable travel options^b, open space and sports/recreational facilities are all accessible from the Site, with the Site being located close to town-centre amenities, local bus stops^c, train station^d, Metrolink station^e and public green spaces. The Site is currently vacant land, and the Proposed Scheme will therefore result in no displacement	✘

^b Footways and cycle lanes are provided on both sides of Charles Street providing access to both Oxford Road and Princess Street. The closest National Cycle Network (route number 6) is approximately 345m west of the Site accessible.

^c There is a bus stop immediately adjacent to the Site on the junction of York Street and Charles Street. The 147 links West Disbury to Manchester Piccadilly Train Station.

^d The closest train station is Manchester Oxford Road located approximately 160m to the north west of the Site which has regular connections to the south west, Wales, midlands and the north.

^e The closest Metrolink station is located approximately 560m to the north at St Peter's Square.

Topic	Appraisal of likely effects	Scoped in to this ES?
	of any existing residential communities, business activities, community spaces or social infrastructure. The Site's location within Manchester city centre will enable coherent integration with existing residential and commercial areas and transport links, and local provision of commercial, leisure and other amenity spaces will therefore be accessible for future Site users (i.e. residents, workers and visitors). Whilst a beneficial effect with regard to social cohesion and inclusive design for residents of the Proposed Scheme and existing local communities is therefore anticipated, the level of effect is not considered likely to be significant. Based on single-occupancy of units, the 107 new PBSA units will accommodate 107 residents. As outlined within HUDU¹¹ guidance, the Royal College of GPs recommend a ratio of one GP (assumed FTE) per 1,800 registered patients; this therefore suggests that the Proposed Scheme could generate demand for under 0.1 FTE GPs. There are a number of primary healthcare facilities accessible from the Site, The Docs being the closest (located 270m north of the Site). This surgery and others in the locality, including The Arch Medical Practice (0.6 miles from the Site) and the City Health Centre (also 0.6 away), are confirmed as currently accepting new patients¹², and it is therefore anticipated that local surgeries will be able to meet the demand generated by the population of the Proposed Scheme. Similarly, as a determinant of health, residents would have adequate access to a number of nearby supermarkets/food stores that supply healthy food. The Site will be kept secure during construction to ensure that the potential for crime and anti-social behaviour is minimised. Site security arrangements will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015¹³, including 24-hour on-Site security and CCTV, where required. Once operational, the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (such as CCTV cameras, appropriate security lighting and digital entry systems at each building) to help 'design out' crime, minimising the potential for crime and anti-social behaviour. The Proposed Scheme will have on-Site security staff, with staff present 24 hours a day. Therefore, the Proposed Scheme is not considered to result in a significant change to crime levels or decrease in community safety during the construction and operation of the Proposed Scheme. Employment opportunities will be generated through the construction and operation of the Proposed Scheme. The construction of the Proposed Scheme will lead to the delivery of new construction stage jobs that would	

Topic	Appraisal of likely effects	Scoped in to this ES?
	represent a beneficial effect for the labour force in the local authority area of MCC. However, whilst beneficial, the scale jobs generated by the Proposed Scheme would result only in a small change in the context of the existing 9,000 jobs recorded in Manchester's construction sector as of 2022¹⁴. Therefore, effects related to employment generated during the construction stage are unlikely to be significant. Once operational the Proposed Scheme could deliver new employment opportunities including concierge and maintenance and security employment. However, the number of jobs created is anticipated to be small in scale compared to total employment across Manchester. Whilst again a beneficial effect, their delivery is unlikely to be significant. Overall, effects relating to socio-economics and human health during construction and operation are considered unlikely to be significant and have not been scoped into this ES^f. A standalone Socio-economic Regeneration Impact Statement report will be prepared and submitted with the Application.	
Built Heritage	As there are no heritage assets within the Site, there will be no direct physical change to the fabric of heritage assets. The on-Site construction activities and the gradual creation of built form within the Site will influence the character of the Site. In addition, the completed Proposed Scheme will change the character of the Site from a construction compound to a new high-quality residential-led development. However, due to the distance and screening by existing built form, the heritage assets potentially affected by the construction and operation of the Proposed Scheme are likely to be limited to The Whitworth Conservation Area immediately north of the Site and listed buildings^g within the Conservation Area and on Charles Street. However, based on the significance of these heritage assets and the contribution made by their setting (including the Site), and taking into consideration existing density of modern built form along York Street and Charles Street, it is not considered likely that there	✘

^f This is with the exception of potential effects on human health from changes to daylight, sunlight and overshadowing and air quality which will be assessed within **Chapter 6: Daylight, sunlight and Overshadowing** and **Chapters 7: Air Quality**.

^g Lass O Gowrie Public House Grade II Listed Building (circa 60m to the east), Former Refuse Assurance Company Offices Grade II* Listed Building (approximately 60m to the north west), India House (Including Attached Wrought Iron Gateway Linked To Lancaster House), Grade II* listed (approximately 90m north), Lancaster House, Grade II* listed (approximately 120m north-east), Asia House, Grade II* listed, (approximately 100m north-east); and Manchester House, Grade II listed, (approximately 90m north-east) and Manchester South Junction and Altrincham Railway Viaduct, Grade II listed (approximately 5m north).

Topic	Appraisal of likely effects	Scoped in to this ES?
	would be a significant environmental effect on the heritage significance of these assets. With consideration of the above, effects relating to built heritage during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A stand alone Heritage Impact Assessment will be prepared and submitted with the Application.	
Townscape and Visual	The Site does not lie within a statutory designated landscape area. The Site is located in the Manchester Conurbation National Landscape Character Area (NCA) 55, meaning that the Site and the surrounding landscape is already dominated by built form and infrastructure. The Application Site is situated within the 'City Centre' Strategic Character Area as defined in the Strategic Level City-Wide Urban Characterisation for Core Strategy (November 2010). Townscape effects from construction would be experienced directly by the Site and the immediate townscape as a result of the change of use from the existing Site as a construction compound to a construction site. As the effect experienced during construction is short-term and temporary, it is considered unlikely to be significant. In addition, once operational the new built form would be read in conjunction with the already existing built form in the surrounding area and the wider townscape character. With regards to visual effects construction activities (such as the introduction of material stockpiles, and the movement of plant and other construction vehicles, and the progressive construction of the PBSA) are likely to result in adverse effects on visual receptors due to the incomplete nature of the building during this stage. It is likely that temporary fencing/hoarding will be erected around the perimeter of the Site, where necessary. This will help to screen low-level construction activities. In addition, the adoption of general Site tidiness and sensible layout (which will be defined in the CEMP), would all help to mitigate adverse visual changes. As a result, the effects would be temporary and short-term, and are unlikely to be considered significant. Once operational the Proposed Scheme will introduce a new built form into the area which will be visible by local receptors. The Proposed Scheme will comprise of a single building up to a height of 79.705m Above Ordnance Datum (AOD) which, while taller than Bracken House, will be lower in height than the adjacent Maldron Hotel and therefore visually will likely not be out of place in the existing 'context' of the built form and the surrounding area	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	(characterised by a mix of residential, commercial, retail and educational / university buildings). The existing built form and topography are also likely to limit visual effects to the immediate street scene. With consideration of the above, effects relating to townscape and visual receptors during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A standalone Townscape and Visual Impact Assessment report will be prepared and submitted with the Application.	
Archaeology	The Site is not subject to any archaeological designations (i.e. below ground Scheduled Monument). The Site and the immediate surrounding area have been subject to significant development / redevelopment from the 19th century onwards (see Chapter 3: Site Context) and any remains (if present), are likely to have been disturbed / truncated. The significance of any remains is therefore likely to be considered low. A stand alone Archaeological Desk-Based Assessment will be prepared and submitted with the Application.	✘
Biodiversity	There are no ecological designations within the Site or statutory designations within 2km of the Site. The nearest non statutory designated site is the Ashton Canal West Site of Biological Importance¹⁵ (SBI) (circa 940m to the north-east at the closest point). Due to the distance and the intervening urban land uses between the Site and the statutory / non-statutory ecological sites, no adverse effects on these sites are anticipated. The Site itself comprises hard standing with a few opportunistic shrubs and therefore does not provide any significant habitat. Therefore, direct and indirect effects on habitats and species using the Site are likely to be insignificant. Due to the absence of habitats, the site is exempt from Biodiversity Net Gain in line with the Environment Act 2021. Given the lack of buildings or habitats on Site, the Site itself is unlikely to support any protected or notable species. It is possible that birds and bats may be present in the railway arches to the north of the Site with the River Medlock (located approximately 50 m north east of the site) providing a possible commuting line for bats. If present the construction of the Site has the potential to cause disturbance to these species through increased light spill and noise. There is also the potential, although minimal, for impacts via pollution (through dust and surface water runoff). Pollution (through lighting, dust and surface water runoff) can be controlled through standard good practice measures/guidance through a CEMP including:	✘

Topic	Appraisal of likely effects	Scoped in to this ES?
	• Implementation of a construction Dust Management Plan (DMP) (see '<i>Air Quality</i>' below); • Implementation of best practice measures to control lighting in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129¹⁶, ILP GN01-2021¹⁷, BS EN 12464-2:2014¹⁸ and ILP Guidance Note 08/23¹⁹ to reduce light spill and glare; • Preventative measures included within the Chartered Institute of Ecology and Environmental Management²⁰ guidance such as screening stockpiles of materials, deployment of windbreak netting and banksmen and dampening exposed soils/ aggregates as appropriate and set out requirements for ongoing monitoring and liaison with MCC; and • Potential for pollution from surface water runoff will be prevented (See '<i>Ground Conditions and Contamination</i>' below). Adherence to these guidance documents and standards will ensure that disturbance associated with construction on bats and birds will be minimised. During operation, impacts on the potential use of the railway arches by birds and bats will be limited to operational lighting. As detailed within Chapter 4: Development Specification, the lighting design ensures that there will be zero light contributions from additional external lighting towards the railway arches. Therefore, if present, the effects on bats and birds during the operation of the Proposed Scheme are unlikely to be significant. With consideration of the above, effects relating to biodiversity during construction and operation are deemed unlikely to be significant and have not been scoped into this ES. A stand alone Phase 1 Ecological Survey will be prepared and submitted with the Application.	
Ground Conditions and Contamination	The Site is not located within a groundwater Source Protection Zone (SPZ), therefore, it is unlikely that the development of this Site will have a significant effect on the groundwater recharge of the underlying Principal and Secondary A Aquifer. The Site lies within an area with the lowest band of radon potential and therefore effects from the potential release of radon during disturbance to the ground from construction activities are not considered significant.	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	It is anticipated that there is historical contamination from previous uses as well as current sources from accidental oil/fuel spills from the adjacent commercial garage to the north of the Site and from vehicles using the Site. Existing ground contamination has the potential to impact the health of construction works and future Site users via exposure to soils through direct contact / ingestion / inhalation of contamination soils and adjacent site users from contaminated dust emissions. Similarly, impacts to groundwater (and surface water quality) may be associated with historical site uses and environmental setting. During the construction stage, there is a potential for contamination to be mobilised during the formation of foundations and migrate vertically into the underlying groundwater and then into nearby surface water bodies, the closest of which is the River Medlock. There is also the possibility that proposed foundations (particularly piled foundations) may create a preferential pathway to the groundwater and for ground gas Throughout the construction stage of the Proposed Scheme, there is a potential for spillages (such as oil, fuel, cement, chemicals etc.), and the generation of suspended solids during construction activities which could affect construction workers, existing residents or nearby controlled waters (i.e. the River Medlock / secondary A Aquifer). If present, asbestos will be identified, removed, handled and disposed of in line with appropriate guidance and Regulations, including The Hazardous Waste (England and Wales) Regulations 2005²¹, Control of Asbestos Regulations 2012²² and CIRIA C733²³. Programmed removal of the identified asbestos materials will be undertaken at the outset of the enabling works under an Asbestos Management Plan (as part of the CEMP). Measures to protect construction workers, local residents and the local community from exposure to any contaminated material which is unexpectedly encountered will be required of the appointed contractor(s) under the Construction (Design and Management) Regulations 2015 and other health and safety legislation. Appropriate strategies / protocols will be put in place through a CEMP in line with relevant legislation and best practice for all activities, including: • Provision of appropriate Personal Protective Equipment (PPE); • Implementation of risk assessments and method statements;	

Topic	Appraisal of likely effects	Scoped in to this ES?
	- Control of dust through the application of management measures in line with IAQM guidance as detailed above; - All construction activities will be undertaken in line with all appropriate Guidance for Pollution Prevention (GPPs); - Bunded storage; - Provision of designated wheel washing areas; - Screening stockpiles of materials; and - Requirements for ongoing monitoring and liaison. With the adoption of the identified mitigation, effects related to the potential migration / release of on-Site contamination are unlikely to be considered significant. In addition, the Site will largely be covered in hardstanding once the Proposed Scheme is complete (and therefore any below ground contamination will be 'capped'). As such, effects related to contamination during the operational stage are unlikely to be considered significant. Regional BGS data is known for the Site (Sandstone); however, site specific ground conditions are not known ground conditions will be identified by an intrusive ground investigation prior to the main construction works to ensure that geotechnical risks are identified. All necessary groundworks and foundation design will be implemented in order to provide suitable construction platforms in line with best practice guidance and applicable British Standards^h. As such, it is anticipated that suitable ground remediation techniques and design can be implemented to negate any likely significant effects related to the presence of geotechnical risks. With consideration of the above, effects relating to ground conditions and contamination during construction and operation are deemed unlikely to be significant and have not been scoped into this ES.	

^h Such guidance and British Standards could potentially include CIRIA report C572: Treated ground engineering properties and performance; BRE document FB75: Building on Fill - Geotechnical Aspects and British Standard 6031:2009: Code of Practice for Earthworks.

Topic	Appraisal of likely effects	Scoped in to this ES?
	The potential for contaminants and requirements for a remediation strategy will be confirmed through a stand alone Phase 1 Desk-based Ground Conditions Assessment (including a Coal Mining Report) and Phase 2 Site Investigation and Remediation Strategy which will be prepared and submitted with the Application.	
Soils and Agriculture	The Site is located in its entirety upon previously developed land within Manchester City Centre. Therefore, its implementation would not involve the loss of agricultural land or affect farm businesses during the construction and operation phases.	✗
Flood Risk and Drainage	The Site is located within Flood Zone 3 (indicating a high risk of fluvial flooding from the River Medlock), low risk from surface water flooding and at risk from reservoir flooding (considered under <i>Major Accidents and Disasters</i>). In addition, construction activities have the potential to cause the release of physical contaminants (i.e. sediments) which could increase sedimentation of nearby controlled waters (the River Medlock). It is assumed that the existing drainage infrastructure within the Site will be used to manage surface water until the controlled surface drainage strategy has been implemented. If required, a temporary drainage system utilising the existing drainage system will be installed to manage the surface water until the permanent drainage strategy has been implemented. Appropriate water management measures will also be implemented as part of the CEMP, including the protection of existing drainage pop-upsⁱ, the regular maintenance of gullies and drainage systems to prevent debris from causing obstructions, awareness training for construction workers and the siting of material storage areas to avoid increasing flood risk off-site. During operation the Proposed Scheme has been designed so that less sensitive development is located on Ground Level and Level 01 with residential accommodation commencing at Level 02 at 38.355AOD (see Chapter 4: Development Specification). In addition, the Proposed Scheme will be required to meet the standards as set out within the Manchester City Council Level 2 SFRA which requires at least a 50% reduction in surface water runoff be provided through SuDS as part of any brownfield development with the aim of reducing to Greenfield runoff rates. This has been provided by using attenuation in the form of a blue roof at Level 09.	✗

ⁱ In line with industry best practice and guidance, including British Standard 8582:2013 — Code of practice for surface water management for development sites.

Topic	Appraisal of likely effects	Scoped in to this ES?
	As such, changes to risk of flooding and surface water flow routes (while beneficial) are unlikely to be considered significant and have not been scoped into this ES. The operation of the Proposed Scheme will put an increase in demand on potable and foul water services. Given the City Centre location, there will be existing potable and foul water infrastructure in the area. According to United Utilities Water Resources Management Plan²⁴, the baseline forecast of the amount of potable water available to meet the projected demand shows a surplus assuming their preferred plan is implemented. It is also anticipated that the increase in foul flows in relation to the foul sewerage capacity within Manchester City Centre will not be significant. Therefore, increased demand on existing potable and foul water infrastructure is considered unlikely to be significant and have not been scoped into this ES. A stand alone Flood Risk Assessment will be prepared and submitted with the Application	
Daylight, Sunlight and Overshadowing	The Applicant's Daylight, Sunlight and Overshadowing consultant found that daylight and sunlight effects would vary throughout the construction stage, and these would gradually increase to reach those caused by the operational Proposed Scheme. As such, the operational stage assessment was considered to provide the worst case scenario for the Proposed Scheme, and construction stage effects were scoped out of the EIA. Given the existing built form, effects from the Proposed Scheme are likely to be limited to receptors within the immediate vicinity of the Site. Sensitive receptors within the immediate vicinity of the Site include commercial, educational and residential uses. The BRE Guidelines²⁵ consider residential properties to have the highest requirement for daylight and sunlight. Therefore, there are potential effects from the Proposed Scheme in relation to reduced daylight and sunlight amenity to residential sensitive receptors and increased overshadowing to surrounding areas of outdoor amenity. The façades of the proposed building comprise mainly of brick with anodised aluminium and glass. Due to the scale of surrounding buildings, the southern and western elevations will be shaded and obscured from view at nearby road and rail locations. The punched windows and angle of eastern elevation within the field of view of drivers would mean solar glare would not impact train drivers on the adjacent railway tracks. The northern elevation is the only elevation that would be visible to train drivers but does not have any windows proposed and	✓

Topic	Appraisal of likely effects	Scoped in to this ES?
	so cannot result in solar glare. Therefore, the effects of the Proposed Scheme on solar glare at sensitive receptors surrounding the Site are not considered significant and have not been scoped into this ES. Effects from daylight, sunlight and overshadowing have subsequently been scoped into the ES and are reported in Chapter 6: Daylight, Sunlight and Overshadowing.	
Wind Microclimate	The introduction of built form on-Site as part of the Proposed Scheme is anticipated to alter the wind environment. Preliminary wind modelling has been undertaken^j using Computational Fluid Dynamics (CFD) to assess wind conditions for the Proposed Scheme. Conditions have been assessed at both ground level and elevated levels within a 400m radius. The results of the assessment conclude that there are no exceedances of safety risk^k or exceedances of the wind comfort criteria^l at the Site (for their intended uses) or in the surrounding area assessed. Therefore, the effects of the Proposed Scheme on wind conditions at sensitive receptors within and surrounding the Site are not considered significant and have not been scoped into this ES. The stand alone Wind Microclimate Assessment report will be prepared and submitted with the Application.	x
Climate Change	The construction of the Proposed Scheme has the potential to release GHG emissions from the use of plant and machinery, and construction traffic. The exact emissions from construction are unclear without full knowledge of materials, their origins and the machinery / plant being used. However, the emissions can be mitigated through careful sourcing of construction materials to reduce associated GHG emissions as well as direct emission-reducing practices. Such measures will be detailed within the CEMP. Considering the scale of the Proposed Scheme and measures to be included in the CEMP, GHG emissions from construction are considered to be limited in the context of overall emissions across MCC and construction sector targets and are unlikely to be significant.	x

^j GIA (November 2023) 'Bracken House Car Park: Initial Wind Microclimate Assessment'

^k Wind safety risks are defined as any location where the mean wind speed exceeds 15m/s for greater than 0.025% of the year (~2hrs) speed exceeds 15m/s for greater than 0.025% of the year (~2hrs)

^l In accordance with the Lawson Comfort Criteria

Topic	Appraisal of likely effects	Scoped in to this ES?
	Once completed, the Proposed Scheme will be required to comply with Part L of the Building Regulations. Greenhouse Gas (GHG) emissions will be released as a result of transportation movements, although this is expected to be limited given the limited vehicle movements associated with the Proposed Scheme (see '<i>Transport and Access</i>') and prominence of active travel options in the immediate locality of the Site. The exact GHG emissions are not understood, nor how these emissions would compare to regional and national budgets. However, the scale of the Proposed Scheme and the anticipated operational traffic movements are small in a regional context and the emissions released from them are considered to be negligible compared to the existing environment. Climate change has the potential to increase summer temperatures which in turn can lead to the overheating of facilities provided as part of the Proposed Scheme. However, the building will be designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes. The effect of climate change has the potential to increase flood risk and damage Site equipment. The Site lies within Flood Risk Zone 3, however potential increase of flooding on off-site receptors and future Site users can be mitigated through the implementation of an appropriate drainage strategy and design of finished floor levels (see Chapter 4: Development Specification) taking into account further effects of climate change. Accounting for the above, effects relating to climate change during construction and operation are considered unlikely to be significant and have not been scoped into this ES. A stand alone Whole Life Carbon Assessment and Circular Economy Statement, Energy and Sustainability Statement, BREEAM Pre-Assessment Report and Green and Blue Infrastructure Statement will be prepared and submitted with the Application.	
Lighting	There are no lighting installations on the Site itself. Lighting installations in the vicinity of the Site include street lighting installations adjacent to the Site on York Street, on the corner of York Street and Charles Street and on Charles Street to the south east corner of the Site. Given the size of the Site, light spill from these sources of street lighting is likely to affect all parts of the Site. Light spill from bulk head lighting installations on the façade of	✘

Topic	Appraisal of likely effects	Scoped in to this ES?
	Paintpots Nursery (which is located on the ground floor of Bracken House) to the east of the Site will also affect the lighting levels currently experienced on the Site. The railway viaduct forms an unlit corridor to the north of the Site. Overall it is considered that the lighting environment within the Site is likely to be representative of an E4 / E3 Environmental Zone ('high / medium district brightness')²⁶. During construction activities, there is anticipated to be task lighting to ensure safe working conditions (particularly during the winter months), which will lead to an increase in lighting on the Site. The nature of the effect and its significance is relative to the existing baseline conditions (i.e. lighting environment experienced by existing receptor) and general proximity to potential light sources, where the greatest effect is felt by receptors adjacent to, or in close proximity to a light source (i.e. within 50m). However, given the presence of existing lighting adjacent to the Site, along with the temporary nature of this lighting, there is unlikely to be a significant change from the baseline environment at nearby sensitive receptors. Nevertheless, the CEMP will include construction lighting measures in line with industry standards and guidance²⁷, including: • The use of sufficient lighting units for the task in hand to avoid the need for tall, wide beam lighting units; • The reduction of fixed lighting outside construction working hours; and • Luminaires to be positioned at the boundaries and orientated inwards to the site, reducing light spill beyond the lit areas. Once operational the Proposed Scheme will introduce lighting to the Site. However, new external lighting is limited and only proposed along the northern façade path. The lighting installations comprise of wall lights with full light cut off to reduce light spill. Although new lighting will alter the lighting environment on-Site, it is not considered to result in a substantial change in lighting environment experienced by existing receptors (or give rise to statutory nuisance), given the existing lighting environment of the Site and the immediate surrounding buildings. Existing street lighting on York Street and Charles Street will be retained, therefore the lighting environment along these frontages will not change. Therefore, changes to light spill / glare due to construction and operational lighting is considered unlikely to be significant and have not been scoped into this ES.	

