Stocktons, Manchester

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March 2025

Turley

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1. Introduction

Overview

1.1 This Environmental Statement (ES) is part of a suite of documents submitted by Liquid Business (Manchester) Limited (the 'Applicant') to Manchester City Council (MCC) for a residential led development in east Manchester (the 'Proposed Scheme'). The Proposed Scheme will be delivered on approximately 0.5 (ha) at 140 Great Ancoats Street, Manchester, M4 6DU (the 'Site'). The Site is shown on **Figure 1.1** and **Figure 1.2**.

1.2 Turley were commissioned by the Applicant to undertake the EIA and prepare this ES, with support from a competent project team (as set out in **Table 1.2**) in accordance with The Town and Country Planning (EIA) Regulations 2017 (as amended) (the 'EIA Regulations')[1].

1.3 The ES, alongside the other application documents and plans, has been submitted to MCC and is available on the MCC website for viewing and downloading at the following link:

https://pa.manchester.gov.uk/online-applications/

1.4 Members of the public may comment either in writing (using the details below) or through MCC planning portal website (using the link above).

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Albert Square
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Email: building.control@manchester.gov.uk

Legal Framework for EIA

Definition and Aims of EIA

1.5 EIA is defined by Regulation 4, Paragraph 1 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 of any enactment in respect of EIA development; and

(c) the steps required under Regulation 26'.

1.6 Under Regulation 4, Paragraph 2 of the EIA Regulations, an EIA must:

'*identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors -*

(a) population and human health;

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

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

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

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

1.7 The aim of EIA, as outlined by the Planning Practice Guidance (PPG)[2], is:

'*…to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision making process. The regulations set out a procedure for identifying those projects which should be subject to an Environmental Impact Assessment, and for assessing, consulting and coming to a decision on those projects which are likely to have significant environmental effects*'.

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

Overview of the EIA Process

1.9 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 developments which must always be subject to an EIA (referred to as 'Schedule 1 development') and other development which may require an EIA, if it is likely to give rise to significant environmental effects (referred to as 'Schedule 2 development'). The EIA process is summarised below.

EIA Screening

1.10 The Proposed Scheme does not comprise a Schedule 1 development, however, as it exceeds criteria within Schedule 2, 10b[a] it falls with the remit of the EIA Regulations. The thresholds and criteria do not alone trigger the need for EIA but require a subsequent stage ('Screening') to determine "*whether the development is likely to have significant effects on the environment by virtue of factors such as its nature, size or*

[a] In that over 150 dwellings are proposed.

location". Given the characteristics of the Proposed Scheme and receiving environment (the Site), a number of potentially significant effects were identified and therefore an EIA has been undertaken.

EIA Scoping

1.11 Scoping (in accordance with Regulation 15 of the EIA Regulations) is best practice but not mandatory, and in this instance the Applicant's project team have identified all aspects of the environment likely to be significantly affected but the Proposed Scheme. Further details are provided in **Chapter 2: Approach to EIA**.

Environmental Statement (ES)

1.12 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 the PPG.

1.13 The ES is provided in four volumes:

- **Volume 1: Primary Reporting and Supporting Graphics –** providing the main text of the ES, which is divided into Chapters. Each environmental topic is detailed within the respective **Technical Chapters 6 – 14**.

- **Volume 2: Technical Appendices to the Primary Report –** encompasses a range of technical reports which have informed the technical assessments presented in **Volume 1**.

- **Volume 3: Environmental Management Plan –** provides a schedule of primary and tertiary mitigation considered an integral part of the Proposed Scheme and secondary mitigation identified through further assessment and reported within **Volume 1**. This acts as the checklist for all mitigation which is required to be implemented as part of the approved plans and planning conditions / obligations.

- **Volume 4: Non-Technical Summary -** provides a summary of the ES in a non-technical language to aid communication and understanding of the Proposed Scheme and the EIA process undertaken.

1.14 **Table 1.1** provides a breakdown of the information required to be included within an ES (as defined by Regulation 18, Paragraphs 3 – 5 and Schedule 4 of the EIA Regulations) and where this information is in this ES (including in other Volumes).