Topic	Appraisal of likely effects	Scoped in to this ES?
Use of Resources and Waste	Construction will require a quantity of steel, aggregate, cement, concrete, bitumen, wood, glass and plastic etc. However, given the scale of the Proposed Scheme, the volumes of materials that will be utilised are not anticipated to be significant. Measures to reduce material use are detailed below. The Proposed Scheme does not include for basement levels and given the topography of the Site it is assumed that a broad cut and fill balance will be achieved. Therefore, there is unlikely to be a significant volume of material generated that is required to be imported or exported to / from the Site. Other sources of waste during construction include solid wastes such as packaging and leftover construction material. However, due to the modest scale of the Proposed Scheme, the overall volume of waste material generated is considered to be limited in the context of construction arisings / waste from the wider area. From a review of remaining landfill capacity data published by the Environment Agency, last updated at the end of 2022²⁸, a total of five landfill sites located in Greater Manchester alone would each have sufficient capacity to accommodate the inert construction material from Site. Should any hazardous material be identified (during intrusive investigation/remediation of the Site), this will be removed, handled and disposed of in line with appropriate guidance and regulations²⁹. To minimise construction waste a Site Waste Management Plan would be included within the CEMP. This will set out measures / practices to minimise waste generation, including the re-use and recycling of materials where possible. It is assumed that the appointed contractor(s) will manage construction related waste in line with relevant legislation^{30 3132333435} 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. This will ensure that construction waste is appropriately managed / controlled. Waste streams generated by the Proposed Scheme during operation will include commercial (recyclables, mixed-waste etc.) and green waste. Storage and collection facilities will be provided through provision of 4, 1100 litre eurobins based on 70 l/bed with two collections per week provided. It is assumed that all waste storage/handling facilities will be designed in accordance with BS 5906:2005³⁶ and in accordance with MCC's Waste Storage and Collection Guidance³⁷.	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	Accounting for the above, effects relating to the use of resources and increased demand / pressure on local waste facilities from production of waste during construction and operation are considered unlikely to be significant and have not been scoped into this ES.	
Major Accidents and Disasters	The probability, frequency and likelihood of natural disasters arising from climatic occurrences (i.e. hurricanes), geological conditions and earthquakes are considered to be very low, due to the climatic conditions and location of the UK. There are no COMAH sites within or adjacent to the Site and it is also not subject to any HSE Consultation Zones. The Site lies in an area classified as at Moderate risk of uncovering Unexploded Ordnance (UXO). As part of a CEMP, the potential risks of UXO will be communicated to all stakeholders who may be exposed to risks during the works (and consideration of potential risks prior to any works commencing). Provision of safety training by a competent UXO expert and provision of UXO safety monitoring will be implemented. The Site is in an area considered at risk of reservoir flooding. Reservoir systems in the UK are actively managed and subject to strict maintenance and inspection regimes. The probability of a dam failure is therefore considered to be extremely low. As detailed above the Site is located within Flood Zone 3. The Proposed Scheme has been designed so that less sensitive development is located on Ground Level and Level 01. In addition, the Flood Risk Assessment and Drainage Strategy to be submitted in support of the Application will account for the possibility of extreme/climate change-induce rainfall events, in providing appropriate surface water drainage infrastructure. The risk of arson / terrorism is managed at a regional / national level and delivered locally through emergency planning and services / response teams. This aims to reduce the risk as far as possible and allow a safe response to any event. Nevertheless, the Proposed Scheme will contain safety measures in place to deter criminals included in the design such as CCTV operation, security lighting, etc., to deter criminals. During construction the appointed contractor(s) will be required to identify appropriate safe working standards and methodologies taking account of Construction Design and Management Regulations (2015) and other good practice guidance, all of which will be included / managed as part of a CEMP. Works will also be undertaken in line with Fire Prevention on Construction Sites: Joint Code of Practice³⁸. There will be areas for the storage / stockpiling of construction waste. These areas will be managed appropriately and maintained safely in fenced	x

Topic	Appraisal of likely effects	Scoped in to this ES?
	locations away from sensitive receptors (as part of the CEMP). Any hazardous waste (such as ACMs) will be handled and disposed of as required by relevant legislation and guidance. The potential for major transport accidents will be mitigated by the implementation of a traffic management measures as part of the CEMP, which will include measures such as a planned route for traffic to reduce the risk to road users, restricting deliveries to certain periods and ensuring the vehicles are well maintained. Fire prevention/protection measures including a Fire Emergency Evacuation Plan (FEED) 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 Proposed Scheme will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law. The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (such as appropriate lighting and digital entry systems at each building). The Proposed Scheme will have on-Site security staff, with staff present 24 hours a day. As detailed above the presence / absence of unstable and compressible ground will be identified prior to the main construction works to ensure there is no geotechnical risk to foundations. All earthworks and foundation design will be in accordance with relevant industry guidance^h. Accounting for the above, effects relating to major accidents and/or disasters during construction and operation are considered unlikely to be significant and have not been scoped into this ES.	

Summary of Technical Topics to be Included in the ES

2.11 In line with the rationale set out within **Table 2.1**, the following technical topic and their associated likely significant environmental effects have been assessed within this ES:

- Daylight, Sunlight and Overshadowing (**Chapter 6**).

Stakeholder 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. Where this has been undertaken in support of topics scoped into this ES, summaries are provided in **Chapter 6: Daylight, Sunlight and Overshadowing**.

2.13 With respect to engagement with the public, the Applicant has undertaken a neighbourhood briefing and public consultation webinar. In addition, the Project Team has consulted MCC through Pre-Application meetings. Feedback from MCC has fed into the design of the Proposed Scheme, of which further detail is accounted for below within '*Consideration of Alternatives*'.

2.14 A full summary of the stakeholder engagement undertaken is detailed within the Statement of Community Engagement, prepared in support of the Application.

Approach to Assessment

2.15 This section outlines the approach to the assessment of likely significant environment effects adopted, as reported within this ES.

2.16 The exact methodology for the technical assessment of likely significant effects of the Proposed Scheme during the construction and operational stages is detailed in Chapter 6: Daylight, Sunlight and Overshadowing.

2.17 However, an overview to the approach has been accommodated with the approach outlined below.

Consideration of the Full Extent of Development

2.18 The study area includes 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.

Approach to Assessment against a Consistent Baseline

2.19 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)".

2.20 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

relevant technical study areas. Therefore, it is necessary to establish the existing baseline environmental condition of the Site and study area.

2.21 The baseline environment comprises the prevailing existing environmental characteristics and conditions of the Site and relevant technical study areas, based upon (where relevant and required):

- 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.

2.22 A summary of baseline data sources/surveys for **Chapter 6: Daylight, Sunlight and Overshadowing** is as follows:

- An indicative topographical survey was undertaken to record the Site's topographical context. A 3D model of the Site and surrounding area in the existing baseline environment was then produced to identify the levels of daylight, sunlight and overshadowing experienced by receptors in the existing baseline environment.

2.23 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, alongside any limitations or assumptions.

Consideration of the Future Baseline and Receptors

2.24 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"

2.25 As required under the EIA Regulations, the ES reports the future baseline scenario under a 'do nothing' scenario, which is further discussed in 'Consideration of Alternatives' below. However, the future baseline scenario is discussed within **Technical Chapter 6**. The discussion is associated with how the Site and study area may change assuming the Proposed Scheme was not brought forward, and the existing management regime was maintained.

2.26 The assessments presented in the ES are based on the deviation from the existing baseline scenario.

Identification of Sensitive Receptors

2.27 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”

2.28 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 **Technical Chapter 6**. These are summarised in **Table 3.1** in **Chapter 3: Site Context**.

Development Specification and Detailed Plans

2.29 As indicated in **Chapter 1: Introduction**, the Application is detailed in nature with full planning permission sought.

2.30 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.

2.31 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 – 4.11**) which contains all information required to inform the EIA in a single location.

Massing

2.32 The scale and location of development as defined on the Detailed Plans and described in **Chapter 4: Development Specification** are the key parameters used to assess likely significant environmental effects of **Technical Chapters 6**, specifically:

- The massing and orientation of the Proposed Scheme is considered regarding the impacts of overshadowing, particularly in relation to residential dwellings/amenity spaces that directly overlook the Site.

Assessment Scenarios

2.33 As set out in **Chapter 4: Development Specification**, construction anticipated to commence in March 2024 with the construction being completed over approximately 18 months with the Proposed Scheme anticipated to be completed by September 2025. Where relevant, the assessments within **Technical Chapter 6** have therefore considered the construction and operational stage of the Proposed Scheme in line with these dates.

2.34 The cumulative scenario is assessed separately within **Chapter 7: Assessment of Cumulative Effects**.

Implementation of Mitigation and Monitoring

2.35 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.”

2.36 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.

2.37 In accordance with IEMA Guidance, 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; 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 a 90% level of confidence that these will be implemented, and they need to be specific with a clear timescale for implementation and responsibility.

2.38 Those measures considered to constitute tertiary mitigation are also considered part of the Proposed Scheme and set out in **Chapter 4: Development Specification**.

2.39 Therefore, **Chapter 6: Daylight, Sunlight and Overshadowing** have considered relevant primary and tertiary mitigation for both the construction and operational stages (where relevant) 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).

2.40 As detailed above (under ‘Scope of the ES’) where tertiary measures have been considered to scope out environmental effects from this ES, these are clearly stated in **Table 2.1** and also summarised in **Chapter 4: Development Specification**.

- 2.41 The application of secondary and tertiary mitigation is only considered appropriate if there is a high level of confidence (i.e., >90%) in the mechanism for implementation (by the Applicant or third party).
- 2.42 Consideration is then also given to any indirect effects of the secondary mitigation alongside the likelihood and confidence of implementation which is evaluated when determining the residual effect.
- 2.43 The primary, tertiary and secondary mitigation detailed within **Table 2.1** and **Chapter 6: Daylight, Sunlight and Overshadowing** are summarised in **Volume 3: Environmental Management Plan** which is assumed to be secured by a planning condition.

Determining Level of Effect and Significance Criteria

- 2.44 A four-step approach has been adopted to define effects as outlined below.
- 2.45 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 from the baseline conditions, including aspects such as probability / likelihood of occurrence, geographical extent, complexity, duration, frequency and reversibility (i.e. temporary and permanent).
- 2.46 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 Chapter 6**.
- 2.47 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.
- 2.48 The assignment of the level of effect has been based on professional judgement and the matrix below (**Table 2.8**) 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 2.2: Matrix to support determining the level of effect

Magnitude of change	Sensitivity (or value, importance, etc.)				
		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

- 2.49 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 a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
 - **Negligible:** Where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.
- 2.50 For some specific Chapters, guidance on the nature of the effect requires that differing criteria or scales for determining significance are to be used. 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. The assessment methodology adopted is set out in **Technical Chapter 6**.
- 2.51 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).

- 2.52 Effects have also been described in line with the requirements of the EIA Regulations, specifically defining if the effect is direct or indirect; if the temporarily scale of the effect is short / medium / long-term; and if the effect is temporary or permanent.
- 2.53 **Technical Chapter 6** provides a summary of effects table, which outlines the effects assessed, associated sensitive receptors, residual effects and whether the effect is 'Significant' or 'Not Significant'.
- 2.54 Cumulative effects have been considered as a single co-ordinated assessment (**Chapter 7: Assessment of Cumulative Effects**).

Consideration of Alternatives

- 2.55 Paragraph 2, Schedule 4, of the EIA Regulations³⁹ states that an ES should include:
- “...a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.
- 2.56 Planning Practice Guidance (PPG)⁴⁰ indicates that where alternative approaches to development have been considered, the ES should include a description of the reasonable alternatives studied which are relevant to the Proposed Scheme and its specific characteristics. In evaluating the reasonable alternatives studied, an indication should be provided of the environmental effects.
- 2.57 As such, in line with the EIA Regulations, if no alternatives have been studied, the EIA does not necessarily need to report or assess reasonable alternatives.
- 2.58 Neither the EIA Regulations, nor PPG identify a specific methodology for the assessment of alternatives, or the criteria to be used to inform the assessment 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 assessment, in line with PPG.

Approach to Consideration of Alternatives

- 2.59 The methodology adopted is based on professional experience of similar projects and an understanding of the Proposed Scheme and its characteristics, as well as focus on the delivery of a proportionate assessment, in line with PPG.
- 2.60 The consideration of alternatives has followed a two-step approach, set out as follows:
- **Step 1:** Consideration of 'factors' that constitute alternatives and justification / discussion for the inclusion / exclusion from further assessment; and
 - **Step 2:** Assessment of the 'factors' brought forward from Step 1 and, where applicable, comparison of environmental effects.

Step 1: Consideration of 'Factors'

2.61 **Table 2.3** reports Step 1.

Table 2.3: Step 1: Consideration of 'factors'

Alternative 'factors'	Considered at Step 2	Justification / discussion
Alternative sites (location)	✗	Alternative sites have not been considered as the Applicant owns the Site and other sites are outside of the Applicant's control. Given the above, alternative sites were not considered by the Applicant and will not be taken forward to Step 2.
Alternative technologies	✗	Whilst alternative technologies are available in terms of the construction of the Proposed Scheme these are largely dictated by 'build-ability' and cost exercises rather than environmental-focused considerations. The Proposed Scheme is a PBSA development, and given this, alternative 'technologies' are not considered to be applicable as they would be for other types of development (i.e. industrial processes or energy generation). Therefore, alternative technologies were not considered to be applicable and will not be taken forward to Step 2.
Alternative development designs (including size and scale)	✓	The design of the Proposed Scheme has evolved in response to stakeholder engagement, market demand / feedback, technical studies and environmental constraints and opportunities (where present in an urban context). Therefore, a design process has been undertaken where 'alternatives' have been considered and disregarded. Therefore, alternative development designs are considered to be applicable and will be taken forward to Step 2.
'Do nothing' scenario	✗	The EIA (as reported within this ES) has assessed the likely significant effects largely based on a deviation from the baseline environment, which is in essence the current scenario. Technical Chapter 6 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). 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 level of redevelopment occurring within Manchester City Centre.

In addition, given the strategic position of the Site within Manchester City Centre, is considered likely that if the Proposed Scheme was not to come forward, another form of redevelopment would likely be proposed. The environmental effects of any such proposal are unknown, as they would be dependent on a proposal's own nature.

Therefore, the 'do nothing' scenario was not considered to be applicable and will not be taken forward to Step 2.

Step 2: Assessment of 'Factors'

- 2.62 As identified above, 'alternative development designs' is the only 'factor' considered relevant for assessment in terms of alternatives and is reported below.
- 2.63 Overall, as the Site is small and constrained by the presence of a railway line, roads and buildings which border the Site, there have been limited opportunities for major design alternatives. However, the design of the Proposed Scheme has evolved through the design process following technical modelling and in response to feedback from MCC in the form of Pre-Application discussions and the resulting issue of feedback.
- 2.64 The massing of the proposed building has undergone several reiterations to take account of the surrounding buildings including the development of an oversail of York Street to counter the proximity to Bracken House.
- 2.65 In addition to the massing changes made with respect Bracken House, the Proposed Scheme has been subject to wind model testing, to ensure that conditions at the Site/surrounding area will be safe and suitable to for their intended uses.
- 2.66 The external façade has given due regard to its surroundings, including omission of windows adjacent to the railway line thereby minimising risk of solar glare.
- 2.67 The initial PBSA proposals included for 88 beds which have subsequently been increased to 100 beds with the final number of 107 beds forming the Proposed Scheme, responding to market demand.
- 2.68 The design of the Proposed Scheme has also taken into account the location of the Site within Flood Zone 3; such measures to account for this include:
- Inclusion of a setback at Level 09. A blue roof will be installed at Level 09 to allow the required surface water discharge rate to be achieved;
 - Relocation of the winter garden from Level 02 to create a walled garden within the entrance lobby on the GL adjacent to Charles Street to allow the raising of more sensitive uses (office and parcel room) from GL to Level 01; and

- Inclusion of a flood resistant box, in which the lift shafts and M&E services will be located.

2.69 Overall, the Proposed Scheme has evolved through the design process following technical modelling and in response to feedback from MCC. Changes to the massing have been made to take account of the existing development, whilst internal changes have ensured that appropriate flood mitigation measures are included within the design to ensure the Proposed Scheme is suitable for its end use.

Limitations and Assumptions

2.70 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”

2.71 Where **Technical Chapter 6** experiences limitations or are based on assumptions these have been clearly identified within the relevant chapter.

References

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- ¹ Department for Levelling Up, Housing and Communities (2020) Planning Practice Guidance [Online], available at: <https://www.gov.uk/guidance/environmental-impact-assessment>.
- ² IEMA, Environmental Impact Assessment Guide to: Shaping Quality Development, November, 2015.
- ³ IEMA, Environmental Impact Assessment Guide to: Delivering Quality Development, July, 2016.
- ⁴ IEMA (2023) Environmental Assessment of Traffic and Movement, July, 2023.
- ⁵ IAQM “Guidance on the assessment of dust from demolition and construction” v2.1 2023 Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf>
- ⁶ Defra (2022) ‘Local Air Quality Management Technical Guidance Document LAQM.TG (22). Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>
- ⁷ BS 5228-1:2009 + A1:2014 Code of Practice for noise and vibration control on construction and open sites - Part 1 - Noise and Part 2 - Vibration
- ⁸ Manchester City Council (2022) ‘Planning & Noise Technical Guidance’ October 2022
- ⁹ British Standard 4142:2014+A1:2019; ‘Methods for rating and assessing industrial and commercial sound’
- ¹⁰ BS 8233: 2014 Guidance on sound insulation and noise reduction for buildings
- ¹¹ NHS Healthy Urban Development Unit (HUDU) (2019) Rapid Health Impact Assessment Toolkit (4th Edition)
- ¹² NHS (2023). ‘Find a GP’ [Online]. Available at: <https://www.nhs.uk/service-search/find-a-gp>
- ¹³ Construction (Design and Management) Regulations 2015 No. 51.
- ¹⁴ ONS via Nomis (2023) Business Register & Employment Survey: 2022 &c2=2092957698
- ¹⁵ https://mappinggm.org.uk/gmsf-consultation-2019/?lyrs=gmeu_sbi#os_maps_light/15/53.4779/-2.2356

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- ¹⁶ CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas
- ¹⁷ Institute of Lighting Professional (ILP) GN01-2021 Guidance Notes for Reduction of Obtrusive Light
- ¹⁸ BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places
- ¹⁹ ILP Guidance Note 08/23: Bats and Artificial Lighting at Night
- ²⁰ CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- ²¹ The Hazardous Waste (England and Wales) Regulations 2005 No. 894.
- ²² Control of Asbestos Regulations 2012 No. 632.
- ²³ CIRIA (2014) C733 Asbestos in soil and made ground: a guide to understanding and managing risks.
- ²⁴ <https://www.unitedutilities.com/corporate/about-us/our-future-plans/water-resources/water-resources-management-plan/>.
- ²⁵ Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition
- ²⁶ Institution of Lighting Professionals (2021). Guidance Note 01/21: The Reduction of Obtrusive Light.
- ²⁷ ILP Guidance Note 01/21 The Reduction of Obtrusive Light (2021); CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas; and British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places. ILP Guidance Note 08/23: Bats and Artificial Lighting at Night.
- ²⁸ Environment Agency (2023) Landfill capacity – England 2022 – Version 1. Available online: <https://environment.data.gov.uk/portalstg/home/item.html?id=a07458942af14410b54ce8f3758d4bff> [Accessed 17/11/2023].
- ²⁹ CIRIA C741 (2015) Environmental good practice on site
- ³⁰ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>
- ³¹ 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>
- ³² The Waste (England and Wales) Regulations 2011 No 988
- ³³ Controlled Waste (England and Wales) Regulations 2012
- ³⁴ The Hazardous Waste (England and Wales) Regulations 2005
- ³⁵ Control of Asbestos Regulations 2012
- ³⁶ British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice.
- ³⁷ Manchester City Council (2023) 'GD 04 Waste Storage and Collection Guidance for New Developments', Version 7.00
- ³⁸ Fire Protection Association (2023) Fire Prevention on Construction Sites: The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation
- ³⁹ 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: <https://www.legislation.gov.uk/uksi/2017/571/contents> and <https://www.legislation.gov.uk/uksi/2018/695/contents/made> [Accessed: 14/11/2023].
- ⁴⁰ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government: Planning Practice Guidance Environmental Impact Assessment. Available at: <https://www.gov.uk/guidance/environmental-impact-assessment#the-purpose-of-environmental-impact-assessment> [Accessed: 14/11/2023].

3. Site Context

Introduction

- 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 to avoid the need for repetition within **Technical Chapter 6**.
- 3.2 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 Chapter 6**). A summary of the sensitive receptors included in **Technical Chapter 6** is included in **Table 3.1**.

Location and Setting

- 3.3 The Site (**Figure 1.1**) is approximately 0.04ha and currently comprises a being used as a construction compound. The Site is located in the administrative area of MCC. The Site is bound by Bracken House to the east; Charles Street to the south; and York Street to the west.
- 3.4 Bracken House to the east comprises of residential use with the Paintpots day nursery on the ground floor. An external play area lies immediately adjacent to the east of the Site. It is understood that the residential use of Bracken House is currently vacant while works to the cladding of the façade of the buildings are being undertaken.
- 3.5 Within the arches of the raised railway viaduct is a commercial (garage) development which borders the Site to the north at ground level.
- 3.6 The mixed use Circle Square development lies to the south with the Maldron Hotel and Oxford Road to the west and Oxford Road Station to the north-west. A surface level car park, York Street Car Park is located north of the railway viaduct with the River Medlock forming the northern boundary of this car park.

Historic Context

- 3.7 The earliest available ordnance survey (OS) map for the Site is dated 1845¹ and shows that the Site was partially developed with four rows of buildings situated parallel to Charles Street with part of a larger building to the north of the Site.
- 3.8 By 1849² the Manchester South Junction and Railway is shown to the north of the Site and several buildings are present on the Site. The Medlock New (cotton) Mill is shown to the North of the Manchester South Junction and Railway line.
- 3.9 By 1889³ there are buildings shown on the majority of the Site; the Site remains relatively unchanged till 1955⁴ where the OS maps show a reconfiguration of buildings on the Site with only buildings in the south west corner of the Site remaining by 1972⁵.

Topography

- 3.10 The topography across the Site is generally flat at approximately 31.6m Above Ordnance Datum (AOD). The surrounding topography gently slopes down from south to north.

Sensitive Receptors Considered Within the EIA

- 3.11 **Table 3.1** lists the sensitive receptors at which likely significant effects may^a occur and their relationship to the aspects of the environment outlined in Schedule 4 of the EIA Regulations⁶.

Table 3.1: Identified Sensitive Receptors

Chapter	Sensitive Receptors Identified for Assessment in this ES	Schedule 4 'factor'
Chapter 6: Daylight, Sunlight and Overshadowing	- Residential receptors in Circle Square Block 5 & 6, Bracken House and Circle Square Plot 9. - Bracken House Nursery Playground	Population and Human Health

References

¹ OS (1848) 6 inches to the mile England and Wales, 1842-1952. Surveyed 1845

² OS (1851) Town Plans of England and Wales, 1840s-1890. Surveyed 1849

³ OS (1891) Town Plans of England and Wales =, 1840s – 1890s. Surveyed 1889

⁴ OS (1956) National Grid Maps 1944 – 1972. Surveyed 1955

⁵ OS (1972) National Grid Maps 1944 – 1972. Surveyed / Revised 1949 to 1972

⁶ 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/2017/571/contents> and <https://www.legislation.gov.uk/uksi/2018/695/contents/made> [Accessed: 19/09/2023].

^a The level of effects and significance upon the identified receptors is detailed within the relevant technical chapters.

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 Chapter 6**.

4.2 The Proposed Scheme is described as:

“Full planning permission for the erection of 15-storey purpose-built student accommodation building, including site preparation works, works over the public highway and associated works.”

4.3 All temporary and permanent works will take place within the Site boundary, as shown on **Figure 4.2: Existing Site Plan / Application Location Plan**. The description of the completed project should be read in conjunction with the supporting detailed plans, as follows:

- **Figure 4.1: Existing Site Plan / Site Location Plan (10489-SHP-ZZ-A-B5D8-G100-XP-00-001);**
- **Figure 4.2: Existing Site Plan (10489-SHP-ZZ-A-B5D8-G100-XP-00-002);**
- **Figure 4.3: Demolition Plan (Existing) (10489-SHP-ZZ-A-B5D8-JC20-XP-XX-001);**
- **Figure 4.4: General Arrangement Plan (Ground Floor) (10489-SHP-ZZ-A-B5D8-G200-PL-00-001);**
- **Figure 4.5: General Arrangement Plan (Level 01) (10489-SHP-ZZ-A-B5D8-G200-PL-01-001);**
- **Figure 4.6: General Arrangement Plan (Level 02) (10489-SHP-ZZ-A-B5D8-G200-PL-02-001);**
- **Figure 4.7: General Arrangement Plan Typical Levels 03 – 08 (Level 03 shown) (10489-SHP-ZZ-A-B5D8-G200-PL-TY-001);**
- **Figure 4.8: General Arrangement Plan Typical Levels 09 – 14 (Level 09 shown) (10489-SHP-ZZ-A-B5D8-G200-PL-TY-002);**
- **Figure 4.9: Proposed Site Plan (Roof) (10489-SHP-ZZ-A-B5D8-G200-PL-RF-001);**
- **Figure 4.10: General Arrangement Plan (Roof) (10489-SHP-ZZ-A-B5D8-G200-PL-RF-002);**
- **Figure 4.11: General Arrangement Section AA (10489-SHP-ZZ-A-B5D8-G200-SE-AA-001);**

- **Figure 4.12: Façade Detail Charles Street abd North Elevations Ground Floor (10489-SHP-ZZ-A-B5D8-G251-DE-XX-007);**
- **Figure 4.13: Façade Detail East Elevation Ground Level (10489-SHP-ZZ-A-B5D8-G251-DE-XX-009);**
- **Figure 4.14: Façade Detail Charles Street Lower Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-002);**
- **Figure 4.15: Façade Detail Charles Street Upper Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-001);**
- **Figure 4.16: Façade Detail North Elevation Typical (Parapet) (10489-SHP-ZZ-A-B5D8-G251-DE-XX-003);**
- **Figure 4.17: Façade Detail East Elevation Typical (Parapet) (10489-SHP-ZZ-A-B5D8-G251-DE-XX-006);**
- **Figure 4.18: Façade Detail York Street Ground Floor (10489-SHP-ZZ-A-B5D8-G251-DE-XX-008);**
- **Figure 4.19: Façade Detail York Street Lower Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-004); and**
- **Figure 4.20: Façade Detail York Street Upper Typical (10489-SHP-ZZ-A-B5D8-G251-DE-XX-005)**

4.4 The Application is supported by additional plans to those set out above, however, they have not been included for the ES as the information presented within them are appropriately provided in the above listed plans.

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 (Sui Generis) – up to 107 units; and
- 147m² GIA amenity space.

4.6 Single bed occupancy units will be provided across Levels 02 up to Level 14. Typical arrangements are set out within **Figures 4.6, 4.7 and 4.8.**

4.7 As defined on **Figures 4.4, 4.5 and 4.6** supporting ancillary amenity uses will be located at Ground Level (GL), and Level 01 and Level 02 (i.e., plant areas, waste storage, cycle storage, office, meeting rooms, laundry facilities, amenity spaces).

Layout / General Arrangement and Amenity Space

4.8 The Proposed Scheme will comprise a singular building comprising ground floor plus 14 storeys. The building provides for three volumes, with an undercut at GF and Level 01 and a set back at Level 09. The proposed uses for each level comprise of the following:

- Ground Level (**Figure 4.4**): walled garden entrance, plant areas, waste storage and cycle stores;
- Level 01 (**Figure 4.5**): plant areas, laundry facilities, parcel room, meeting room, office and amenity space;
- Level 02 (**Figure 4.6**): amenity area and 5 standard studio student accommodation;
- Level 03 – 08 (**Figure 4.7**): 8 standard studios and two large studios ;
- Level 09 – 14 (**Figure 4.8**): 5 standard studios, 1 accessible studio and 1 large studio; and
- Roof (**Figure 4.9 and 4.10**): further plant will be located on the roof of the building.

Heights

- 4.9 As set out within **Figure 4.11**, the Proposed Scheme comprises of a single building comprising of GL, 14 Storeys plus roof level. The tallest element of the Proposed Scheme (the parapet) will extend up to a maximum height of 79.705m AOD.
- 4.10 The proposed finished floor level at GL is set at 31.900m AOD, which is 300mm above the pavement on Charles Street, to allow for internal ramped disabled access.

Table 4.1: Proposed heights of finished floor levels

Finished Floor Levels	Height (m AOD) ^a
Level GL	31.900
Level 01	35.000
Level 02	38.355
Level 03	41.280
Level 04	44.205
Level 05	47.130
Level 06	50.055
Level 07	52.980
Level 08	55.905
Level 09	58.830
Level 10	61.755
Level 11	64.680
Level 12	67.605
Level 13	70.530

Finished Floor Levels	Height (m AOD) ^a
Level 14	73.455
Roof	76.380

a – heights specified are at the floor level.

Building Materials

- 4.11 The proposed tower will generally be constructed using concrete to create the superstructure of the tower element and provide the necessary structural stability of the building.
- 4.12 The external façade of the building will differ slightly depending on the elevation and to reflect the three distinct volumes of the building. Materials include:
- Light bronze anodised aluminium;
 - Buff cream textured facing brick;
 - Green flat panel glazed terracotta;
 - Buff cream glazed brick;
 - Triangular profited glazed terracotta extrusion; and
 - Buff cream wirecut facing brick.

The details of materials used for each façade are shown on **Figures 4.12 to 4.20**.

Operational Access and Parking

- 4.13 There will be no specific vehicular access to the Site. There are currently 14 car parking spaces on York Street and it is proposed that two of these parking bays are reallocated as one disabled bay with loading bay to allow for an appropriate delivery and servicing point (including for refuse collection purposes).
- 4.14 Residents will be able to access the entrance lobby of the Proposed Scheme from Charles Street.
- 4.15 The proposed cycle store for 28 bikes is located on Level GL (**Figure 4.4**) accessible externally from York Street.

Operational Traffic

- 4.16 As there will be no provision/access to the Site for vehicles, traffic movements associated with the Proposed Scheme will be limited to those for waste collections, deliveries and maintenance (approximately 10 off peak vehicle movements).
- 4.17 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 implement a management plan ensuring that suitable management measures are 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.

- 4.18 Further details are provided in the Transport Statement and Interim Travel Plan submitted with the Application.

Operational Hours

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

Lighting Strategy

- 4.20 Artificial lighting will largely be contained to the interior of the building and the pathway to the north of the Site. Existing lighting on the surrounding road network (York Street and Charles Street) will be retained.
- 4.21 The additional external lighting is with regards to the pathway to the north of the Site which provides access between York Street to the stairwell at the nursery situated at the ground level of Bracken House. Lighting installations along this pathway will comprise of wall lights with full light cut off. The lighting design comprises of Thorn Cesar LED spotlights which have shown Lux levels to be approximately <0.5 lux at 1 m above ground and 0 lux from around 2 m above ground.
- 4.22 Further details can be found in the Design and Access Statement, submitted with the Application.
- 4.23 Lighting is assumed to be operational 24 hours a day to provide a 'safe place' for pedestrians and future users of the Site (i.e. reduction in crime measures) as well as to ground the Proposed Scheme within the context of the surrounding urban realm.

Building Safety

- 4.24 The operator of the facility, once appointed, is expected to have in place the required emergency producers/practices (i.e. Fire Emergency Evacuation Plan (FEEP)) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for these uses. In addition, the buildings will be designed, in line with Building Regulations Approved Document D: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law.
- 4.25 The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (including appropriate lighting and digital entry systems at each building).
- 4.26 Plant rooms and equipment will be designed to contain any spills through bunds and prevent infiltration into ground.

Surface Water Drainage Strategy

- 4.27 The Flood Risk Assessment, submitted with the Application provides details of proposed the proposed surface water drainage strategy. A summary of the drainage strategy which is assumed to be implemented as part of the Proposed Scheme is provided below.

- 4.28 Surface water flows resulting from the building's roof area will discharge into the public surface water sewer located at the north of York Street. Surface water discharge rates must be restricted to a minimum of 50% compared to the existing situation during the 1 in 100 year + 50% climate change event. This equates to 2.5l/s for the Site. Flows in excess of this will be attenuated within a blue roof at Level 09. Full details regarding the installation of a blue roof will be finalised during the detailed design phase. However, the design will be in accordance with CIRIA proposal 3084¹.
- 4.29 Should flooding from the River Medlock to the north occur, most of the ground floor level of the building will be allowed to flood via perforated panels or another venting system. This will allow water to penetrate this area during a flood event and allow it to drain back out again once the flood had subsided.
- 4.30 There will be a proportion of the ground floor level which will not be allowed to flood, this area will comprise of lift shafts and M&E service area. The total footprint of the flood exclusion area is approximately 10m x 8m. Below the ground floor level will be an undercroft with the full 350m² area available to flood at all times via flood venting system. The soffit of the ground floor level will be set at a level no less than 31.400m AOD, which is higher than the 1 in 100 year flood level associated with the River Medlock.

Foul Water Strategy

- 4.31 There will be a separate foul and surface water drainage system.
- 4.32 The proposed drainage system will be designed in accordance with BS EN 752:2017, Building Regulation Approved Document Part H.
- 4.33 The proposed connection to the public sewer system will be into the public combined sewer networks either within York Street or Charles Street, subject to agreement with United Utilities under a Section 106 Agreement.

Potable Water Strategy

- 4.34 United Utilities will be consulted prior to construction to assess the impact of this increase in the water supply and ensure that the supplies can be met without creating a noticeable effect on local residents or at source.

Energy Strategy

- 4.35 The Proposed Scheme will conform to the requirements set out in Parts L2A (Conservation of Fuel & Power) of the Building Regulations 2021 and Woking Councils key Local and Core Strategy policies.
- 4.36 The energy strategy provides for an all electric with Variable Refrigerant Flow (VRF) type space heating and cooling and an Air Source Heat Pumps (ASHP) for Domestic Hot Water (DHW), as well as highly efficient fabric. It is assumed that there will be a requirement for a gas fired backup provided for the DHW but this is intended just for backup or very cold external temperatures.

Waste Arisings and Strategy

- 4.37 An operational waste strategy will be developed in line with the British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice and in accordance with MCC's Waste Storage and Collection Guidance².
- 4.38 Storage and collection facilities will be provided through provision of 4, 1100 litre eurobins based on 70 l/bed with two collections per week provided.

Resilience to Climate Change

- 4.39 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:
- The Building Regulations³ will be considered in relation to the impact of ground movement in foundation design.
 - The building will be designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes.
 - Provision of water efficient fixtures and fittings, i.e. low flow taps and low water use WCs.
 - In accordance with national guidance the mitigation proposed in the Flood Risk Assessment will take into account the potential effects of climate change to minimise risk of flooding. This includes:
 - Ground floor level of the building set at 31.900m AOD, which is 300mm above the pavement on Charles Street, to allow for internal ramped disabled access;
 - Inclusion of a void (undercroft) underneath the ground floor slab with cladding around the envelope of the building designed with flood vents to allow flood waters to pass through the undercroft unimpeded in the event of a flood. The soffit of the ground floor slab will be set no less than 31.400m AOD (higher than 1 in 100 year on-site flood level).
 - The ground floor of the building will also be designed to allow flood waters to enter via flood vents, however a small area of approximately 10m x 8m will be flood proofed which will not be able to flood, in which the lift shafts and M&E services will be located.
 - The ground floor level will only be used for less vulnerable uses, the student accommodation will be located at first floor level and above. The first floor level of the building will be set at 35.000m AOD.

- The building will be designed to include flood proofing measures in accordance with CIRIA C624 'Development and Flood Risk Guidance for the Construction Industry'.

Construction of the Proposed Scheme

Construction Programme and Phasing

4.40 The Proposed Scheme will be delivered in one phase, with initial site works anticipated to commence in March 2024 with completion of the Proposed Scheme by September 2025.

4.41 Construction works are anticipated to comprise the following key stages, broadly in chronological order:

- Demolition and enabling works, including Site securement and formation of construction access(s) and temporary construction compound (within the Site) (see **Figure 4.3**);
- Site preparation works, including removal of existing low level fencing / brick walls along the boundary of the Site, vegetation clearance works, utilities diversions (where appropriate), provisions for retained features, etc.;
- Site clearance works, including hardstanding and other features to be removed, utilities (where applicable) and below-ground services / structures (where applicable);
- Earthworks and infrastructure, including remediation (if required), formation of drainage features, utilities installation and re-profiling to create development platform levels;
- Foundations and substructure installation;
- Construction of building (including facades) and associated infrastructure (i.e. services and plant);
- Internal fit-out; and
- Implementation of proposed landscaping, lighting, internal and external finishing.

4.42 Where appropriate, these activities are discussed in further detail below. Where assumptions have been made these have been clearly stated.

4.43 A commitment has been made to a number of environmental mitigation measures to be adopted throughout the construction stage, intended to be secured and managed through a Construction Environmental Management Plan (CEMP).

Site Securement

4.44 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

- 4.45 Access during construction will be taken from York Street. Temporary secure access gates will be provided to manage the movement of vehicles, plant and personnel into/out of construction working areas.
- 4.46 It is assumed that York Street and Charles Street will remain open and protected with temporary protective barriers, to be installed between the public and construction activities. There may be instances where these roads require temporary closure (in their entirety) (i.e., delivery of large machinery) however, this will be managed in conjunction with MCC to limit road closures.
- 4.47 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.
- 4.48 It is assumed that the Proposed Scheme would generate no more than 30 (with an approximate 1:3 Heavy Good Vehicles to Light Good Vehicles ratio) vehicular movements per day.

Construction Compound

- 4.49 During construction, a construction compound, welfare facilities and other temporary infrastructure required for the contractor and appointed subcontractors (i.e., material laydown / storage areas, waste handling areas etc.) will be established within the Site. The exact location of the construction compound(s) is unknown at this time, but it will be within the Site.
- 4.50 The principal contractor will identify the proposed compound location within a Site Layout Plan as part of a CEMP for submission and approval by MCC prior to commencement of construction activities on-site.

Temporary Drainage Strategy

- 4.51 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).
- 4.52 Changes to surface water flood risk during the construction stage will be managed through appropriate drainage strategies, using either existing (until removed) and / or temporary drainage systems (before the permanent drainage strategy is installed). Management of surface water will also take account of industry best practice and guidance (i.e. British Standard 8582:2013 — Code of practice for surface water management for development sites⁴, Guidelines for Pollution Prevention⁵ and The SuDS Manual (C753)⁶). In addition, the following further measures will be implemented as part of the CEMP:
- Storage of all materials appropriately to avoid increasing flood risk off-site;

- Awareness training for construction workers;
- Regular maintenance of gullies and drainage systems to prevent debris from causing obstructions;
- Protection of existing drainage pop-ups (which discharge into combination of existing private sewers) to prevent surface water from running off-site uncontrolled; and
- Dewatering to sewers will only be carried out under a licence from United Utilities as the statutory undertaker.

4.53 Measures will be implemented through the CEMP to minimise the risk of detrimental effects on water quality from construction activities, including the use of specific method statements and adherence to good-site practices as well as:

- Wheel washing facilities;
- Screening stockpiles and materials;
- Use of sediment traps on surface water drains;
- Safe storage of materials, fuels and oils (including bunded storage);
- Washing down / equipment cleaning associated with concrete or cementing processes and provision of facilities to remove sediment prior to disposal;
- Earth movements will be controlled to reduce the risk of silt combining with run-off and implementation of protection measures to minimise silts and construction arisings;
- Use of impermeable materials to prevent ingress into the ground; and
- Regular sweeping to remove loose sediments and prevent build-up of dust and mud.

4.54 For piled foundations, the method of construction will be carefully selected to ensure that the potential migration of any physical contamination into the underlying ground is kept to a minimum. Such activities will be undertaken in line with approved guidance.

Utilities Strategy

4.55 The Proposed Scheme will apply for new mains cold water and new electrical supplies into the building. Applications will be made with the network operators to obtain details and agree final locations and details.

4.56 Any utilities requiring diversion, stopping up or temporary relocation will be undertaken in line with an agreed strategy with the relevant network operators.

4.57 The works / route of any new connections is not fully known at this stage. However, it is assumed that the works will be limited in nature, temporary and short-term, for a

limited time within the overall construction programme. In addition, a small number of receptors (predominantly comprising pedestrians, cyclists and drivers of vehicles) would be likely be affected. Therefore, no significant effects are anticipated to arise.

Features for Retention / Removal

- 4.58 No features on Site will be retained. **Figure 4.3 Demolition Plan (Existing)** shows the removal of the car park surface, the low level fencing / brick walls and the ramp/stairs to the south east of the Site will be removed.
- 4.59 In conjunction with and/or following ground investigation work(s) and remedial activities; a layer of ground may need to be stripped from the Site.

Earthworks, Levels and Material Management

- 4.60 Given the topography and size of the Site, it is anticipated that ground levels will remain broadly the same and that a broad cut and fill balance will be achieved.
- 4.61 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.
- 4.62 All waste arisings during construction are to be controlled through the implementation of a CEMP and a best practice waste management strategy.

Remediation Strategy

- 4.63 A Remediation Strategy has been prepared and submitted with the Application and will be agreed with MCC prior to commencement of remediation works.

Foundations Solution

- 4.64 Foundation design will be undertaken in accordance with relevant industry guidance including CIRIA Report C572⁷ and BRE FB75⁸.
- 4.65 Given the anticipated loading of the proposed building, along with the likely ground conditions on the Site, it is anticipated that piled foundations will be required for the construction of the buildings. It is assumed that bored piles will be installed using continuous flight auger (CFA) techniques or using rotary augured piles drilled using a support fluid (as appropriate). Ground improvement techniques (e.g. vibro-compaction) may also be required.

Cranes

- 4.66 The use of mobile cranes and tower cranes is anticipated for the construction of the Proposed Scheme.

Working Hours

- 4.67 Construction working hours⁹ (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

- 4.68 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

- 4.69 Sources of waste during the construction stage are assumed to relate to 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.
- 4.70 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.
- 4.71 The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going management responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste.

Construction Environmental Management Commitments

- 4.72 The proposed construction works will be carried out by a competent contractor, who will comply with current legislation (including the Health and Safety at Work etc. Act 1974, the Control of Pollution Act 1974 and Construction (Design and Management) Regulations 2015). This will be captured within the CEMP, the contract documents, methods statement and risk assessments issued by the appointed contractor(s) ahead of the works.
- 4.73 A commitment has been made to a number of environmental measures and management practices during the construction stage and, where appropriate, these have been set out as part of the CEMP and will be agreed with MCC.
- 4.74 The final working CEMP will include the following:
- 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 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;
- 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.

4.75 Full details of the measures committed to are provided within **Volume 3: Environmental Management Plan (EMP)**.

References

¹ CIRIA proposal 3084 (April 2019) 'Guidance on the delivery of blue roofs'

² Manchester City Council (2023) 'GD 04 Waste Storage and Collection Guidance for New Developments', Version 7.00

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf

⁴ 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/Products/BS-8582-2013)

⁵ <https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/guidance-for-pollution-prevention-gpps-full-list/>.

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

⁷ CIRIA Report C572: Treated ground engineering properties and performance

⁸ British Research Establishment document FB75: Building on Fill - Geotechnical Aspects

⁹ Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](#)

¹⁰ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>

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>

5. Air Quality Screening Evaluation

Introduction

- 5.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to air quality.

Summary of Consultation

- 5.2 **Table 5.1** provides an overview of the consultation that has been undertaken to inform the likely significant effects and the methodology for assessment.

Table 5.1: Summary of Consultation

Body Organisation	/ Contact	Date and Form of Consultation	Summary
MCC	Environmental Health Officer.	Email, 14 November 2023. Email, 16 November 2023.	Consultation regarding scope and methodology with respect to the assessments for construction dust emissions, road traffic emissions and emissions from the railway line. No specific feedback received to date.

Evaluation of Potential Effects

Nuisance and disturbance as a result of dust from construction activities [existing residential receptors within 250 m of the Proposed Scheme]

- 5.3 Construction activities have the potential to result in nuisance and or adverse health effects due to dust deposition arising from on-site construction activities, resulting in the soiling of surfaces; visible dust plumes and elevated PM₁₀ concentrations as a result of dust-generating activities on-site.
- 5.4 It is anticipated that dust and particulate matter (PM) emissions produced during construction activities will be controlled through the implementation of a CEMP. This CEMP will be informed by an assessment completed following Institute of Air Quality Management (IAQM) guidance¹ and will include prevention measures, such as screening stockpiles of materials and setting out requirements for ongoing monitoring and liaison with the local community, and MCC. The construction assessment has been completed and both the assessment and the resulting mitigation is provided in **Appendix 5.1**. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the Environmental Management Plan (see **Volume 3: Environmental Management Plan**).

- 5.5 As part of the CEMP, all non-road mobile machinery (NRMM) will comply with the standards set within the IAQM guidance.
- 5.6 Therefore, nuisance and disturbance as a result of dust from construction activities to existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Traffic-related air pollution as a result of construction activities [existing residential receptors]

- 5.7 Vehicle emissions from road traffic associated with the construction phase of the Proposed Scheme have the potential to result in an increase in air pollution. In terms of traffic generation during the construction phase of the development, it is anticipated that there will not be a change in:
- Light-duty vehicle (LDV) flows of more than 100 annual average daily traffic (AADT) on roads with relevant receptors; and
 - Heavy-duty vehicle (HDV) flows of more than 25 AADT on roads with relevant receptors.
- 5.8 EPUK and IAQM guidance² indicates that the likely impacts of operational traffic on local air quality will not, therefore, be significant. Therefore, traffic-related air pollution from the operational phase on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Traffic-related air pollution as a result of the operational phase of the Proposed Scheme [existing residential receptors]

- 5.9 Vehicle emissions from road traffic associated with the operational phase of the Proposed Scheme have the potential to result in an increase in air pollution. The Proposed Scheme does not have any parking spaces. In terms of traffic generation during the operational phase of the development, it is anticipated that there will not be a change in:
- LDV flows of more than 100 AADT on roads with relevant receptors; and
 - HDV flows of more than 25 AADT on roads with relevant receptors.
- 5.10 EPUK and IAQM guidance² indicates that the likely impacts of operational traffic on local air quality will not, therefore, be significant. Therefore, traffic-related air pollution from the operational phase on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the heating system associated with the Proposed Scheme [existing residential receptors]

- 5.11 Combustion appliances used to heat buildings, such as gas-fired boilers, have the potential to impact air quality². However, the domestic hot water and heating / cooling systems for the Proposed Scheme will be electric. Therefore, the effect of emissions from the heating system associated with the Proposed Scheme on existing residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emergency generator associated with the Proposed Scheme [existing residential receptors]

- 5.12 An emergency generator will be installed to provide power in the event of a power failure. The emergency generator associated with the Proposed Scheme will be gas fired and, thus, has the potential to increase levels of NO₂ and particulate matter PM₁₀ and PM_{2.5}.
- 5.13 It is anticipated that the emergency generator will be tested for approximately 30 minutes per month. This equates to six hours annually.
- 5.14 The short-term nitrogen dioxide (NO₂) objective is that the 1-hour mean of 200 µg/m³ not be exceeded more than 18 times per year³. Consequently, the testing of the emergency generator will not result in exceedances of the short-term NO₂ objective because it will run for less than 18 hours annually.
- 5.15 Therefore, the effects of emissions from the emergency generator associated with the Proposed Scheme on existing residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emissions from the railway line adjacent to the Proposed Scheme [new residential receptors]

- 5.16 Stationary diesel locomotives can give rise to high short-term NO₂ and SO₂ concentrations near railway stations or depots. Additionally, moving locomotives can contribute to elevated short-term NO₂ and SO₂ concentrations close to the track. The Manchester Piccadilly to Manchester Deansgate rail line borders the northern boundary of the Proposed Scheme; future occupants will be within 30 m of the railway line.
- 5.17 There are unlikely to be stationary locomotives adjacent to the Proposed Scheme but this railway line is identified by Defra as having significant diesel locomotive use³ and thus has the potential to have a significant effect on air quality at the Proposed Scheme.
- 5.18 Defra Guidance LAQM.TG (22)³ provides a methodology for the assessment of railway emissions (Paragraphs 7.21 to 7.22 and Table 7.2 of LAQM.TG (22)) which uses background annual mean NO₂ concentrations as an indication of the potential for significant effects. Defra advises that, if the background annual mean NO₂ concentration is below 25 µg/m³, a detailed assessment of the railway line can be screened out i.e. the effects will be not significant.
- 5.19 Following the guidance³, Defra background concentrations of NO₂ have been used⁴, alongside results from the automatic monitoring at Manchester Piccadilly⁵, to calculate the background concentrations at the development site in the opening year of the development.
- 5.20 A factor for adjusting the Defra background data for 2026 has been calculated using the following formula:

$$\text{Factor} = \frac{\text{Monitored concentration in 2022}}{\text{DEFRA Map 2022 Concentration}}$$

- 5.21 This factor has then been applied to the 2026 Defra background concentration data. The results are shown in **Table 5.2**.

Table 5.2: Calculated Background NO₂ Concentrations for 2026

Monitoring location	Monitored NO ₂ background concentration for 2022	Defra background NO ₂ concentration for 2022	Adjustment factor	Defra background NO ₂ concentration for 2026 at the Site	Calculated background NO ₂ concentration for 2026 at the Site
Manchester Piccadilly	29	26.25	1.105	21.85	24.14
(Grid reference 384310,398337)					

- 5.22 Both the Defra and the calculated background concentration of annual mean NO₂ for 2026 are less than 25µg/m³. Following Defra guidance, therefore, the impact of the railway adjacent to the Proposed Scheme on residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of emissions from existing road traffic to the Proposed Scheme [new residential receptors]

- 5.23 Vehicle emissions from road traffic on roads adjacent to the Site have the potential to impact the Proposed Scheme. There will be no residential units on the ground or first floor but at second floor level and above, residential accommodation is proposed.
- 5.24 The Site is located within the Greater Manchester Air Quality Management Area (AQMA). The Greater Manchester AQMA has been declared based on the outputs of air dispersion modelling for the year 2016 at a height of 0 m. This modelling work was completed by Transport for Greater Manchester (TfGM). All locations across Greater Manchester that were predicted to be above a NO₂ annual mean of 35 µg/m³ were included within the AQMA. The annual mean objective is 40 µg/m³ and the selection of 35 µg/m³ as the threshold was selected to account for model uncertainty.
- 5.25 The TfGM modelling results for the Site, shown in **Figure 5.1⁶**, indicate that the NO₂ annual mean concentrations along Charles Street and thus the front façade of the building were in the region of 43 µg/m³ at a height of 0 m at the time of modelling (2016). This is 3 µg/m³ (8%) above the relevant air quality objective.
- 5.26 The Greater Manchester 2022 Air Quality Status Report⁵, however, states that long-term trends show that there has been an improvement in air quality within Greater Manchester. In order to assess likely levels of NO₂ when the Proposed Scheme is operational, monitoring results for 2016 and 2017 have been obtained from the GMCA (2021) 2020 Air Quality Annual Status Report

(ASR)⁷ and the results from 2018 to 2022 were obtained from the GMCA (2023) 2022 Air Quality Annual Status Report (ASR)⁵.