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**; and **Technical Chapters 7 – 14** 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;	**Technical Chapters 7 – 14** where relevant and **Chapter 15: Assessment of Cumulative Effects.**

Regulation 18	Schedule 4	Location within this ES
	(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; (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,	(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	**Chapter 4: Development Specification, Technical Chapters 7 – 14** where relevant, **Chapter 15: Assessment of**

Regulation 18	Schedule 4	Location within this ES
offset likely significant adverse effects on the environment.	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.	**Cumulative Effects,** and **Volume 3: Environmental Management Plan.**
(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 development on the environment.	(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 5: Reporting of Alternatives.**
(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 direction[2]);	**–**	**Chapter 2: Approach to EIA** and **Technical Chapters 7 – 14** where relevant.

Regulation 18	Schedule 4	Location within this ES
(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 (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 - (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.	–	**Chapter 1: Introduction** and **Appendix 1.1: Statement of Technical Competence.**
–	(3) a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the	**Chapter 3: Site Context** and **Technical Chapters 7 – 14.**

Regulation 18	Schedule 4	Location within this ES
	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.	
–	(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** and **Technical Chapters 7 – 14.**
–	(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 **Technical Chapters 7 – 14.**
–	(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	**Chapter 2: Approach to EIA**; **Technical Chapters 7 – 14** and **Chapter 16: Summary of ES.**

Regulation 18	Schedule 4	Location within this ES
	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.	
	(10) a reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	**Chapters 1 – 16** (at the end of each Chapter with references made throughout).

Project Team and Their Roles

1.15 Regulation 18, Paragraph 5(a) of the EIA Regulations requires an EIA to be prepared by competent experts.

1.16 Turley have been responsible for the co-ordination and leadership of the EIA process as well as the compilation and procedural review of the constituent parts of the ES (**Table 1.2**). The Institute of Environmental Management and Assessment (IEMA) has awarded Turley the EIA Quality Mark in recognition of our technical quality and commitment to improvement in practice.

1.17 All technical assessments reported in **Technical Chapters 6 – 14** have been undertaken by a suitably qualified project team (**Table 1.2**), inclusive of a thorough technical review to assure technical credibility, followed by a subsequent procedural review by the EIA co-ordination team at Turley.

1.18 A statement outlining the relevant expertise / qualifications of the EIA project team (including those involved in the EIA Scoping process) is provided in **Appendix 1.1**.

Table 1.2: Project team and their roles

Team Member	Role
Liquid Funding Business Ltd and Cityside Developments Ltd	Applicant
Artal	Project Managers
Turley	Planning, EIA, Socio-Economic and Human Health, and Climate Change consultants
Heritage Architecture	Built Heritage consultants
Chris Burnett Associates	Townscape and Visual consultants
Suono	Noise and Vibration consultants
GIA	Daylight, Sunlight, Overshadowing and Solar Glare consultants
ArcAero	Wind consultants

Application Documents and Plans

1.19 The ES is one of the documents submitted alongside the detail planning application for the Proposed Scheme.

1.20 A number of other documents and plans have been submitted for the Application that provide a greater level of detail on how the Proposed Scheme is likely to come forward, how the Proposed Scheme complies with policy or provide assessments for environmental topics for which no likely significant effects are considered to arise. Where information from these documents has informed the description of the Proposed Scheme upon which the ES is based, this is clearly stated within **Chapter 4:**

Development Specification. However, they do not inform the assessment of likely significant effects and are not connected to the ES.

References

[1] 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: 04/12/2024].
[2] Ministry of Housing, Communities and Local Government [Online Tool]. Planning Practice Guidance Environmental Impact Assessment. Available at: https://www.gov.uk/guidance/environmental-impact-assessment [Accessed: 29/07/2024].

2. Approach to EIA

Introduction

2.1 This Chapter sets out the approach and methodology that has been undertaken to complete the assessment of the likely significant environmental effects of the Proposed Scheme.

2.2 This Chapter sets out the following:

- Adoption and application of best practice within the EIA process applied to this ES;
- Scope of the ES, including a summary of the EIA Scoping process and the technical topics scoped in and out of the ES;
- Stakeholder engagement, summarising the level of engagement with statutory and non-statutory consultees, and other forms of engagement;
- Approach to the assessment of likely significant effects, specifically covering: consideration of the full extent of the Proposed Scheme; approach to the assessment against a consistent baseline; future baseline; identification of sensitive receptors; information to inform assessment; assessment scenarios; implementation of mitigation; criteria for determining the level of effects and significance; and limitations/assumptions; and
- EIA requirements at later stages.