- 5.27 MCC monitors NO₂ and PM₁₀ at an automatic monitoring station, Oxford Road, approximately 190 m southwest of the Site. There are two NO₂ diffusion tube sites, including a triplicate tube monitoring location within 200 m of the Site. These identified roadside and kerbside monitoring sites are located along the B5117, Oxford Street and Oxford Road, which is a busy and congested road. Comparatively, the Site is located on a minor road, approximately 80 m east of the B5117 and 100 m west of the A34.
- 5.28 There is an urban background monitoring location approximately 830 m northeast of the Site which consists of an automatic monitoring station, Manchester Piccadilly, and triplicate NO₂ diffusion tubes. Manchester Piccadilly automatic monitoring station monitors NO₂, PM₁₀ and PM_{2.5}. There is also an urban background NO₂ diffusion tube, MAN72, approximately 520 m southeast of the Site.
- 5.29 Consequently, there are no monitoring sites representative of the Site. However, the identified monitoring locations indicate air quality in the general area and how it has changed since 2016. The results from the monitoring sites are shown in **Table 5.3** and the monitor locations are shown in **Figure 5.2**.

Table 5.3: Annual Mean NO₂ Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean NO ₂ Concentrations (µg/m ³)							
		2016	2017	2018	2019	2020	2021	2022	
Oxford Road (Kerbside)	384233, 397287	66	65	62	59	36	44	43	
Manchester Piccadilly (Urban Centre)	384310, 398337	40	36	35	36	27	30	29	
MAN72 Lockton Close (Urban background)	384761, 397384	40.0	34.6	33.4	32.8	24.5	27.5	26.3	
MAN82-MAN 84 Oxford Rd co-located tubes (Roadside)	384239, 397276	60.2	56.2	54.0	52.0	33.9	40.7	42.6	
MAN59-61 Manchester Piccadilly co-located tubes (Urban background)	384310, 398337	40.8	35.7	31.6	33.1	22.3	24.6	25.3	
MAN29 (Roadside)	384119, 397503	66.2	57.7	58.8	55.4	39.0	44.8	49.8	
Annual Mean NO ₂ air quality objective		40 µg/m ³							

- 5.30 The monitoring results in **Table 5.3** indicate that annual mean concentrations of NO₂ range from below the annual average air quality objective to well above it depending on proximity to road traffic emissions. The 2020 results show the impact of Covid-19 and reduced traffic flows. In 2021, when lockdown restrictions began to be lifted in earnest, concentrations increased at all sites, although did not rise as high as concentrations measured in 2019.
- 5.31 The monitoring results in **Table 5.3** corroborate the conclusion within the Greater Manchester 2022 Air Quality Status Report⁵ that there has been an improvement in air quality within Greater Manchester since 2016. Annual average concentrations at all of the diffusion tubes have fallen by at least 10 µg/m³. Therefore, the NO₂ concentrations at the Site are expected to have improved compared to those predicted in the TfGM model outputs.
- 5.32 The GMCA Air Quality Annual Status reports provide the number of hours that the 1-hour mean has exceeded 200 µg/m³. Since 2016, Manchester Piccadilly has only recorded one hour in which the 1-hour mean exceeded 200 µg/m³, which was in 2017. Therefore, since 2016, the short-term objective for NO₂ has not been exceeded at the Manchester Piccadilly automatic monitoring station.
- 5.33 In 2016, the 1-hour mean exceeded 200 µg/m³ 90 times at the Manchester Oxford Road automatic monitoring station. Since 2017, the greatest number of times the 1-hour mean has been exceeded at the Manchester Oxford Road automatic monitoring station was six times in 2017. Therefore, since 2017, the short-term objective for NO₂ has not been exceeded at the Manchester Oxford Road automatic monitoring station.
- 5.34 MCC monitors PM₁₀ at two automatic monitoring stations, Oxford Road and Manchester Piccadilly, within 830 m of the Site. The Manchester Piccadilly automatic monitoring station also monitors PM_{2.5} concentrations. The results from the monitoring stations are shown in **Table 5.4**, **Table 5.5** and **Table 5.6**; the locations of the monitors are shown in **Figure 5.1**.

Table 5.4: Annual Mean PM₁₀ Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean PM ₁₀ Concentrations (µg/m ³)							
		2016	2017	2018	2019	2020	2021	2022	
Oxford Road (Kerbside)	384233, 397287	27	27	30	26	18	18	18	
Manchester Piccadilly (Urban Centre)	384310, 398337	20	20	21	20	15	15	17	
Annual Mean PM ₁₀ air quality objective		40 µg/m ³							

Table 5.5: 24-Hour Mean PM₁₀ Concentrations Monitored by MCC

Site ID (Classification)	Location	Number of 24-Hour Mean PM ₁₀ > 50 µg/m ³						
		2016	2017	2018	2019	2020	2021	2022
Oxford Road (Kerbside)	384233, 397287	16	15	15	18	5	2	8
Manchester Piccadilly (Urban Centre)	384310, 398337	3	3	2	7	1	2	4
24-Hour Mean PM ₁₀ air quality objective		not to be exceeded more than 35 per year						

Table 5.6: Annual Mean PM_{2.5} Concentrations Monitored by MCC

Site ID (Classification)	Location	Annual Mean PM ₁₀ Concentrations (µg/m ³)						
		2016	2017	2018	2019	2020	2021	2022
Manchester Piccadilly (Urban Centre)	384310, 398337	10	8	11	12	8	9	10
PM _{2.5} Target Level		25 µg/m ³						

- 5.35 The results indicate that since 2016 the PM₁₀ annual mean and 24-hour mean objective have not been exceeded at either automatic monitoring station and the PM_{2.5} concentrations at Manchester Piccadilly are below the PM_{2.5} target level.
- 5.36 In addition, pollutant concentrations, such as NO₂, decrease as the distance from the source increases³. Thus, as height (and distance from the source) increases air quality, air quality improves. The evidence from existing information sources is that the ground and first floor levels of the Proposed Scheme are likely to experience levels of NO₂ below the one-hour mean objective. Proposed residential dwellings on the second floor and above are likely to experience levels of NO₂ and PM₁₀ below the annual mean and short-term objectives for the pollutants and below the annual mean target for PM_{2.5}.
- 5.37 Therefore, the impact of road traffic emissions associated with the existing road network adjacent to the Proposed Scheme on future residential receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Air pollution as a result of the emissions from the commercial garage adjacent to the Proposed Scheme [new residential receptors]

- 5.38 There is a commercial garage, DC Motor Engineers, adjacent to the north of the Site which has the potential to impact on air quality adjacent to the Site due to emissions from vehicles within the garage. Via a phone call⁸ it was confirmed that the garage does not offer any vehicle spray painting services nor do they carry out any activity which requires extraction systems within their premises. On an average day, they have six vehicles on site.

5.39 Therefore, the effects of emissions from the commercial garage on new residential receptors are not considered to be significant and will not be considered further in the EIA or reported in the ES.

Summary

5.40 There are no air quality effects associated with the Proposed Scheme which are considered likely to be significant, therefore air quality is not considered further in the ES.

Technical Competence

5.41 **Table 5.7** provides a summary of technical competence in air quality and EIA.

Table 5.7: Technical Competence in Air Quality and EIA

Technical Competence in Air Quality		
	Lead Author	Reviewer
Name	Melody Horan	Lesley Goodall
Company	Miller Goodall Ltd	
Qualifications / Accreditations Relevant to Technical Area	MSc Environmental Science BSc (Hons) Environmental Science Member of the Institute of Air Quality Management	MSc Environmental Protection BSc(Hons) Environmental Health Member of the Institute of Air Quality Management Member Chartered Institution of Environmental Health
Does the practitioner hold any IEMA qualification?	No	No
Company hold IEMA QMark?	No	
Years Technical Experience (in Technical Area)	6 years	31 years
Number of EIA's Delivered to Date	1	10

References

¹ IAQM (2023) Guidance on the assessment of dust from demolition and construction. Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf> [Accessed: 21/11/2023].

² EPUK and IAQM (2017) Land Use Planning and Development Control: Planning for Air Quality (v1.2). Available at: <https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed: 21/11/2023].

³ Defra (2022) 'Local Air Quality Management Technical Guidance Document LAQM.TG (22). Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf> [Accessed: 21/11/2023].

⁴ Defra (2020) online support tool Background pollution concentrations. Available at: <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018> [Accessed:22/11/2023]

⁵ GMCA (2023) 2022 Air Quality Annual Status Report for Greater Manchester

⁶ TfGM screenshot provided by Ian Hull, Geospatial Team Leader, at Transport for Greater Manchester via email on the 09/11/2023.

⁷ GMCA (2021) 2020 Air Quality Annual Status Report for Greater Manchester Available at https://assets.ctfassets.net/tlpgbvy1k6h2/4IY6QAZe4MdkqcedBlbgE8/a343eef4385f33f4710bb9f08c70f59f/GM_2020_Air_Quality_Annual_Status_Report.pdf [Accessed 27/11/2023]

⁸ Phone call between DC Motor Engineers Director Colin Comerford and Miller Goodall Ltd. on 24/11/2023.

6. Daylight, Sunlight and Overshadowing

Introduction

- 6.1 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.
- 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).
- 6.4 This Chapter, and its associated **Appendix 6.1- 6.3**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).
- 6.5 In addition, this Chapter should be read in conjunction with **Chapter 7: Assessment of Cumulative Effects**.

Summary of Consultation

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

Scope of the Assessment

Effects Not Considered to be Significant

- 6.7 The following effects are considered unlikely to be significant and therefore will not be considered further within the EIA or reported in the ES. A factual evidence base has been provided below to support this.

Effects upon the daylight and sunlight amenity within commercial properties

- 6.8 The BRE Guidelines¹ consider that residential properties have the highest requirement for daylight and sunlight. As such, daylight and sunlight effects to commercial buildings surrounding the Site are not considered to be significant and will not be considered further in the ES.

Reduced daylight and sunlight amenity within surrounding residential receptors during demolition and construction

- 6.9 Owing to the evolving and changing nature of construction activities, the assessment of potential effects during construction of the Proposed Scheme on daylight and sunlight to surrounding

properties will not be modelled.

- 6.10 Since the potential daylight and sunlight effects relating to construction works will vary throughout the construction programme and gradually increase to the potential effects identified for the completed Proposed Scheme, the interim construction effects will not be assessed quantitatively as it is considered that the completed Proposed Scheme represents the worst-case assessment in terms of likely daylight and sunlight.
- 6.11 Therefore, reduced daylight and sunlight amenity within the surrounding residential receptors during the construction stages is not considered to be significant (or if it is, only on parity with the completed Proposed Scheme) and will not be considered further in the ES.

Effects Considered Likely to be Significant

- 6.12 **Table 6.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 6.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Reduced daylight amenity	Circle Square Block 5 & 6 Bracken House Circle Square Plot 9	Operation
Reduced sunlight amenity	Bracken House	Operation
Increased Shadow	Bracken House Nursery Playground	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

- 6.13 There is no legislation that governs daylight and sunlight. The criteria for assessment relating to daylight and sunlight is covered by national and local policy in addition to BRE guidance as set out below.
- 6.14 The following legislation and policy have informed the assessment of effects within this Chapter:
- Revised National Planning Policy Framework 2023²;
 - National Planning Policy Guidance 2021³;
 - Manchester Core Strategy (2012 – 2027)⁴; and
 - Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007)⁵.
- 6.15 The following guidance has informed the assessment of effects within this Chapter:

- BRE 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (2022).

Defining the Study Area

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

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

6.17 There is no specific guidance relating to the extent of a study area. The scope of residential properties that have been assessed has been determined through professional judgement, considering their orientation and proximity to the Site. In relation to the Proposed Scheme, the sensitive receptors fall within 130m from the centre of the Site.

6.18 The location of the surrounding sensitive receptors can be seen in the drawings in Appendix 6.1

Background Studies to Inform the ES / Establish the Baseline

6.19 **Table 6.2** summarises all analysis undertaken to inform the assessment presented within this Chapter.

Table 6.2: Background Technical Analysis

Analysis	Overview	Date of Completion
Daylight, sunlight and shadow baseline assessment	An assessment of the baseline daylight, sunlight and shadow levels to the surrounding sensitive receptors	November 2023

Assessment Process

Methodology for Determining Operational Effects

6.20 The following approaches are undertaken to assess the daylight, sunlight and shadow effects upon the surrounding sensitive receptors when the Proposed Scheme is completed and operational:

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

Outline Approach for Daylight, Sunlight and Shadow Assessments

6.21 The technical analyses carried out to inform the daylight, sunlight and shadow assessments have

been undertaken by creating a digital three-dimensional (3D) model of the existing Site and Proposed Scheme, based on 3D photogrammetry.

- 6.22 The 3D model uses Waldram Diagrams to establish the VSC and 3D geometric calculations for daylight distribution. This model (which is orientated to north using Ordnance Survey (OS) information) enables the path of the sun to be tracked throughout the year to establish the shadow cast by the existing and proposed buildings and thus calculate the sun hours on ground in each scenario.
- 6.23 In accordance with the BRE Guidance, only those surrounding properties which have windows facing towards the Site and are residential in usage were included in the assessment. If a nearby residential property has no windows facing the Site or cannot see the Site, these properties would not be affected by the Proposed Scheme in terms of light.

Daylight

- 6.24 The assessment of changes to the availability of daylight presented within this Chapter has been informed by two common methods, as set out below.

Vertical Sky Component (VSC) Method

- 6.25 The VSC method of assessment is defined in the BRE Guidelines as the:

“ratio of that part of illuminance at a point on a given vertical plane that is received directly from a CIE standard overcast sky, to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky”.

- 6.26 This ratio is the percentage of the total unobstructed view that is available, once obstructions (e.g. the Proposed Scheme), are placed in front of the point of view.
- 6.27 The assessment is calculated from the centre of a window on the outward face and measures the amount of light available on a vertical wall or window following the introduction of visible barriers, such as buildings. The VSC has been calculated using a 'Waldram Diagram'.
- 6.28 The Waldram Diagram is effectively a snapshot taken from that point of the sky in front of the window, together with all relevant obstructions to it, i.e. the buildings. For calculation purposes, trees may be ignored unless they form dense continuous belts.

Due to the limitations of peripheral vision, the maximum VSC value is almost 40% for a completely unobstructed vertical wall or window.

No Sky Line (NSL) Method

- 6.29 The BRE Guidelines provide that where room layouts are known, the effect on the daylight distribution can be calculated by plotting the NSL. In terms of the surrounding receptors, it has not been possible to obtain room layouts for all of the properties and therefore layouts have been assumed where information is not available.
- 6.30 The NSL method is a measure of the distribution of daylight at the 'working plane' within a room. The 'working plane' means a horizontal 'desktop' plane 0.85m in height for residential

properties. The NSL divides those areas of the working plane which can receive direct sky light from those which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light), then the distribution of daylight in the room will be poor and supplementary electric lighting may be required.

- 6.31 The potential effects of daylighting distribution in an existing building can be found by plotting the NSL in each of the main rooms. For houses, this will include living rooms, dining rooms and kitchens. Bedrooms should also be analysed, although the BRE state that they are less important.
- 6.32 In regard to deep rooms which are lit by windows on one side, the BRE Guidelines state (para.2.2.10):

"If an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable."

Sunlight

Annual Probable Sunlight Hours (APSH) Method

- 6.33 Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of APSH. Therefore, where no obstruction exists the total annual probable sunlight hours would amount to 1486, and each spot equates to 14.86 hours of the total annual sunlight hours.
- 6.34 In determining the effects of a development on the availability of sunlight, the assessment considers the number of spots calculated in the Baseline scenario compared to the scenario with the Proposed Scheme in place. Furthermore, assessment considers scenarios during the year and during the winter period, and a comparison made between the two. This provides a percentage of APSH for each of the time periods for each window assessed.
- 6.35 The BRE Guidelines note that:

"In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon."

"all main living rooms of dwellings...should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun".

"If the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be checked."

"...a south facing window will, in general, receive most sunlight, while a north facing one will receive it only on a handful of occasions. East and west facing windows will receive sunlight only at certain times of day".

- 6.36 At Section 3.1.12 the BRE states that:

"If a room has multiple windows, the amount of sunlight received by each can be added together

provided they occur at different times and sunlight hours are not double counted.”

Overshadowing

6.37 The method for assessing hours in sun is the ‘sun-on-ground indicator’. The assessment applies to both to new and existing gardens/amenity areas, which are affected by new developments. The BRE Guidelines suggest that the Spring Equinox (21st March) is a suitable date for the assessment. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

Receptor Modelling

6.38 Where a residential sensitive receptor has rooms with windows which face the Site, any mitigating/dual aspect windows will also be modelled.

6.39 The following residential sensitive receptors have been modelled to publicly available floor plans:-

- Circle Square Block 5 & 6;
- Bracken House; and
- Circle Square Plot 9.

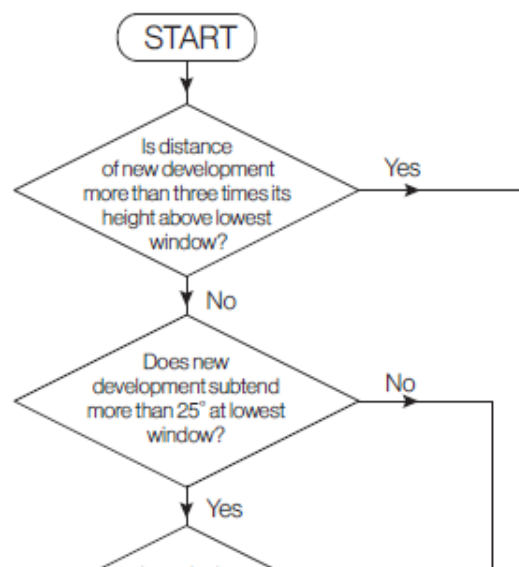
6.40 Where information to identify habitable rooms was unavailable, room uses and layouts were assumed to be habitable and their sizes and layouts assumed using professional judgement. In relation to sunlight modelling and analysis, where floor plans are not available and so making it difficult to determine room uses or confirm which window should be considered as the ‘main windows’, all the rooms with windows facing the Site and within 90 degrees of due south have been considered in the assessment.

6.41 Windows that do not face within 90 degrees of due south do not have a realistic expectation of direct sunlight, due to their orientation and the sunlight path in the northern hemisphere.

Daylight

6.42 To decide whether the daylight amenity within a neighbouring room is likely to be adversely affected by the construction of a proposed development, the BRE recommends the following assessment process be undertaken using the results of the above described VSC and NSL assessments in combination.

Diagram 6.1 – BRE Decision Chart



Sunlight

- 6.43 The BRE Guidelines provide that a window may be adversely affected if a point at the centre of the window receives less than 25% of the APSH, including at least 5% of the APSH during the winter months (21 September to 21 March), or less than 0.8 times its baseline sunlight hours during either period, or if there is a reduction in total APSH which is greater than 4%.

Overshadowing

- 6.44 The BRE Guidelines recommend that at least half of a garden or amenity area should receive at least 2 hours of sunlight on March 21st or the area which receives 2 hours of direct sunlight should not be reduced to less than 0.8 times its former value (i.e. there should be no more than a 20% reduction).

Summary of Criteria for Daylight, Sunlight and Overshadowing

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

Table 6.3: Summary of Daylight and Sunlight Assessment Criteria

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.
SHOG	An area of outdoor amenity space may be adversely affected if less than 50% of its total area is unable to benefit from at least 2 hours of sunlight on 21st March and if the reduction in sunlight is greater than 20% of the baseline level.

Reporting of the Environmental Effect and Significance Criteria

- 6.46 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

- 6.47 The sensitivity of affected receptors has been considered on a scale of **high, medium, low or negligible**.
- 6.48 It is important that the location and nature of the Site and surroundings are considered when determining the sensitivity of the receptors identified. The BRE Guide is very clear that the

targets provided are not mandatory. The location of the Proposed Scheme could be deemed to be special circumstances in which the planning authority may wish to use different target values. This scope and view should also be followed through to the sensitivity of the surrounding receptors. There should be an expectation that a higher degree of obstruction is inevitable in an area with modern high-rise buildings. This point is also made in the NPPF and PPG.

- 6.49 For these reasons, the surrounding receptors may have a lower sensitivity to change in an urban location than those located in suburban, less dense areas. Therefore, for the purpose of this assessment sensitivity classification has been assigned based on how the receptor is able to accommodate or adapt to the effect of the development, given that the existing residential receptors surrounding the Site are in a city centre location where there is an expectation for a higher density of development.
- 6.50 Based on the above, the sensitivity of identified receptors considered within this assessment are defined below.
- 6.51 The following receptors are defined as having a medium sensitivity:
- Circle Square Block 5 & 6;
 - Bracken House;
 - Circle Square Plot 9; and
 - Bracken House Nursery Playground.

Determining the Magnitude of Change

- 6.52 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**.
- 6.53 For daylight and sunlight, the BRE Guidelines outline the approach within the accompanying appendix, in terms of assigning criteria to assess the effects. Where the BRE guidance refers to the magnitude of impacts (referred to in this ES Chapter as 'magnitude of change') as major, moderate, minor and negligible below, these should be read as large, medium, small and negligible respectively:

"Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required...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 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 in this book, the impact is

assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- *Only a small number of windows are affected;*
- *The loss of light is only marginally outside the guidelines;*
- *An affected room has other sources of skylight or sunlight; and*
- *The affected building only has a low level of requirement for skylight or sunlight.”*

6.54 The classification of major adverse is documented within Paragraph 7 of the BRE Guidelines:

“Factors tending towards a major adverse impact include:

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

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building. Beneficial impacts should be worked out on the same principals as adverse impacts.”

6.55 The BRE Guidelines do not provide any guidance on what constitutes a moderate (i.e. medium) magnitude of change.

6.56 Therefore, best practice guidance and professional judgment will be used to determine any impacts based on the guidance set out in Appendix I of the BRE Guidelines.

6.57 The initial numerical criteria for determining the magnitude of change is based on percentage alterations, as follows:

Table 6.4: Summary of Daylight, Sunlight and Overshadowing Assessment Criteria

Magnitude of Change	Percentage Alteration from Baseline
Negligible	0-20%
Small	20-29.9%
Medium	30-39.9%
Large	40%+

Determining the Level of Effect

6.58 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 6.5** has been a tool which has assisted with this process.

- 6.59 Whilst **Table 6.5** 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 6.5: Matrix to Support Determining the Level of Effect

		Sensitivity (or value / importance)			
		High	Medium	Low	Negligible
Magnitude of Change / Impact	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

- 6.60 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.

- 6.61 Appendix F of the BRE guidelines provides an alternate baseline VSC value for city centre regions of 18% rather than the 27% referenced through the body of the document which is the level of VSC to be expected in an environment where the neighbouring construction angle is around 25° i.e. a more suburban location.

- 6.62 18 is 67% of 27. 67% of the BRE target value for NSL (80%) is 53.6% Therefore, as the Proposed Scheme is in a more urban location, if the changes in VSC and/or NSL should breach the standard BRE guidelines beyond a small extent, the level of effect is still considered to be of minor significance provided that the windows either experience no change or retain 18% VSC and the rooms retain at least 53.6% NSL.
- 6.63 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

- 6.64 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.
- 6.65 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.
- 6.66 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

Daylight and Sunlight

- 6.67 The full Baseline daylight and sunlight results can be found in **Appendix 6.2** and are summarised in **Table 6.6** below.

Table 6.6: Baseline Daylight and Sunlight results to surrounding residential sensitive receptors

Address	Windows that meet VSC Criteria		Rooms that meet NSL Criteria		Rooms that meet APSH Criteria	
	Total	Pass	Total	Pass	Total	Pass
Circle Square Block 5 & 6	182	60	140	82	-	-
Bracken House	46	1	44	19	44	0
Circle Square Plot 9	96	68	96	74	-	-
Total	324	129	280	175	44	0

Note: As per Table 6.1, the assessment of sunlight availability has only considered Bracken House.

- 6.68 A total of 324 windows facing the Site serving 280 rooms within 3 buildings were assessed for VSC and NSL for daylight and 44 rooms were assessed for APSH for sunlight within the 1 building which is material for consideration in sunlight terms i.e. its windows are orientated to within 90° of due south.
- 6.69 Out of the 324 windows assessed for daylight, 129 (40%) meet the BRE guidelines for VSC. For NSL, 175 (63%) of the 280 rooms assessed meet the BRE criteria. For sunlight, none of the 44 rooms assessed meet the BRE criteria for either Winter or Annual APSH.
- 6.70 The reason for the low baseline daylight and sunlight compliance levels is due to the dense urban location of the surrounding residential sensitive receptors.

Overshadowing

- 6.71 The full Baseline overshadowing results can be found in **Appendix 6.3** and are summarised in **Table 6.7** below.

Table 6.7: Baseline levels of SHOG within the surrounding sensitive receptors

Area Name	Area benefitting from 2 hours of SHOG on 21st March (%)	Meets SHOG Criteria?
Bracken House Nursery Playground	0	No

- 6.72 In accordance with the BRE Guidelines, as less than 50% of the playground area will be able to benefit at least 2 hours of SHOG on 21st March, it is unlikely to be adequately sunlit throughout the year in the baseline situation.
- 6.73 The reason for the low baseline SHOG levels is due to the dense urban location of the surrounding sensitive receptor.

Future Baseline

- 6.74 If the Proposed Scheme was not constructed the baseline daylight, sunlight and overshadowing levels would remain the same as there are no 'natural' factors that would influence baseline conditions, only human induced changes (i.e. development). With respect to human induced changes, any proposed development of the Site could influence the baseline conditions of varying degrees, as any drivers for change in baseline conditions would be linked to massing and layout of any development.

Primary and Tertiary Mitigation

Operational Stage

- 6.75 No primary or tertiary mitigation has been considered as part of the operational stage assessment.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

- 6.76 The results of the daylight and sunlight (where relevant) assessment modelling has been presented below together on a receptor-by-receptor basis, for ease of understanding of effects occurring at the specified receptors.

Reduced daylight and sunlight amenity

- 6.77 The outputs of the computer modelling for both daylight and sunlight is provided in full within **Appendix 6.2**, with the key metrics provided in **Tables 6.8** to **6.11** below.
- 6.78 A total of 324 windows facing the Site serving 280 rooms within 3 buildings were assessed for VSC and NSL for daylight and 44 rooms were assessed for APSH for sunlight within the 1 building which is material for consideration in sunlight terms i.e., its windows are orientated to within 90° of due south.
- 6.79 The breakdown of the baseline results against the Proposed Scheme for each of the individual buildings forming part of this assessment are discussed in more detail below.

Table 6.8: Summary of VSC Daylight Results

Address	Total No. of windows	No. of windows that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Circle Square Blocks 5 & 6	182	129	27	24	2
Bracken House	46	1	0	1	44
Circle Square Plot 9	96	87	7	2	0
Total	324	217	34	27	46

Table 6.9: Summary of NSL Daylight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Circle Square Blocks 5 & 6	140	122	9	7	2
Bracken House	44	9	1	0	34
Circle Square Plot 9	96	89	4	2	1
Total	280	220	14	9	37

Table 6.10: Summary of Annual Sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Bracken House	44	1	0	0	43
Total	44	1	0	0	43

Table 6.11: Summary of Winter Sunlight Results

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Bracken House	44	31	0	4	9
Total	44	31	0	4	9

Circle Square Blocks 5 & 6***Daylight***

- 6.80 A total of 182 windows serving 140 rooms were assessed for daylight within this property.
- 6.81 Any changes in daylight amenity (VSC & NSL) to 84 of the 140 rooms assessed will be fully BRE compliant. The magnitude of change to the daylight amenity within these 84 rooms is therefore considered to be negligible as, in accordance with the BRE's decision chart, the daylighting within these rooms is unlikely to be significantly affected.
- 6.82 In accordance with the assessment methodology above, the magnitude of VSC and/or NSL change within 31 of the remaining 56 rooms will be small.
- 6.83 8 of the remaining 25 rooms are all served by 2 or 3 windows, all of which have baseline VSC levels of below the BRE recommended 27%. As a result of these low baseline values, the no greater than 9.2% absolute VSC changes caused by the Proposed Scheme to one of the windows serving each room will, when expressed as a percentage of the baseline value, present itself as being medium to large in magnitude of change terms. The other window/s serving each room will all experience BRE compliant (negligible) changes in VSC, all of which are less than 1%. All 8 rooms will experience BRE compliant (negligible) changes in NSL and retain daylight distribution to between 74% and 88% of the room area. The overall magnitude of change to the daylight amenity within these 8 rooms is considered to be small.
- 6.84 10 of the remaining 17 rooms are bedrooms, which all have, by virtue of their usage, a lesser requirement for daylight amenity. Construction of the Proposed Scheme will result in the windows serving these 10 bedrooms experiencing changes in VSC which are medium in magnitude of change terms and changes in NSL which are negligible to small in magnitude of

change terms. In view of the usage of these 10 rooms, the overall magnitude of change to the daylight amenity within these 10 bedrooms is considered to be small.

- 6.85 The remaining 7 rooms are all combined lounge kitchen dining rooms whose windows will experience VSC changes which are medium in magnitude with the rooms experiencing changes in NSL which range from negligible to large in magnitude. The overall magnitude of change to the daylight amenity within these 7 rooms is considered to be medium.
- 6.86 The sensitivity of Circle Square Blocks 5 & 6 is considered to be medium. In view of the isolated number of rooms which will experience changes in daylight amenity which are medium in magnitude, the overall magnitude of change to the daylight amenity in this building is considered 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

- 6.87 No secondary mitigation or enhancement is required.

Residual Effect

- 6.88 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Bracken House

Daylight

- 6.90 A total of 46 windows serving 44 rooms were assessed for daylight within this property.
- 6.91 The majority of the VSC & NSL changes caused by the Proposed Scheme will be medium to large in magnitude of change terms. It should be noted, however, that, in the context of the surrounding buildings, the Site is undeveloped.
- 6.92 Manchester City Centre has experienced considerable change over recent years. The City Centre has always been a focus for new development, an approach in line with national planning policy on delivering development in the most sustainable locations. With this in mind, it should be anticipated that any vacant or underutilised Site in the City Centre should come forward for development. This means that, within a city centre context, the Site's current open nature creates an 'artificial baseline' for surrounding buildings, which experience improved levels of sunlight and daylight compared with what should reasonably be expected and existing daylight levels at surrounding receptors are not currently representative of city centre living within Manchester. In planning for a higher density city centre there must be an expectation of a trade-off between high levels of sunlight and daylight and convenient access to a growing and extensive range of amenities.

6.93 It is also worth noting that the relationship between Bracken House and the Proposed Scheme is very similar to that of Oxford Place and the Maldron Hotel. The retained levels of daylight amenity within Bracken House are also commensurate with those in Oxford Place.

6.94 The sensitivity of Bracken House is considered to be 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

6.95 No secondary mitigation or enhancement is required in view of the retained values being commensurate with the surrounding context.

Residual Effect

6.96 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Sunlight

6.98 A total of 46 windows serving 44 rooms were assessed for sunlight within this property.

6.99 The changes in sunlight amenity to all of the 44 rooms are similar in scale to the changes in daylight amenity for the same reasons.

6.100 The sensitivity of Bracken House is considered to be 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

6.101 No secondary mitigation or enhancement is required in view of the retained values being commensurate with the surrounding context.

Residual Effect

6.102 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Circle Square, Plot 9

Daylight

6.104 A total of 96 windows serving 96 rooms were assessed for daylight within this property.

6.105 Any changes in daylight amenity (VSC & NSL) to 83 of the 96 rooms assessed will be fully BRE compliant. The effect upon the daylight amenity within these 83 rooms is therefore considered to be negligible as, in accordance with the BRE's decision chart, the daylighting within these

rooms is unlikely to be significantly affected.

- 6.106 In accordance with the assessment methodology, the magnitude of VSC and/or NSL change within 8 of the remaining 13 rooms will be small.
- 6.107 The remaining 5 rooms are all studio apartments whose windows will experience VSC changes which are negligible to medium in magnitude with the rooms experiencing changes in NSL which range from negligible to large in magnitude. The overall magnitude of change to the daylight amenity within these 5 rooms is considered to be medium.
- 6.108 The sensitivity of Circle Square, Plot 9 is considered to be medium. In view of the isolated number of rooms which will experience changes in daylight amenity which are medium in magnitude, the overall magnitude of change to the daylight amenity in this building is considered 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

- 6.109 No secondary mitigation or enhancement is required.

Residual Effect

- 6.110 In the absence of secondary mitigation, the residual effects for this property are the same as that reported in the pre-mitigation scenario.

Significance

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

Increased Shadow

- 6.112 The outputs of the SHOG analysis is provided in full within **Appendix 6.3**, with a summary provided in **Table 6.12** below.

Table 6.12: Summary of SHOG Results

Area Name	Baseline area benefitting from 2 hours of SHOG on 21st March (%)	Proposed area benefitting from 2 hours of SHOG on 21st March (%)	Meets BRE Criteria ?
Bracken House Nursery Playground	0	0	Yes

- 6.113 As there will be no change in the area of the playground that will be able to benefit from at least 2 hours of SHOG on the 21st March in the proposed scenario, the change is BRE compliant. The playground will continue to be inadequately sunlit throughout the year.

Limitations and Assumptions

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

- Where actual room layouts were available on the planning portal, these have been considered in regard to the modelling of the internal layouts within the existing surrounding properties. Where layout information was not available, assumptions have been made as to the use and internal configuration of the rooms (from external observations during a site inspection) behind the fenestration observed.
- Floor levels have been assumed for adjoining properties assessed, where access has not been obtained. This dictates the level of the working plane which is relevant for the NSL assessments.
- The Proposed Scheme has changed since the modelling and analysis which informed this Chapter was completed. The maximum height increase from 142.221m AOD to 143.525m AOD is, however, unlikely to materially alter the significance of effect conclusions reached.

Summary

6.115 **Table 6.13** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

6.116 The table only provides a summary of the residual effects identified within the assessment. Details of all primary, secondary and tertiary mitigation (where applicable) 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 6.13: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Reduced daylight amenity	Circle Square Blocks 5 & 6	Minor Adverse	No
	Bracken House	Moderate Adverse	Yes
	Circle Square Plot 9	Minor Adverse	No
Reduced sunlight amenity	Bracken House	Moderate Adverse	Yes
Increase Shadow	Bracken House Nursery Playground	Negligible	No

Technical Competence

6.117 **Table 6.14** provides a summary of technical competence in daylight, sunlight and overshadowing and EIA.

Table 6.14: Technical Competence in Daylight, Sunlight and Overshadowing and EIA

Technical Competence in Daylight, Sunlight and Overshadowing		
	Lead Author	Reviewer
Name	Nicola Hensey	Michael Beatty
Company	GIA	
Qualifications / Accreditations Relevant to Technical Area	LLB (Hons)	BSc (Hons) MRICS
Does the practitioner hold any IEMA qualification?	No	No
Company hold IEMA QMark?	No	
Years Technical Experience (in Technical Area)	15	9
Number of EIA's Delivered to Date	30	15

References

¹ Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition

² Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. 2023.

³ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021). National Planning Policy Guidance. 2021.

⁴ Manchester City Council (2012). Manchester Core Strategy (2012 – 2027).

⁵ Manchester City Council (2007). Guide to Development in Manchester Supplementary Planning Document and Planning Guidance Adopted April 2007

7. Assessment of Cumulative Effects

Introduction

- 7.1 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”.

- 7.2 To accord with the EIA Regulations (Schedule 4, Paragraph 5), 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 local area; and
- **In-combination interactions:** the combination of environmental effects of the Proposed Scheme with existing or approved projects affecting the same receptor.

- 7.3 The scope of the ES as outlined in **Chapter 2: Approach to the EIA** confirms that there is only one technical chapter (**Chapter 6: Daylight, Sunlight and Overshadowing**) assessed within this ES. Therefore it is only this single topic that has been considered as part of this Chapter, based on the assessment methodology set out below.

Legislative Framework and Guidance

- 7.4 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 current methodology or best practice for the assessment of cumulative effects. As such, the methodology has been based on previous experience and knowledge at Turley, the types of receptors being assessed and the nature of the Proposed Scheme.

Assessment Methodology

- 7.5 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 also 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.

Effect Interactions

- 7.6 Given the singular technical topic scoped into the ES, (i.e. **Chapter 6: Sunlight, Daylight and Overshadowing**), the assessment of effect interactions has focused on the conclusions of this chapter (specifically the identified residual effects) with respect to changes in daylight and sunlight availability at a common residential receptor or outdoor amenity spaces. Where a residual effect is concluded in **Chapter 6: Sunlight, Daylight and Overshadowing** to be negligible, then this has been excluded from further assessment. 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. Where residual effects have been considered to be 'minor' or greater, these have been considered further within the assessment of effect interactions.
- 7.7 Where effect interactions have been identified, a qualitative appraisal has been undertaken taking account of the following:
- Magnitude of change for each residual effects;
 - Sensitivity/value/importance of the receptor/receiving environment to change; or/and
 - Duration and reversibility of effect.
- 7.8 This process has been documented within the Assessment of Effect Interactions section of this Chapter.

In-Combination Effects

- 7.9 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

- 7.10 A review of planning applications submitted to MCC was undertaken to identify an initial list of projects (referred to as 'Approved Projects') that could give rise to in-combination effects with the Proposed Scheme. The review primarily 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.
- 7.11 Applicable projects for consideration of in-combination effects were determined using the following criteria:
- Permitted application(s) either under construction or not yet implemented;
 - Submitted application(s) not yet determined but have the potential to be determined prior to the submission of the Proposed Scheme;
 - All refusals subject to appeal procedures not yet determined but have the potential to be determined prior to the submission of the Proposed Scheme;
 - Located in common geographical area, taken to be within 0.5km of the Site;

- The project being of a relevant scale, the minimum threshold for this has been projects that have been or would be considered Schedule 1 developments within the EIA Regulations, or Schedule 2 developments, at which there is a potential for 'likely significant effects'. This threshold was be applied with caution.

7.12 In the application of these criteria, if a planning application had not been supported by an EIA it has been assumed that MCC had undertaken a screening exercise upon receipt of the application or issued a screening opinion and concluded that an EIA is not required and therefore the project was not considered to result in 'likely significant effects' (i.e. not EIA development).

7.13 The final list of Approved Projects is set out in **Table 7.1** and shown on **Figure 7.1**.

Step 2: Assessment of In-Combination Effects

7.14 Given the singular technical topic scoped into the ES, (i.e. **Chapter 6: Sunlight, Daylight and Overshadowing**), the assessment of in-combination effects has only considered the potential for an in-combination effect with respect to this technical topic. As such, a qualitative evaluation of the potential in-combination effects between the Proposed Scheme and identified Approved Projects (**Table 7.1**) has been undertaken using professional judgement.

7.15 In the first instance the assessment has considered the potential for a common receptor between the Proposed Scheme (i.e., those assessed within **Chapter 6: Sunlight, Daylight and Overshadowing**) and the identified Approved Projects (**Table 7.1**), based on a technical understanding of the nature of daylight and sunlight effects (i.e., how development impacts upon receptors, including consideration of distances and positioning of Approved Projects relative to receptors).

7.16 Where a common receptor is identified, the qualitative evaluation at the receptor level has considered the following:

- Combined magnitude of change of all Approved Projects;
- Sensitivity/value/importance of the receptor/receiving environment to change; or/and
- Duration and reversibility of effect.

7.17 Through a combination of the qualitative evaluation and mitigation presented in the ES, conclusions have been drawn as to the likelihood for significant in-combination environmental effects.

Table 7.1: List of Approved Projects for In-Combination Assessment

ID	Planning Ref and Address	Description	Distance/direction from the Site	EIA/Not EIA	Status
1	134288/FO/2022 Replacement of 125451/FO/2019 No.3 Circle Square Land Bounded By Princess Street, Newman Street (Formerly Brancaster Road) And Cloak Street Manchester M1 7ED	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	150m south east	EIA	Commencement of Construction
2	136170/FO/2023 Land Bounded By River Street To The North, River Street And Vacant Lane To The East, Hulme Street To The South And Plot 10A Of The First Street Masterplan To The West 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)	445m south west	EIA	Approved
3	136043/FO/2023 Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The South And The Development Plot 9A To The West Manchester	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)	445m south west	EIA	Approved
4	125573/FO/2019 Plot 11 First Street Comprising Land Bound By Hulme Street To The North, Wilmott Street To The East, The Unite Parkway Gate Development And	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	445m south west	EIA	Approved

ID	Planning Ref and Address	Description	Distance/direction from the Site	EIA/Not EIA	Status
	Mancunian Way To The South, And Medlock Street To The West Manchester	(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			
5	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	450m south east	EIA	Awaiting decision
6	136874/FO/2023 Echo Street Manchester M1 3QJ	Erection of 3 interlinked towers ranging from 27, 21 and 16 storeys together with intermediary link buildings (15 and 11 storeys) to form Purpose Built Student Accommodation (Sui Generis) with associated amenity space and external landscaping and other associated works	480 north east	EIA	Approved

Assessment of Effect Interactions

- 7.18 A summary of the conclusions of **Chapter 6: Daylight, Sunlight and Overshadowing**, specifically the identified effects, receptors, and residual effects, is presented in **Table 7.2**.

Table 7.2: Summary of assessment conclusions from Chapter 6

Effect	Receptor	Residual Effect	Significance
Reduced daylight amenity	Circle Square Blocks 5 & 6	Minor Adverse	No
	Bracken House	Moderate Adverse	Yes
	Circle Square Plot 9	Minor Adverse	No
Reduced sunlight amenity	Bracken House	Moderate Adverse	Yes
Increase Shadow	Bracken House Nursery Playground	Negligible	No

- 7.19 It should be noted that the assessment within **Chapter 6** has focused solely on operational stage effects, as it is judged that construction stage effects would occur gradually over time, reaching its greatest level of impact as the massing of the Proposed Scheme is completed. At which point the effect would be the same as that identified at the operational stage. Therefore, the assessment of effect interactions set out below is representative of both the construction and operational stage, albeit at the construction stage the effects would likely only occur for a short period of the overall construction stage.
- 7.20 As set out within **Table 7.2**, only Bracken House experience both changes in the availability of daylight and sunlight, and therefore experience an effect interaction. Changes in daylight and sunlight will generally be experienced in the same way (i.e. the perception that natural light levels are reduced) and the results identified that a moderate adverse and significant effect would occur for both effects. On this basis the effect interaction is also considered to be moderate adverse and significant.
- 7.21 It is noted that the effects on Bracken House with respect to daylight and sunlight are contextual of the urban context of Manchester as part of the assessment within **Chapter 6: Daylight, Sunlight and Overshadowing**.

Assessment of In-Combination Effects

- 7.22 Approved Projects identified for the assessment of in-combination effects are detailed **Table 7.1** and shown on **Figure 7.1**. A review of the Approved Projects by GIA (technical authors of **Chapter 6: Daylight, Sunlight and Overshadowing**) has confirmed that due to distance from the Site (including with respect to Approved Project 1, which

is located closest to the Site¹), as well as intervening built form, that there will be no common receptors and therefore no in-combination effects from sunlight, daylight and overshadowing.

Summary

Effect Interactions

- 7.23 The assessment of effect interactions centred on the interaction of daylight and sunlight effects reported separately within **Chapter 6: Daylight, Sunlight and Overshadowing**, as this was the only technical topic assessed as part of the ES.
- 7.24 When reviewing the outputs of the assessment, only a single receptor was assessed for both a reduction in daylight and sunlight availability and therefore the only receptor considered to experience and effect interaction. The effect interaction was judged to be the same as the individual effects and thus moderate adverse and significant.
- 7.25 It is noted that the effects on Bracken House with respect to daylight and sunlight are contextual of the urban context of Manchester as part of the assessment within **Chapter 6: Daylight, Sunlight and Overshadowing**.

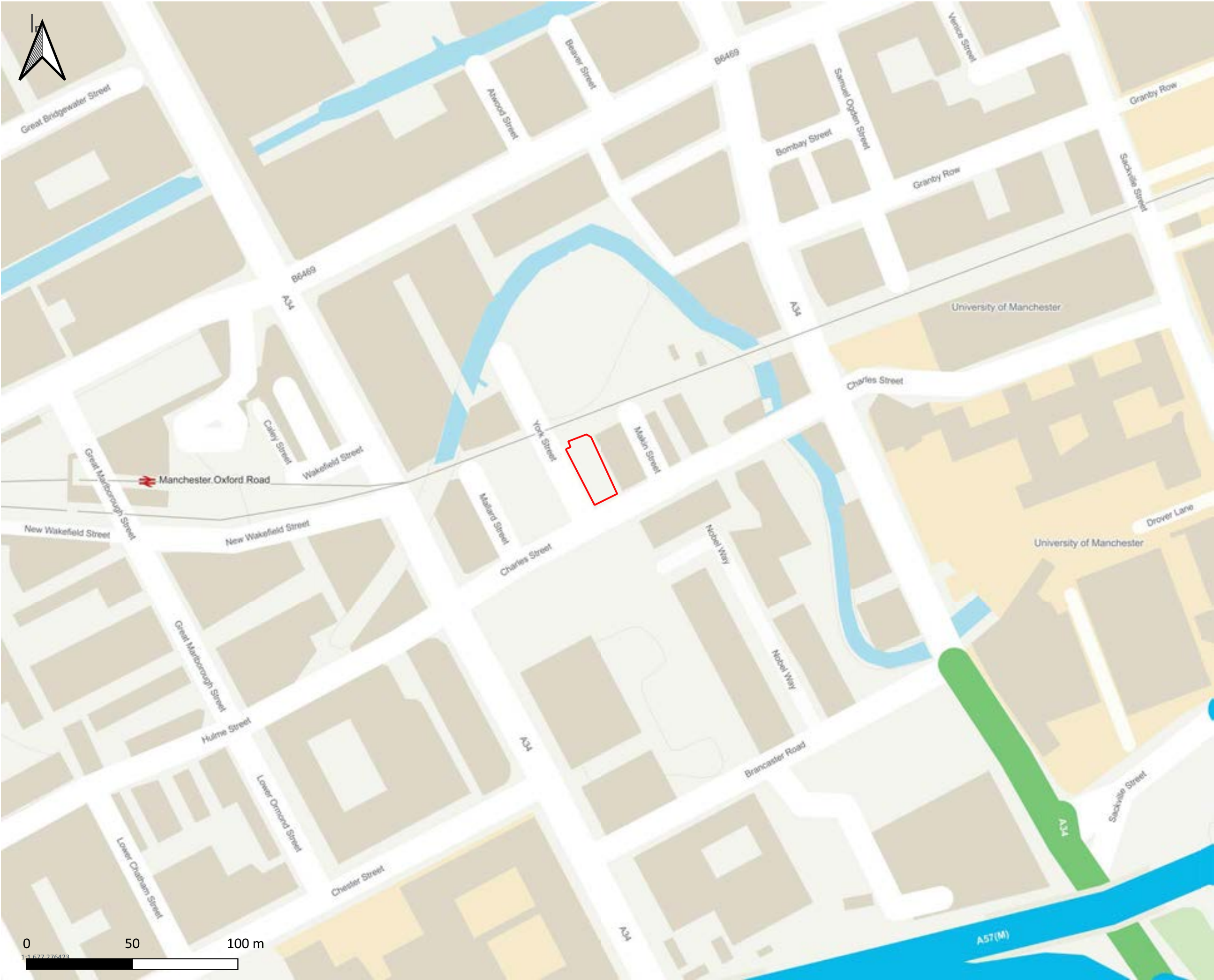
In-Combination Effects

- 7.26 The assessment of in-combination effects considered 6 Approved Projects in relation to sunlight, daylight and overshadowing. Through a review of the Approved Projects relative to the Proposed Scheme, it was confirmed through professional judgement that there was no common receptor and as such no potential for in-combination effects.

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/environmental-impact-assessment) [Accessed: 21/11/23].

¹ The receptors considered within the daylight, sunlight and overshadowing assessment for Approved Project 1 included, Vita Living, Montana House and Princess House. None of which have been assessed as part of **Chapter 6: Daylight, Sunlight and Overshadowing**.