Adoption of Best Practice

2.3 As confirmed within **Chapter 1: Introduction**, this ES meets the requirements set out in Regulation 18, Paragraphs 3 – 4 and Schedule 4 of the EIA 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 Development[2];
- IEMA, EIA Guide to Delivering Quality Development[3];
- IEMA, Implementing the Mitigation Hierarchy from Concept to Construction[4].

Scope of the ES

2.5 In accordance with the EIA Regulations and 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. The Applicants team had sufficient knowledge to identify the

aspects of the environment likely to be significantly affected and therefore scoped into this ES.

Technical Topics 'Scoped In'

2.6 Informed by an internal review exercise, the following technical topics and their associated likely significant environmental effects have been taken forward and assessed within the ES:

- Townscape and Visual (**Chapter 7**);
- Built Heritage (**Chapter 8**);
- Wind (**Chapter 9**);
- Daylight, Sunlight and Overshadowing (**Chapter 10**);
- Solar Glare (**Chapter 11**);
- Socio-Economics and Human Health (**Chapter 12**);
- Climate Change (**Chapter 13**); and
- Noise and Vibration (**Chapter 14**).

2.7 The likely significant environmental effects considered within each technical topic are detailed within the relevant **Technical Chapters 7 – 14**.

Technical Topics 'Scoped Out'

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

- Archaeology;
- Ground Conditions and Contamination;
- Flood Risk and Hydrology;
- Biodiversity;
- Transport;
- Air Quality;
- Lighting;
- Major Accidents and / or Disasters; and
- Waste.

2.9 The evidence base to support 'scoping out' these technical topics is presented in **Chapter 6: Topics which are Not Significant**.

Stakeholder and Public Engagement

2.10 The Project Team have undertaken technical consultation with relevant consultees to inform the scope, assessment methodology/approach and in some instances the outputs of baseline studies/surveys. The specifics of technical consultation, where undertaken, are reported within **Technical Chapters 7 – 14**.

2.11 In addition, consultation with the public was undertaken during October and November 2024, and included virtual exhibitions and an information line and email address. The environmental related comments raised and where these are considered within the ES are summarised in **Table 2.1**.

Table 2.1: Summary of Environment Related Public Feedback

Theme	General Comment	Relevant Technical Chapter
Traffic	Concern over traffic and parking	Effects from traffic are not considered to be significant, as set out in **Chapter 6: Topics which are Not Significant**.
Massing	Concerns related to the size of the building	The effects of the new massing have been reported in **Chapter 7: Townscape and Visual; Chapter 8: Built Heritage; Chapter 9: Wind; Chapter 10: Daylight, Sunlight and Overshadowing** and **Chapter 11: Solar Glare.**
Infrastructure capacity	Concern about strain on infrastructure	Effects on health and school infrastructure are not considered to be significant, as set out in **Chapter 12: Socio-Economics and Human Health.**
Construction	Concern about construction stage	Construction stage effects have been considered throughout the ES. **Chapter 16: Summary of ES sets out the residual construction stage effects.** Mitigation to control construction stage effects is summarised in **Volume 3: Environmental Management Plan.**
Green space	Concern about green spaces	**Chapter 4: Development Specification** and the associated detailed plans sets out the public realm proposed.

Manchester Piccadilly Strategic Regeneration Framework

2.12 The Site is located in the East Village Central Development Framework, which is part of the Manchester Piccadilly Strategic Regeneration Framework (SRF) Addendum[5]. The Proposed Scheme is the first application to come forward within the East Village Central Development Framework. As other applications come forward within this area, they will be required to consider the cumulative effects with the Proposed Scheme.

Approach to Assessment

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

2.14 The exact methodology for the assessment of likely significant effects of the Proposed Scheme during the construction and operational stages is varied across each of the technical topics considered within the EIA, largely due to technical specific guidance and best practice. Therefore, each of **Technical Chapters 7 – 14** specifically sets out the relevant technical assessment methodologies.

2.15 However, there are several aspects to the approach which require consistency across the ES. Where necessary, this is discussed below with the aim of identifying any nuances, and explaining how these have been accommodated with the approach.