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 Site Boundary

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Jadebricks Manchester Limited

PROJECT:
Charles Street, Manchester

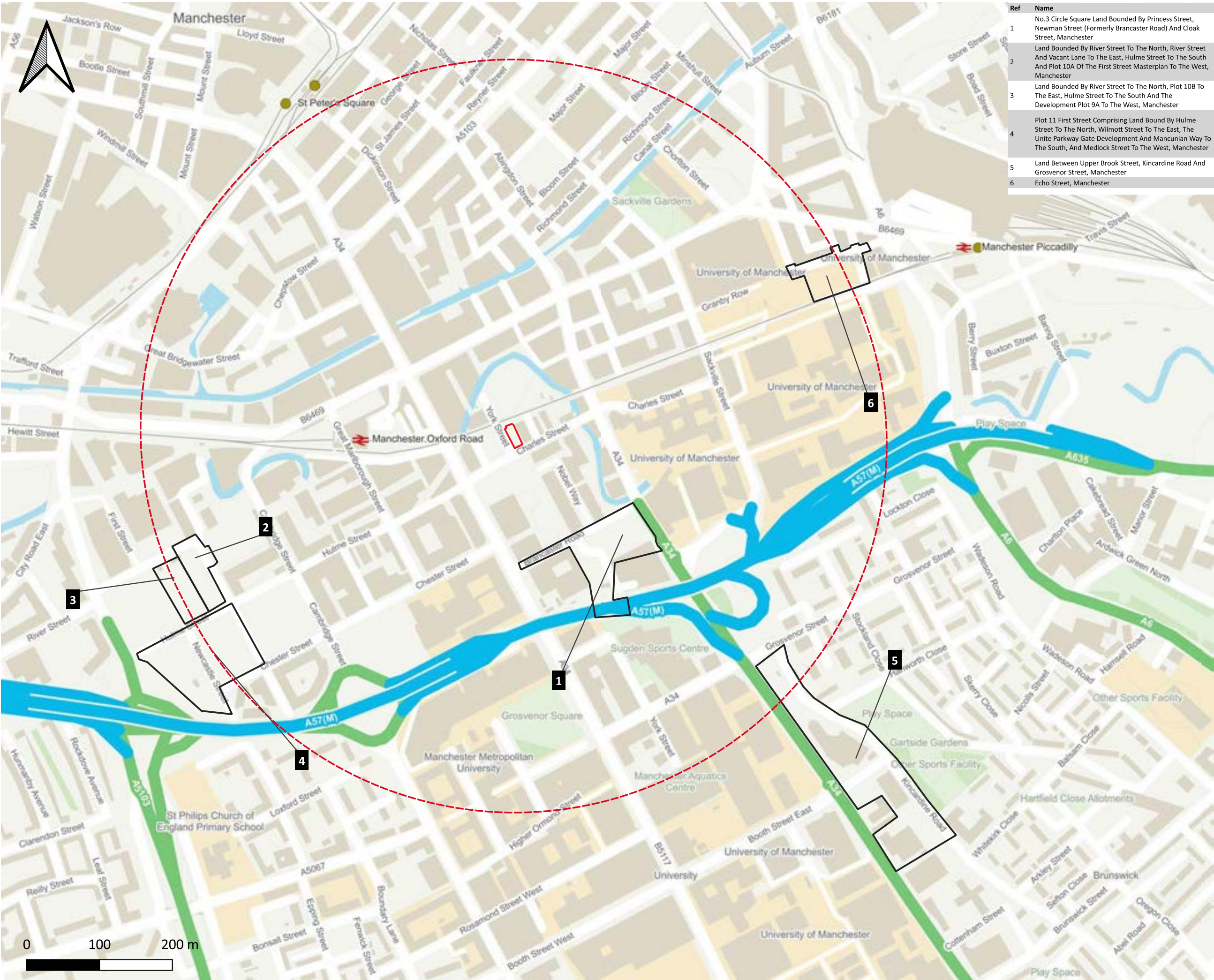
DRAWING:
Site Location Plan

PROJECT NUMBER:
JADM3002

DRAWING NUMBER: CHECKED BY:
Figure 1.1 ET

REVISION: STATUS:
1.0 Final

DATE: SCALE:
November 2023 1:2,000 @ A3



Ref	Name
1	No.3 Circle Square Land Bounded By Princess Street, Newman Street (Formerly Brancaster Road) And Cloak Street, Manchester
2	Land Bounded By River Street To The North, River Street And Vacant Lane To The East, Hulme Street To The South And Plot 10A Of The First Street Masterplan To The West, Manchester
3	Land Bounded By River Street To The North, Plot 10B To The East, Hulme Street To The South And The Development Plot 9A To The West, Manchester
4	Plot 11 First Street Comprising Land Bound By Hulme Street To The North, Wilmott Street To The East, The Unite Parkway Gate Development And Mancunian Way To The South, And Medlock Street To The West, Manchester
5	Land Between Upper Brook Street, Kincardine Road And Grosvenor Street, Manchester
6	Echo Street, Manchester

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Site Boundary

Approved Project

500m Buffer

CLIENT:
Jadebricks Manchester Limited

PROJECT:
Charles Street, Manchester

DRAWING:
Approved Project Plan

PROJECT NUMBER:
JADM3002

DRAWING NUMBER:
Figure 7.1

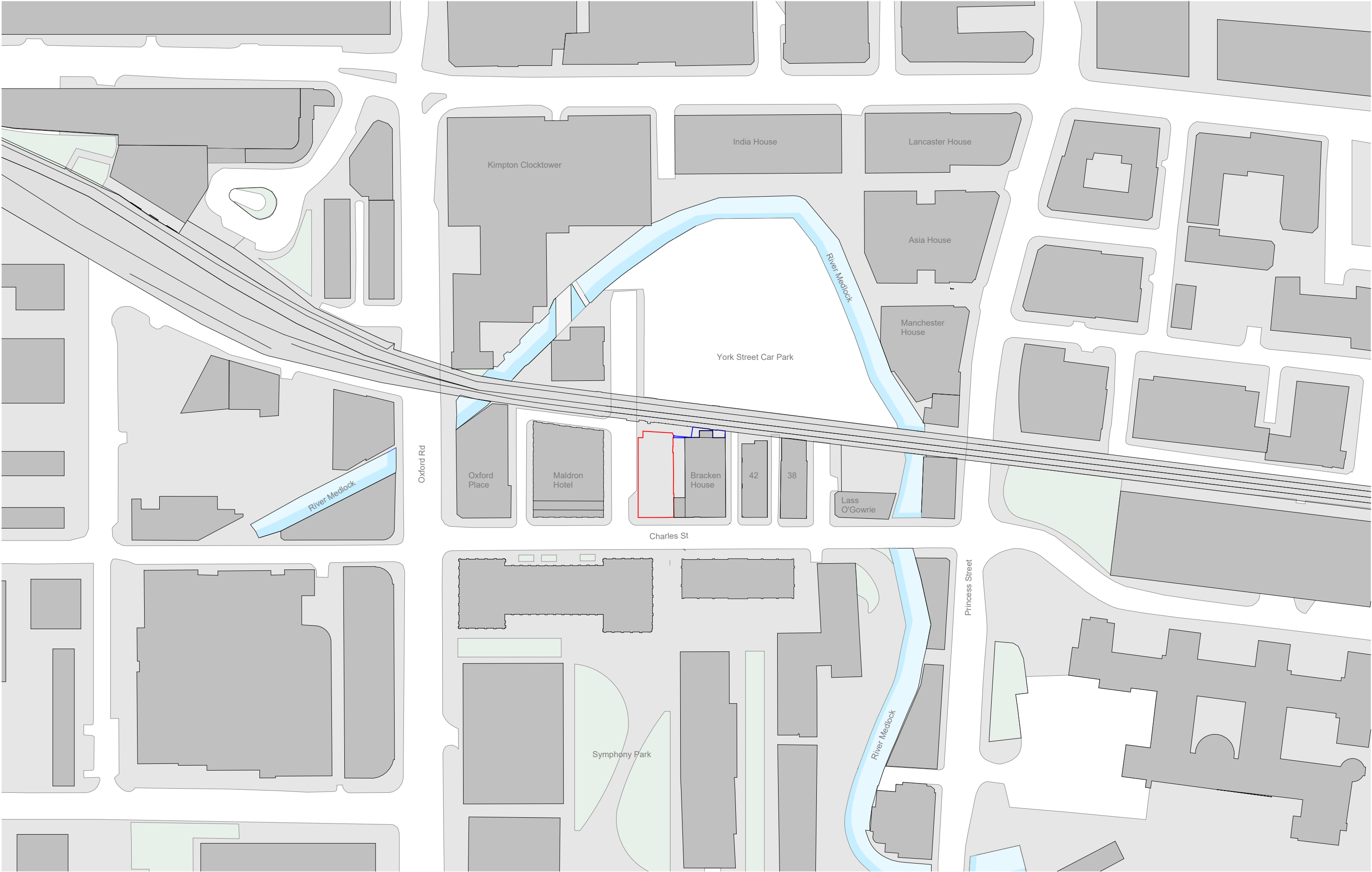
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Final

DATE:
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Project Title Charles Street Manchester	
Status Planning	

Drawing Title Existing Site Plan Site Location Plan	
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Existing Site Plan

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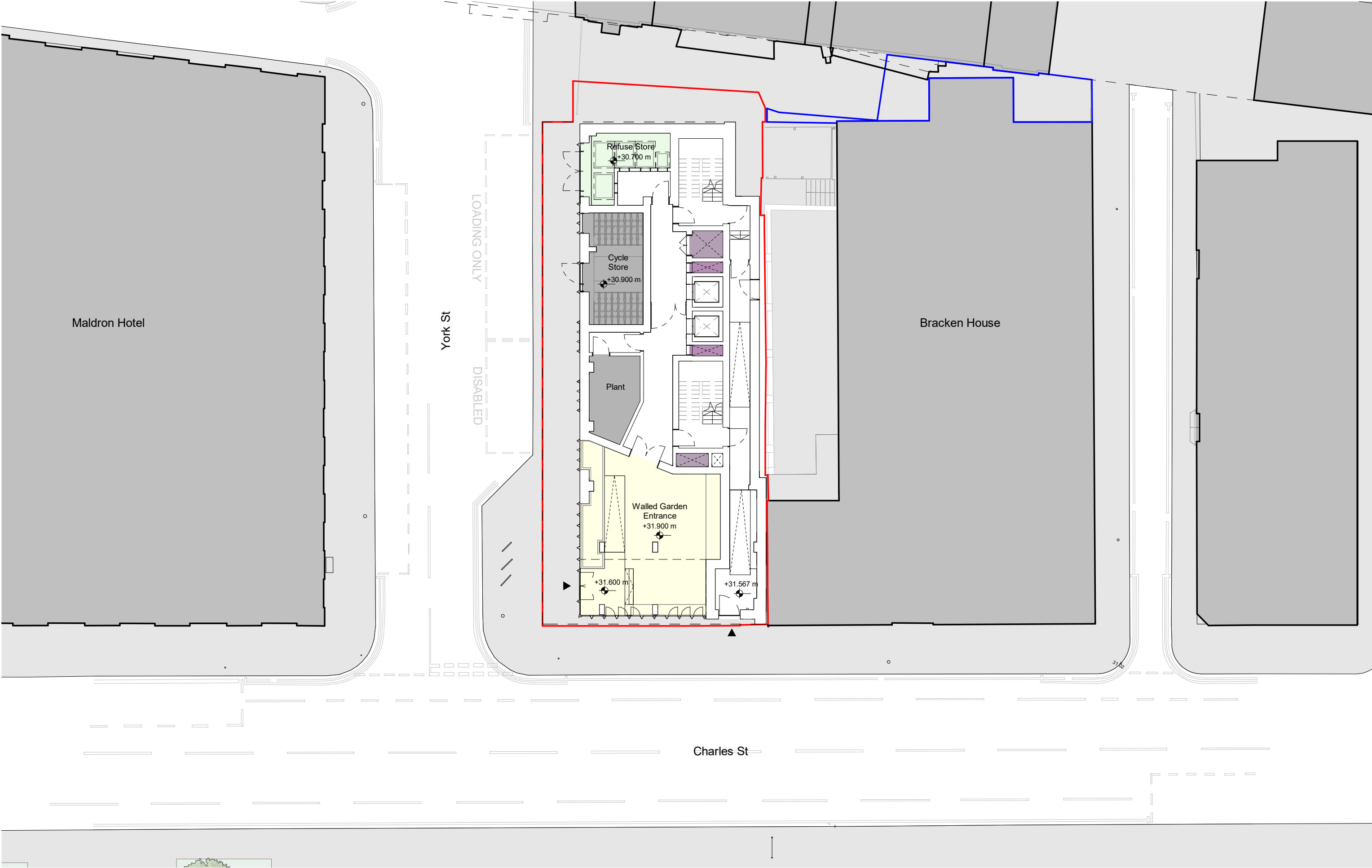
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Existing

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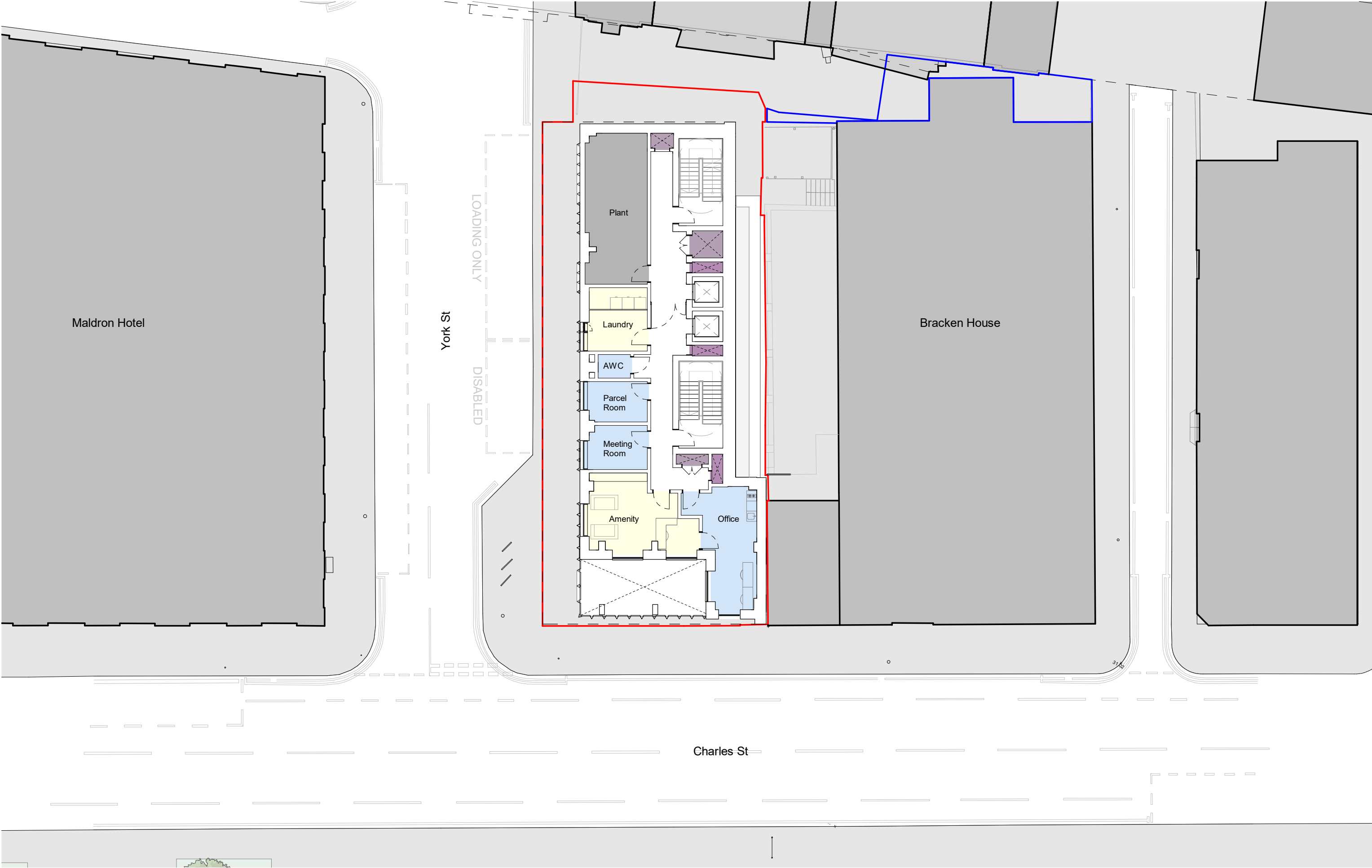
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Ground Floor**

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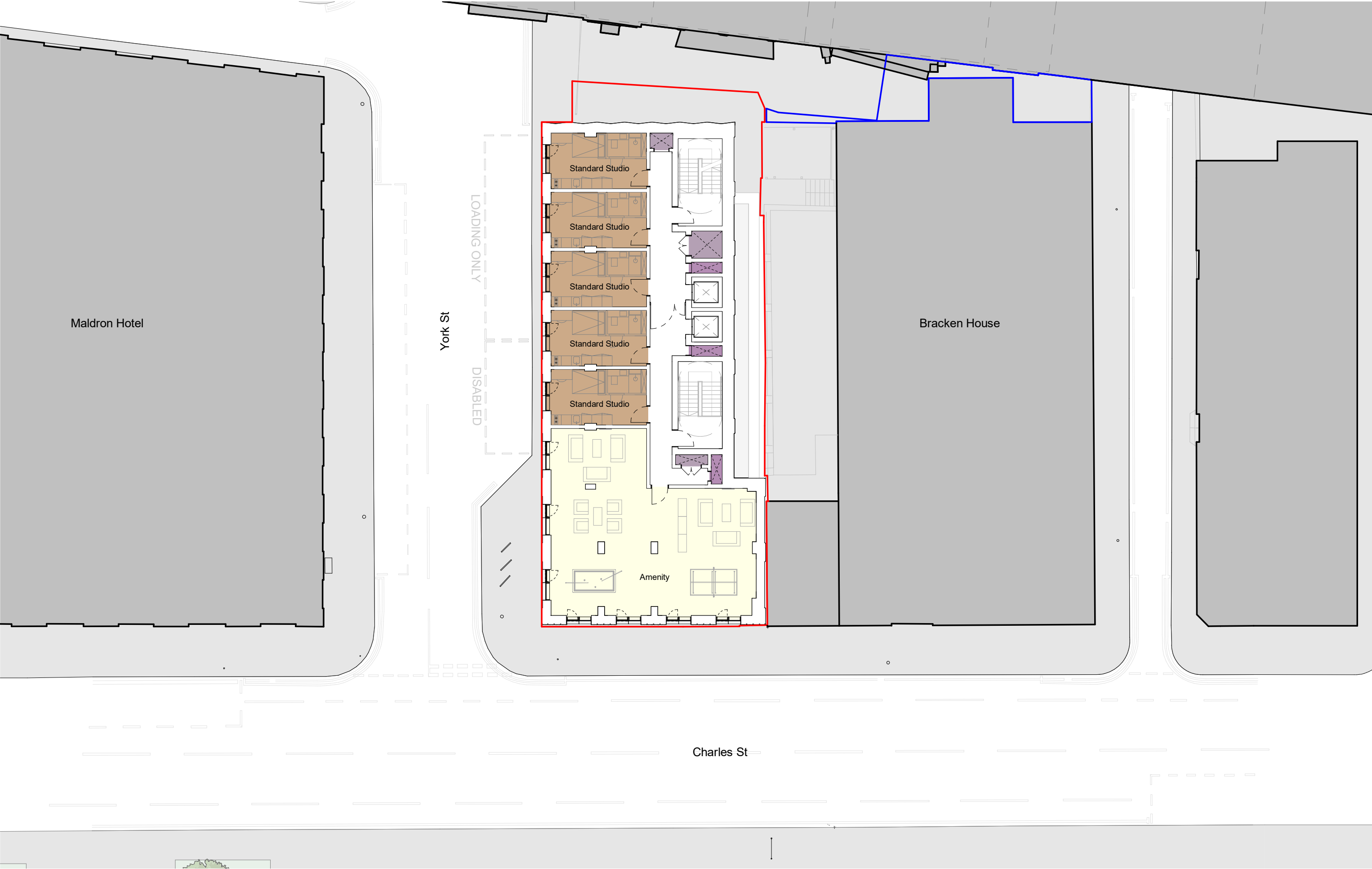
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Level 01

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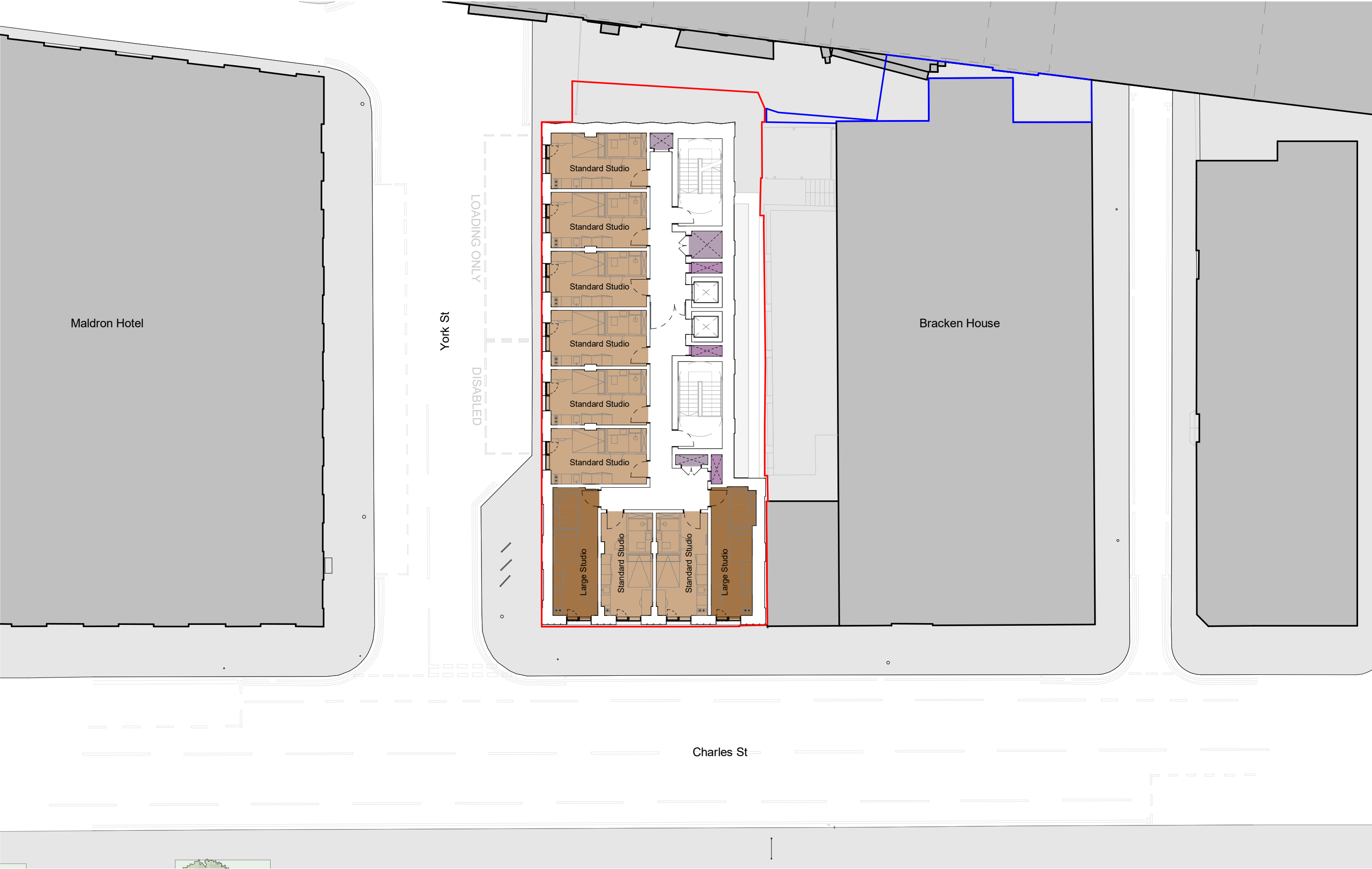
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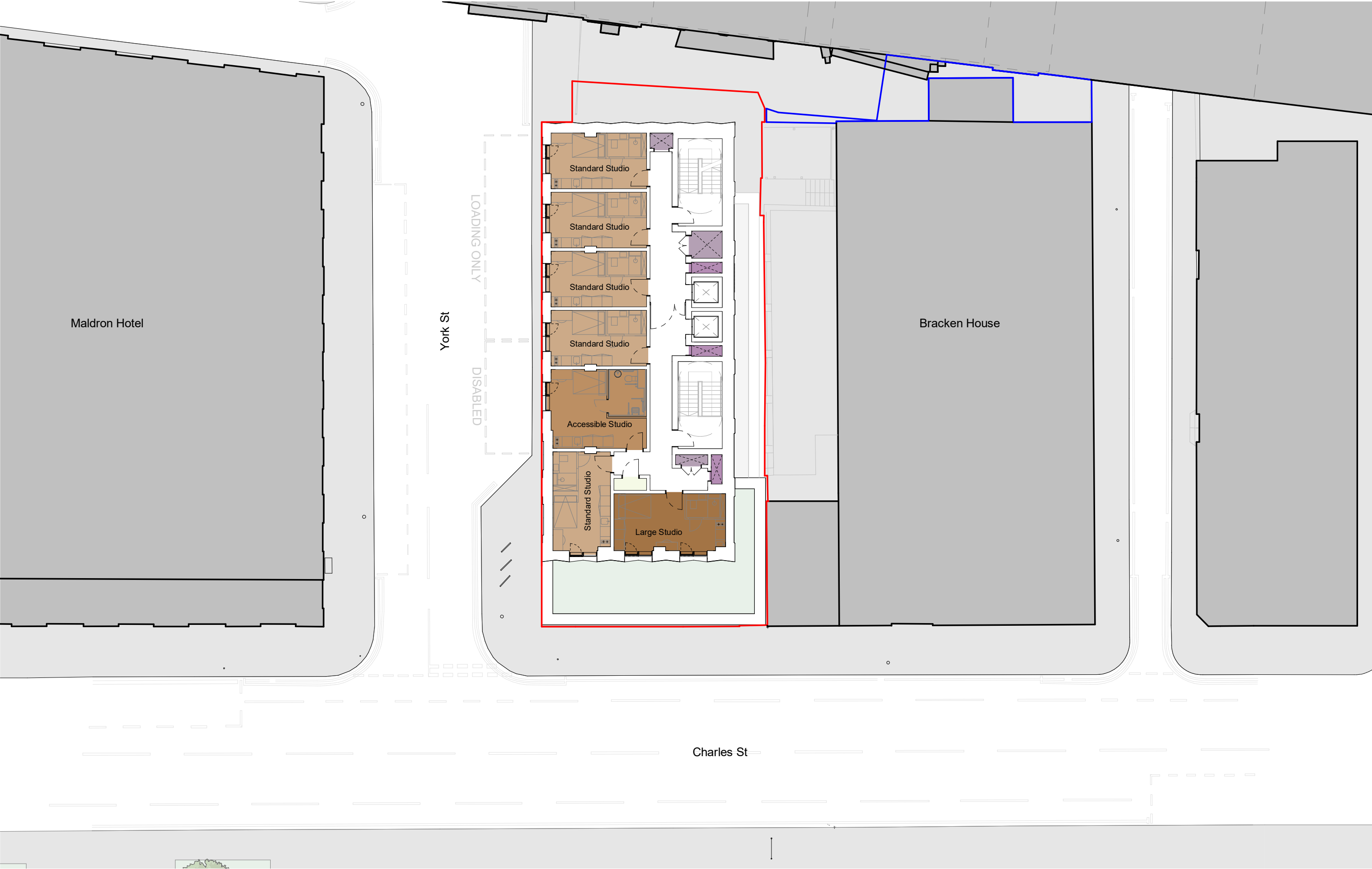
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General Arrangement
Plan
Typical Levels 03-08 (Level 03 Shown)

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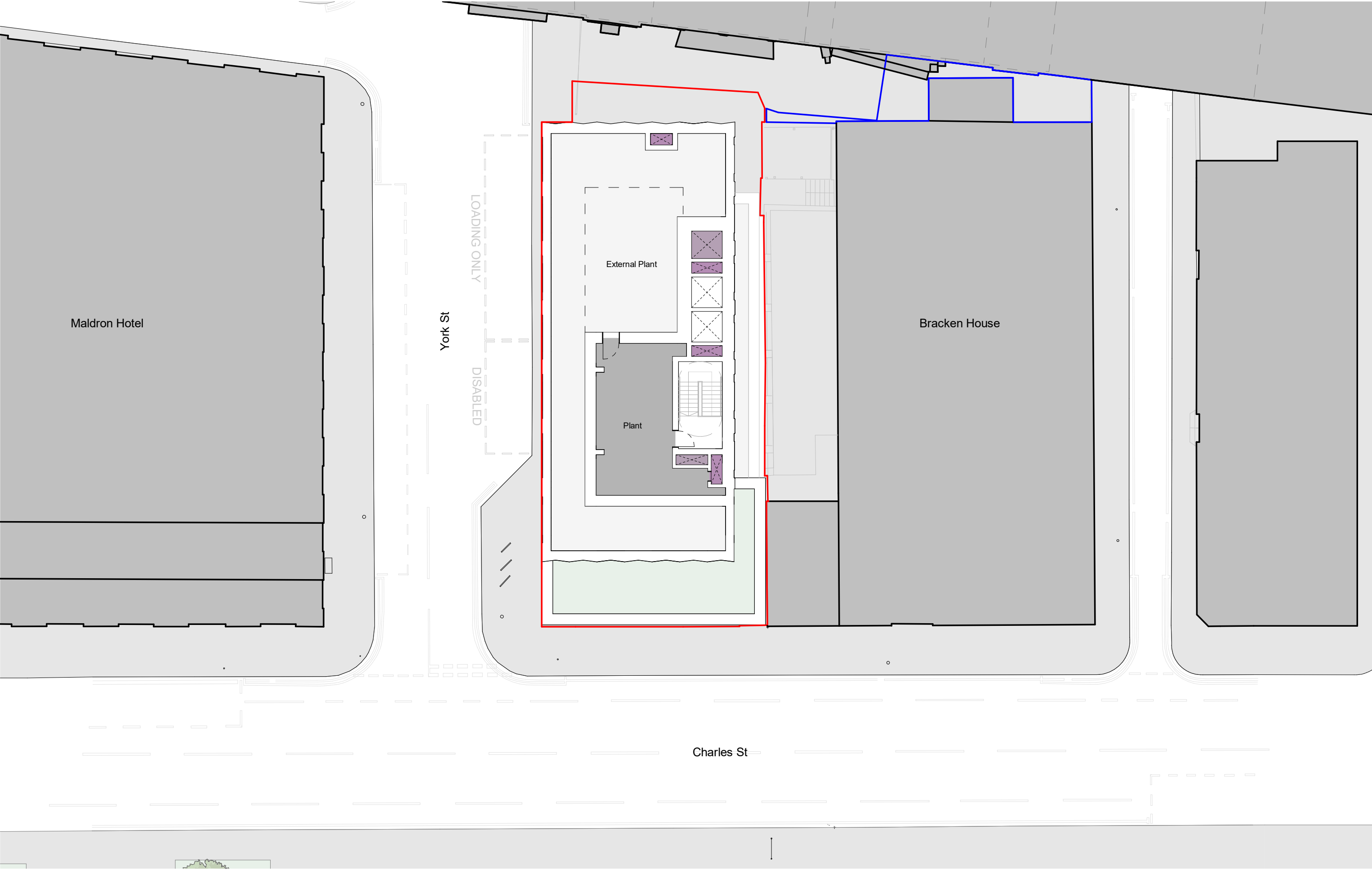
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Drawing Title
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Plan
Typical Levels 09-14 (Level 09 Shown)**

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Drawing Title
General Arrangement
Plan
Roof

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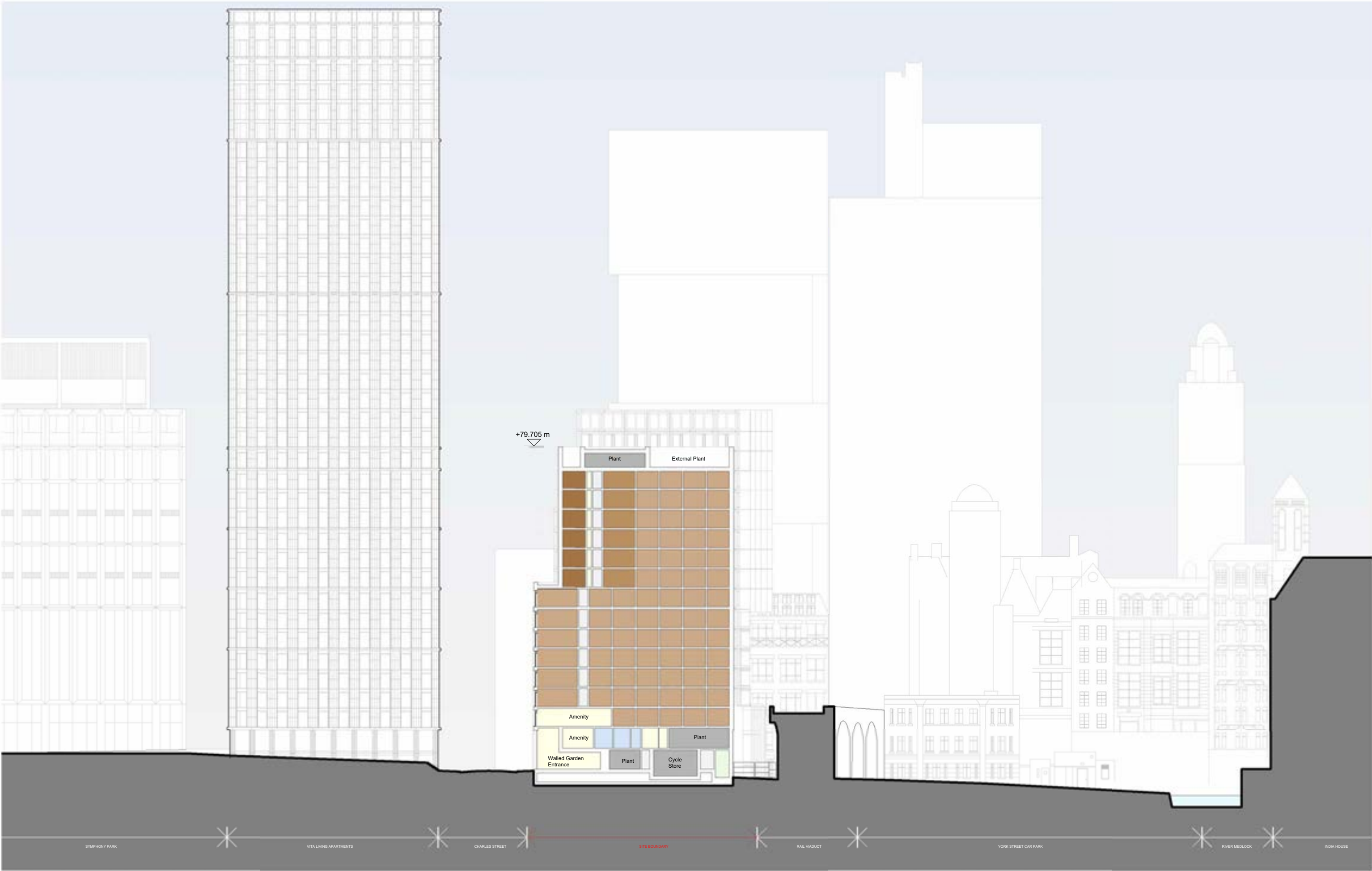
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Manchester

Status
Planning

Drawing Title
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Plan
Roof Parapet

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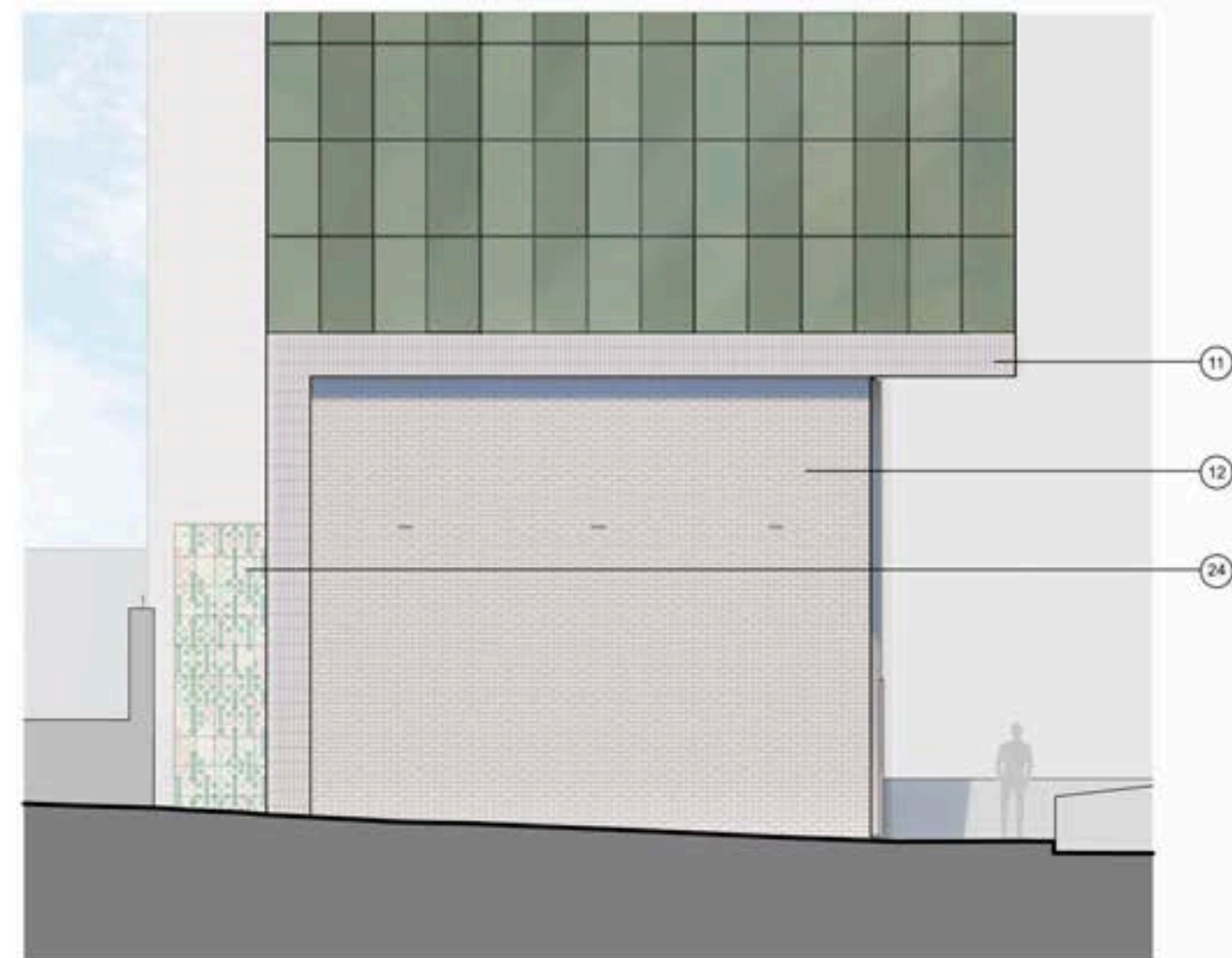
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Section AA**

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KEY:

1. Light bronze anodised aluminium window system with perforated purge vent panel and matching cill
2. Light bronze anodised aluminium window trim
3. Light bronze anodised aluminium coping
4. Light bronze anodised aluminium perforated panel (with opening panels to Charles Street)
5. Light bronze anodised aluminium triangular pier
6. Green glazed terracotta panel (finish tbc) laid to facets
7. Green PPC trim and cill
8. Green glazed terracotta panel (finish tbc) laid flat
9. Green triangular profiled glazed terracotta (finish tbc)
10. Buff triangular profile glazed terracotta extrusion (finish tbc)
11. Buff textured facing brick (soldier course) with flush colour matched mortar and wash
12. Buff textured facing brick (stretcher course) with flush colour matched mortar and wash
13. Buff glazed brick (stretcher course) with bucket handle colour matched mortar including bullnose bricks to pier edge
14. Buff glazed brick (soldier course) with bucket handle colour matched mortar including bullnose bricks
15. Buff wirecut facing brick in English bond with protruding buff glazed brick headers and bucket handle colour matched mortar
16. Buff wirecut facing brick (stretcher course) with bucket handle colour matched mortar
17. Buff wirecut facing brick (soldier course) with bucket handle colour matched mortar
18. Buff textured facing brick soffit
19. Backlit signage
20. Light bronze anodised aluminium perforated panel with colour matched louvre or blanking panel to rear
21. Light bronze anodised aluminium perforated door
22. Glazed entrance door
23. Light bronze anodised aluminium dry riser inlet
24. Illustrative tiled mural

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Facade Detail
Charles Street and North Elevations
Ground Floor

Project No
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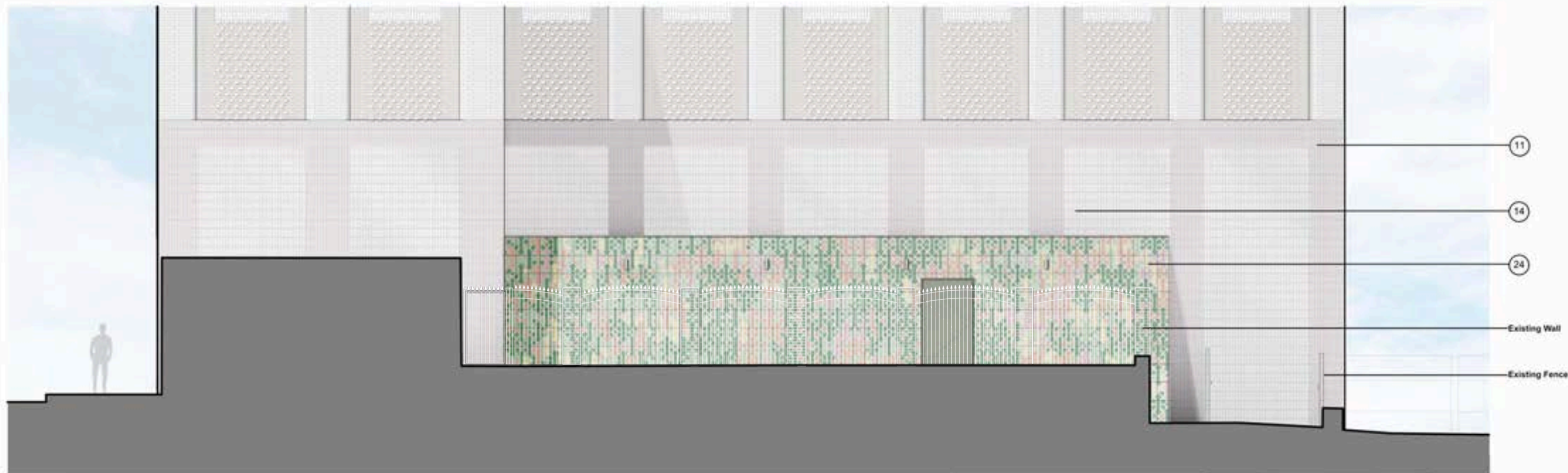
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2. Light bronze anodised aluminium window trim
3. Light bronze anodised aluminium coping
4. Light bronze anodised aluminium perforated panel (with opening panels to Charles Street)
5. Light bronze anodised aluminium triangular pier
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7. Green PPC trim and cill
8. Green glazed terracotta panel (finish tbc) laid flat
9. Green triangular profiled glazed terracotta (finish tbc)
10. Buff triangular profile glazed terracotta extrusion (finish tbc)
11. Buff textured facing brick (soldier course) with flush colour matched mortar and wash
12. Buff textured facing brick (stretcher course) with flush colour matched mortar and wash
13. Buff glazed brick (stretcher course) with bucket handle colour matched mortar including bullnose bricks to pier edge
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Project Title
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Discipline
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Drawing Title
**Facade Detail
East Elevation
Ground Floor**

Project No
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Scale
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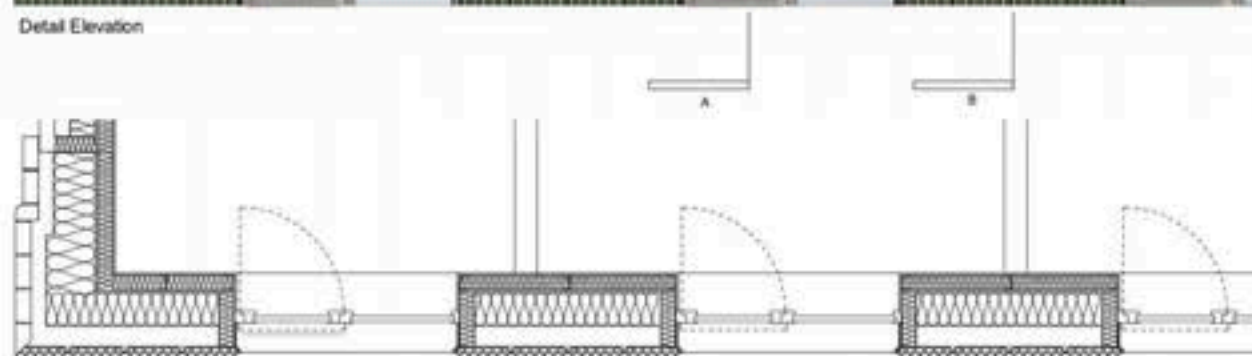
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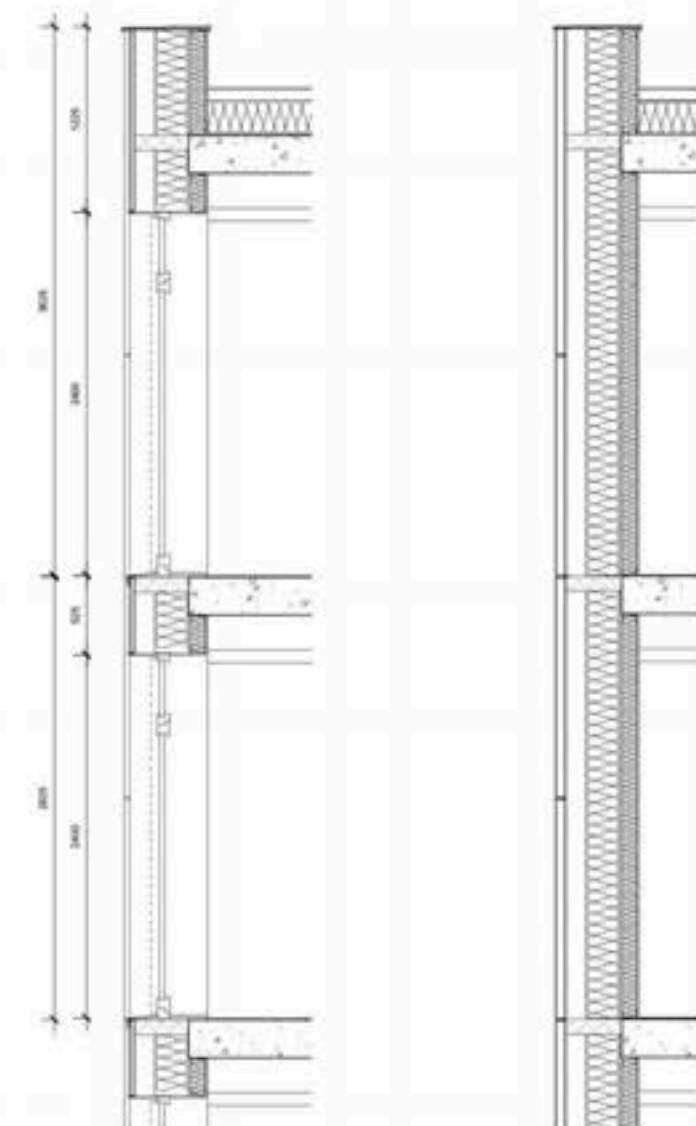
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Detail Elevation



Plan CC



Section AA

Section BB

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2. Light bronze anodised aluminium window trim
3. Light bronze anodised aluminium coping
4. Light bronze anodised aluminium perforated panel (with opening panels to Charles Street)
5. Light bronze anodised aluminium triangular pier
6. Green glazed terracotta panel (finish tbc) laid to facets
7. Green PPC trim and cill
8. Green glazed terracotta panel (finish tbc) laid flat
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Rev	Date	Description
1	2021-12-01	ISSUED FOR BIDDING