Consideration of the Full Extent of the Proposed Scheme

2.16 The boundary upon which baseline data has been collected (i.e. study areas) varies between the technical topics and therefore these are reported specifically within **Technical Chapters 7 – 14**. However, all study areas include the Site, as defined in the Site Location Plan shown on **Figure 1.1**. This represents the maximum extent of permanent and temporary development and associated works for which permission will be sought.

Approach to the Assessment against a Consistent Baseline

2.17 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)".

2.18 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.

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

- Site visits and surveys;
- Desk-based studies;
- Review of existing site-specific information or public literature;

- Modelling;
- Review of relevant national and local planning policies; and
- Consultation with the relevant statutory consultees through the EIA process.

2.20 The baseline conditions for the purpose of the ES may vary dependent on the timing of the survey or the date when data sources will have been accessed. Unless otherwise noted below (**Table 2.3**) all baseline conditions are based on data accessed, or surveys conducted, in 2024.

Table 2.2: Summary of Baseline Adopted within Technical Chapters 7 – 14

Chapter	Data Collection Type	Timeframe
Chapter 7: Townscape and Visual	Photography Desk top baseline review	July 2024 November 2024
Chapter 8: Built Heritage	Visual survey Desk top baseline review	August 2024
Chapter 9: Wind	Physical baseline model	2024
Chapter 10: Daylight, Sunlight and Overshadowing	Baseline model results	November 2024
Chapter 11: Solar Glare	Solar glare model creation	November 2024
Chapter 12: Socio-Economics and Human Health	Online desk based review	November 2024
Chapter 13: Climate Change	Desk top baseline review	November 2024
Chapter 14: Noise and Vibration	Noise survey Vibration survey	October / November 2024

2.21 Throughout the EIA, the origin of all third-party data, the dates of surveys and the dates when data sources have been accessed are clearly outlined within the relevant **Technical Chapters 7 – 14**, alongside any limitations or assumptions.

Consideration of the Future Baseline and Receptors

2.22 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"

2.23 As required by the EIA Regulations, the ES reports the future baseline scenario under a 'do nothing' scenario, which is further discussed in **Chapter 5: Reporting of Alternatives**. However, the future baseline scenario is discussed within each of the **Technical Chapters 7 – 14**. These discussions consider potential changes to the Site and study area assuming no further development and the continuation of the existing management regime.

2.24 As set out under 'Approach to the Assessment against a Consistent Baseline', the assessments presented in the ES are largely based on the deviation from the existing baseline scenario (as future baseline conditions are presented for information purposes only). The 'Assessment Scenarios' section below specifies instances where there is a deviation from this approach.

2.25 Consideration has been given to future sensitive receptors of the Proposed Scheme (i.e. future residents) within a number of the Technical Chapters, or supporting appendices, where applicable. Although the consideration of such receptors is not specifically required by the EIA Regulations, these receptors have been considered to provide certainty to MCC that the Proposed Scheme is unlikely to create future issues when operational. As such future receptors have been considered within the following Technical Chapters/documents, with further details of the specific receptors being assessed set out within the respective Chapter/document:

- **Chapter 9: Wind**;
- **Chapter 12**: **Socio-Economics and Human Health; and**
- **Chapter 14: Noise and Vibration.**

Identification of Sensitive Receptors

2.26 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*"

2.27 Consistent with the EIA Regulations, the identification of the aspects of the environment likely to be significantly affected by the Proposed Scheme has been identified and set out within the 'Sensitive Receptors' section of each **Technical Chapters 7 – 14.** These are summarised in **Table 3.1** in **Chapter 3: Site Context**.

Information to Inform the Assessment in the ES

2.28 As indicated in **Chapter 1: Introduction**, the Application is detailed in nature.

2.29 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 in its entirety.

2.30 The assessments undertaken as part of the EIA and reported in this ES are based on **Chapter 4: Development Specification** and detailed plans which contains all information required to inform the EIA in a single location.