Project Title
Charles Street
Manchester

Status
Planning

Drawing Title
Facade Detail
Charles Street Lower Typical

Project No
10489

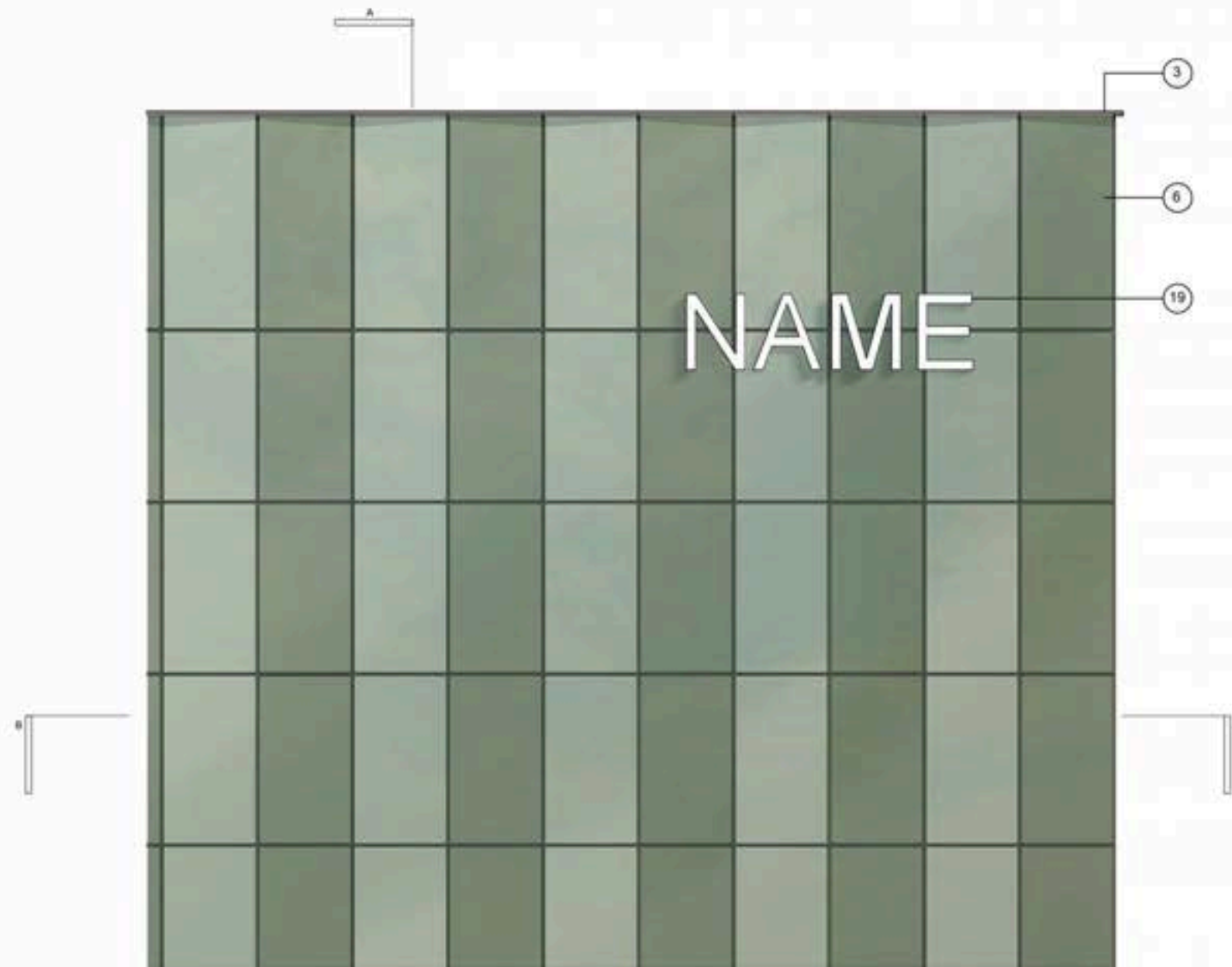
Scale
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SHD Drawing Code
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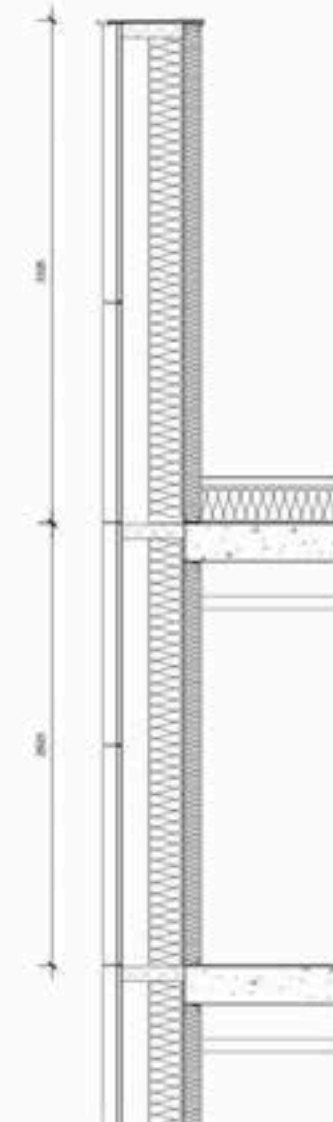
Revision
P01

simpsonhaugh

Manchester
+44 (0)161 838 2345
London
+44 (0)20 7349 4335



Detail Elevation



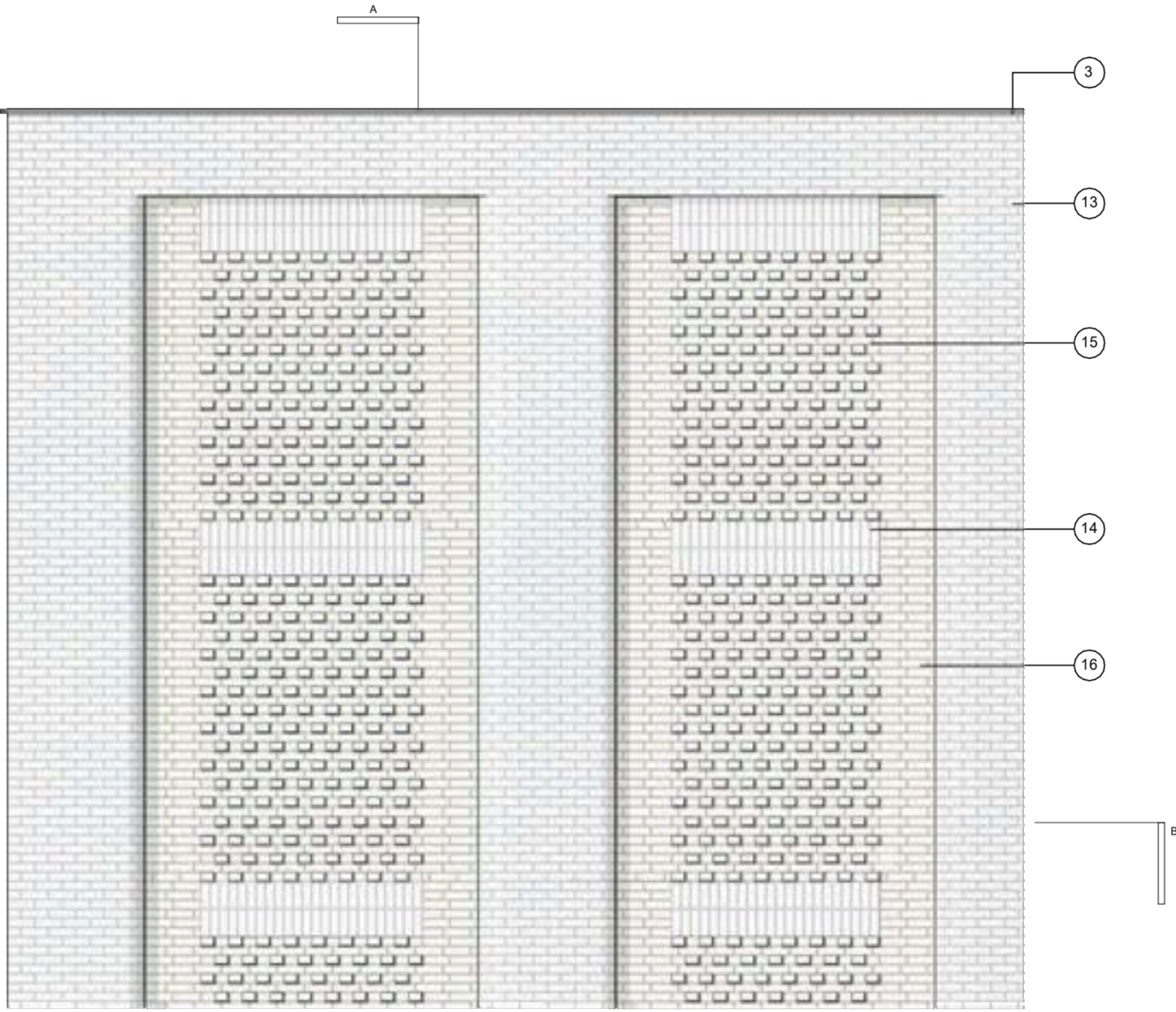
Section AA



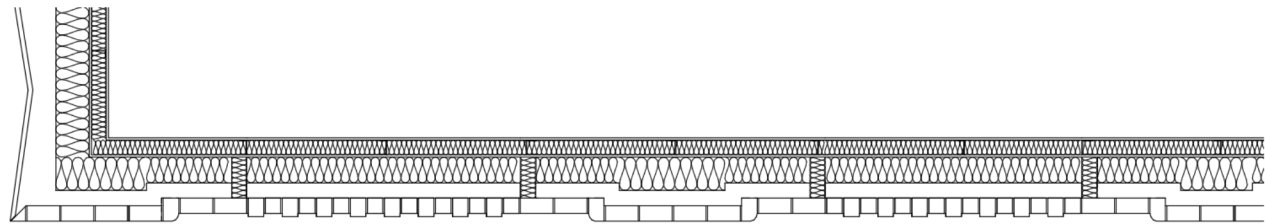
Plan BB

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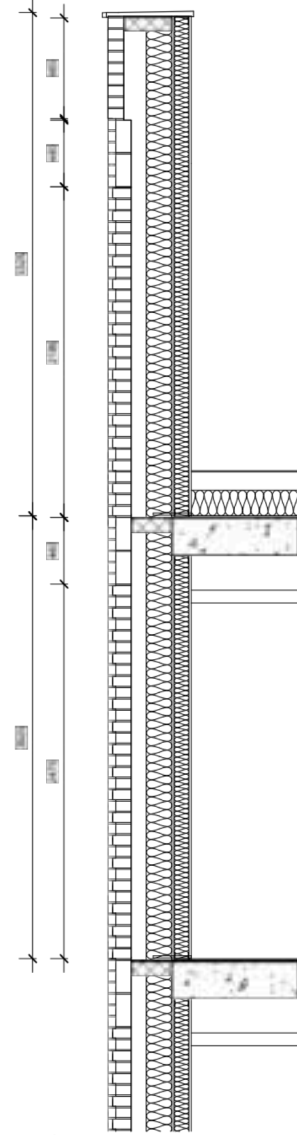
1. Light bronze anodised aluminium window system with perforated purge vent panel and matching cill
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Detail Elevation

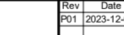


Plan BB



Section AA

- KEY:
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<table><tr><td>Project No</td><td>Scale</td></tr><tr><td>10489</td><td>1:50 @ A3</td></tr></table>	Project No	Scale	10489	1:50 @ A3	<table><tr><td>Status</td><td>Revision</td></tr><tr><td>Planning</td><td>P01</td></tr></table>	Status	Revision	Planning	P01	<table><tr><td colspan="2">SHP Drawing Code</td></tr><tr><td colspan="2">10489-SHP-ZZ-A-B5D8-G251-DE-XX-006</td></tr></table>	SHP Drawing Code		10489-SHP-ZZ-A-B5D8-G251-DE-XX-006		 <table><tr><td>Manchester</td><td>London</td></tr><tr><td>+44 (0)161 835 2345</td><td>+44 (0)20 7549 4000</td></tr></table>	Manchester	London	+44 (0)161 835 2345	+44 (0)20 7549 4000																								
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+44 (0)161 835 2345	+44 (0)20 7549 4000																																										



KEY:

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Rev	Date	Description
1	2023-10-26	PLANNING ISSUE

Project Title
Charles Street
Manchester

Phase
Planning

Drawing Title
Facade Detail
York Street
Ground Floor

Project No
10489

Scale
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SHD Drawing Code
10489-SHP-ZZ-A-85D8-G251-DE-XX-008

Revision
P01

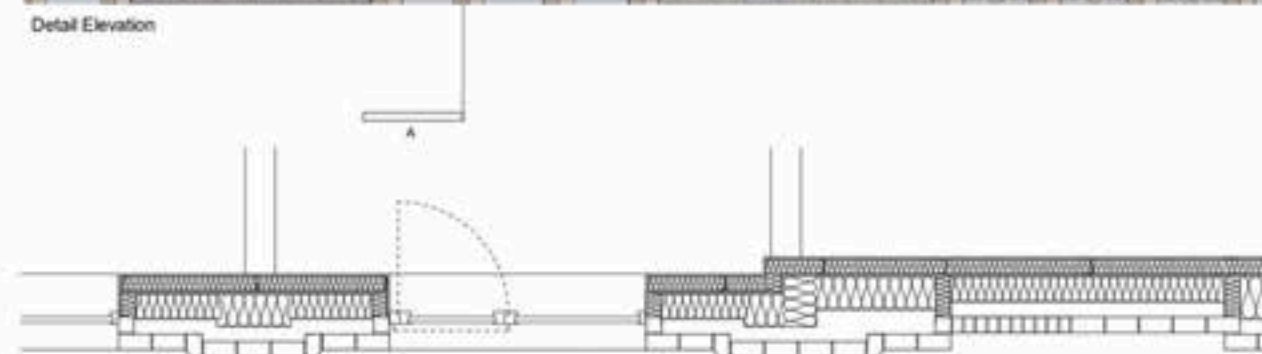
simpsonhaugh

Manchester
+44 (0)161 835 2345

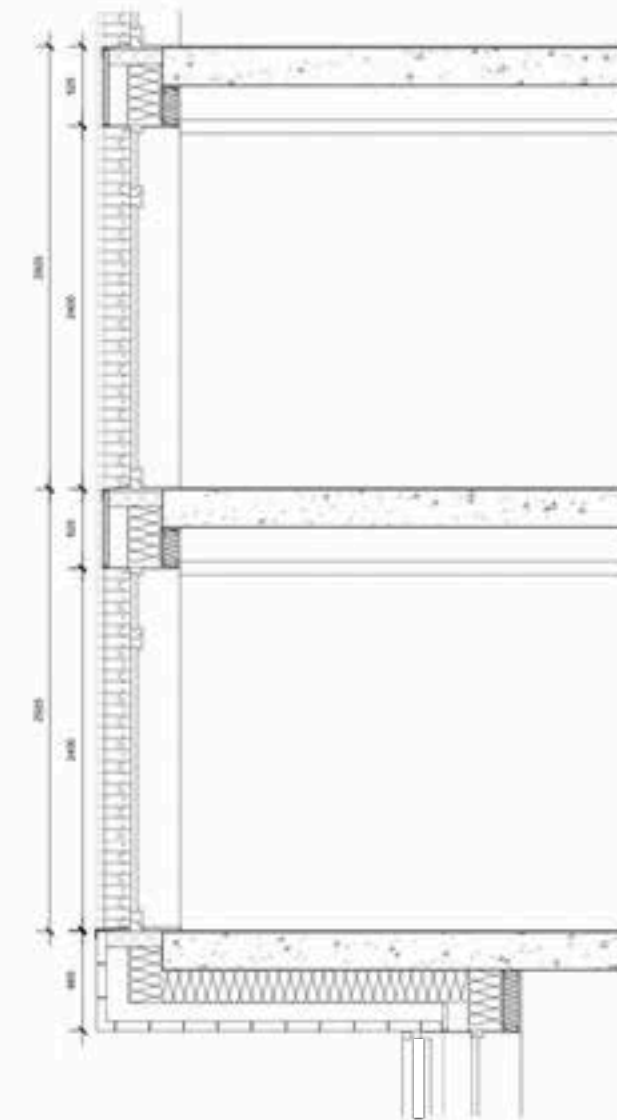
London
+44 (0)20 7548 4000



Detail Elevation



Plan BB



Section AA

KEY:

1. Light bronze anodised aluminium window system with perforated purge vent panel and matching cill
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Rev	Date	Description
1	2023-01-10	PLANNING ISSUE

Project Title
Charles Street
Manchester

Phase
Planning

Drawing Title
Facade Detail
York Street Lower Typical

Project No
10489

Scale
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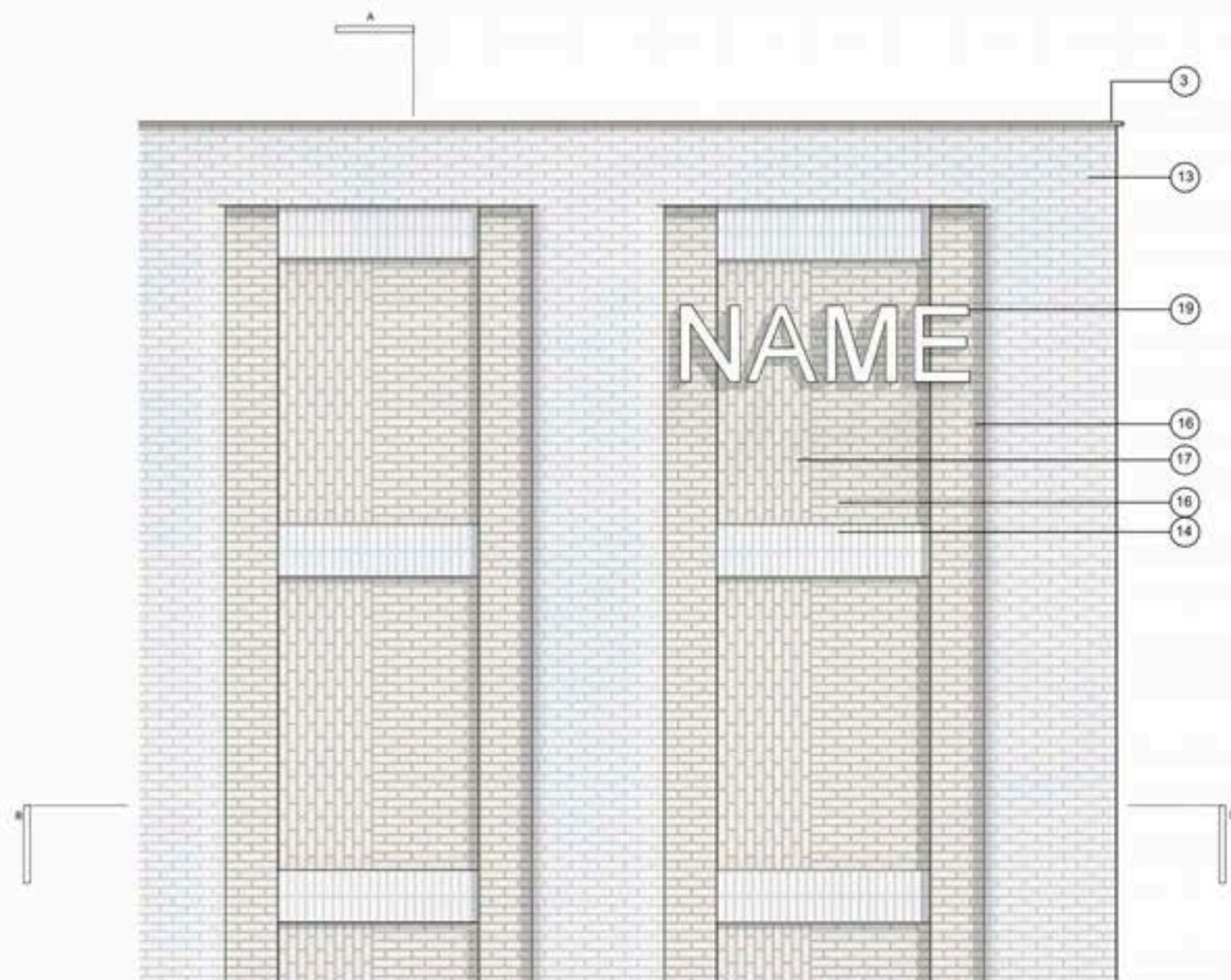
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Revision
P01

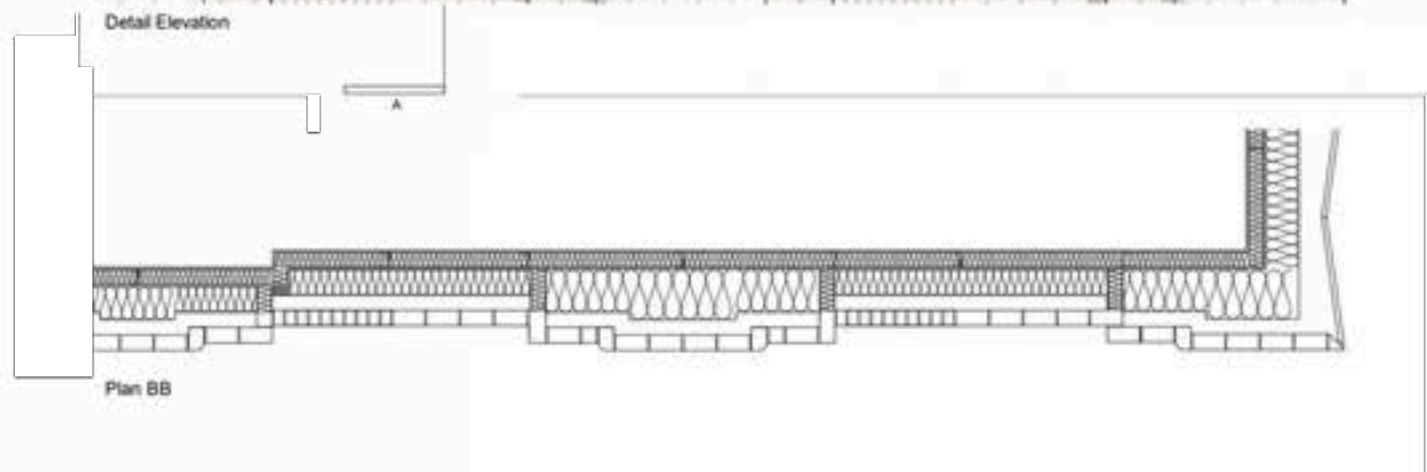
simpsonhaugh

Manchester
+44 (0)161 830 2345

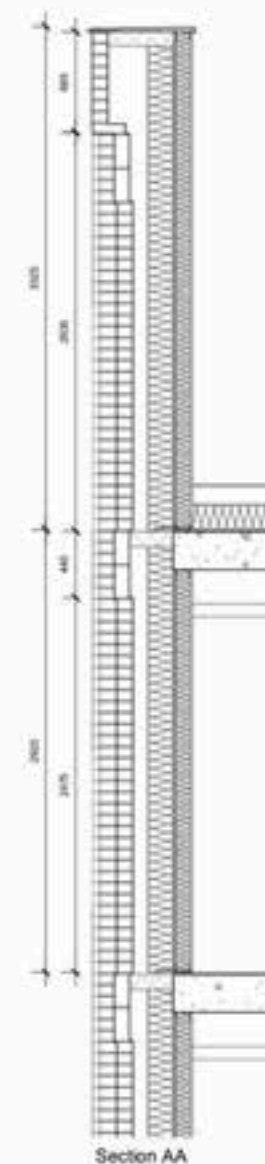
London
+44 (0)20 7543 4330



Detail Elevation



Plan BB



Section AA

KEY:

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2. Light bronze anodised aluminium window trim
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Rev	Date	Description
1	10/10/2023	ISSUED FOR TENDER
2	10/10/2023	ISSUED FOR TENDER
3	10/10/2023	ISSUED FOR TENDER
4	10/10/2023	ISSUED FOR TENDER
5	10/10/2023	ISSUED FOR TENDER
6	10/10/2023	ISSUED FOR TENDER
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8	10/10/2023	ISSUED FOR TENDER
9	10/10/2023	ISSUED FOR TENDER
10	10/10/2023	ISSUED FOR TENDER

Project Name
Charles Street
Manchester

Work
Planning

Drawing Title
Facade Detail
York Street Upper Typical

Project No
10489

Scale
1:50 @ A3

SHP Drawing Code
10489-SHP-ZZ-A-B5D8-G251-DE-XX-005

Revision
P01

simpsonhaugh

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London
+44 (0)20 7545 8000

Figure 5.1: TfGM Model Output

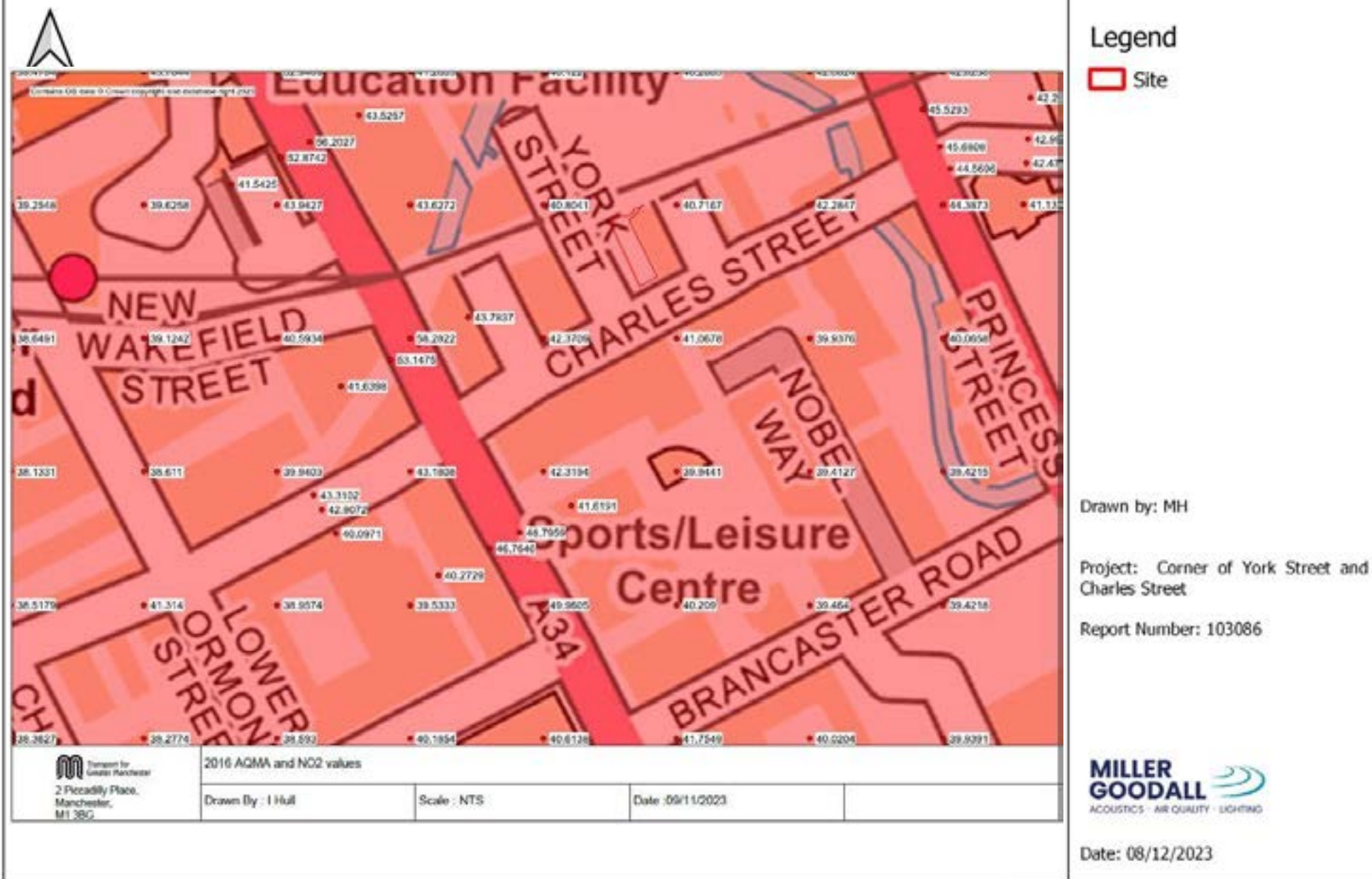


Figure 5.2: Location of Site, AQMA and MCC monitoring