Quantum of Development

2.31 The quantum of development, set out in detail in **Chapter 4: Development Specification** has been used to inform the likely significant environmental effects for the following disciplines:

- **Chapter 12: Socio-Economics and Human Health;** and
- **Chapter 13: Climate Change.**

Massing and Location

2.32 The massing and location of development (including the proposed uses) as defined on the detailed plans and described in **Chapter 4: Development Specification** are used to assess likely significant environmental effects for the following topics:

- **Chapter 7: Townscape and Visual;**
- **Chapter 8: Built Heritage;**
- **Chapter 9: Wind;**
- **Chapter 10: Daylight, Sunlight, and Overshadowing;**
- **Chapter 11: Solar Glare;** and
- **Chapter 14: Noise and Vibration**.

Assessment Scenarios

2.33 In accordance with the EIA Regulations, the EIA has assessed the likely effects arising from the Proposed Scheme, taking account of demolition, site preparation / enabling works, earthworks, remedial works and construction (collectively referred to as 'construction') and operational stages.

2.34 The following key scenarios have been assessed where relevant to each environmental topic (and likely significant effects):

- Peak construction – this varies across environmental topics and has not been attributed to a specific year, rather it is determined at what point the worst-case effect could occur. This has been clearly defined within the **Technical Chapters 7 – 14**; and
- Operation – this considers environmental effects associated with the full operation of the Proposed Scheme, once completed.

2.35 All scenarios have been considered against the existing baseline conditions as defined above (see 'Approach to the Assessment Against a Consistent Baseline').

Implementation of Mitigation and Monitoring

2.36 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."

2.37 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.

2.38 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 or planning obligation; and
- **Tertiary:** actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

2.39 The application of secondary and tertiary mitigation is only considered appropriate if there is a high level of confidence in the mechanism for implementation (by the Applicant or third party

2.40 The design process has been informed by studies/surveys/modelling so that potential effects are well understood, and primary mitigation has been identified and developed. The Proposed Scheme has evolved to take account of the environmental constraints and opportunities within the Site and study area. Such evolution (as set out in **Chapter 5: Reporting of Alternatives**) constitutes primary mitigation and therefore for the purpose of the EIA such measures are considered as part of the Proposed Scheme and therefore set out in **Chapter 4: Development Specification**.

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

2.42 **Technical Chapters 7 – 14** have considered relevant primary and tertiary mitigation for both the construction and operational stages prior to undertaking their assessment of likely significant effects. Following the conclusion of effects based on the Proposed Scheme any further mitigation measures (i.e. secondary mitigation) or monitoring arrangements have been identified.

2.43 Consideration is 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.

2.44 The primary, tertiary and secondary mitigation detailed within **Technical Chapters 7 – 14** are summarised in **Volume 3: Environmental Management Plan**.

Determining Level of Effect and Significance Criteria

2.45 A four-step approach has been adopted to define effects. The four steps comprise the following, which are discussed further below:

- Step 1: Define environmental sensitivity;
- Step 2: Define magnitude of change;
- Step 3: Define level of effect; and
- Step 4: Conclude on significance.

2.46 The method for assessing the level of effect has varied between technical topics but in principle has been based on:

- The environmental sensitivity (or value / importance etc., as appropriate to the environmental topic) of a receptor or receiving environment to change, including aspects such as adaptability, tolerance or recoverability; and
- The magnitude of change (or impact) from the baseline conditions, including aspects such as probability / likelihood of occurrence, geographical extent, complexity, duration, frequency and reversibility (i.e. temporary and permanent).

2.47 Sensitivity (or value/importance etc.) has been assessed on a scale of high, medium, low and negligible and magnitude of change on a scale of large, medium, small and negligible. Where deviations from these scales is required to meet specific technical guidance this is outlined, where relevant, in **Technical Chapters 7 – 14**.

2.48 Other factors such as feedback from stakeholders, relevant legislation, international / national / regional / local standards and guidance and the relationship between effects (both cumulatively and in terms of potential effect interactions) have also been considered, where appropriate.

2.49 The assignment of the level of effect has been based on professional judgement and the matrix below (**Table 2.3**) is 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 2.3: Matrix to support determining the level of effect

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

2.50 The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- **Major effect**: Where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity. This effect is considered to be 'Significant';

- **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. This effect is considered more likely to be 'Significant' but will be subject to professional judgement;

- **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. This effect is considered less likely to be 'Significant' but will be subject to professional judgement; 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. This effect is 'Not Significant'.

2.51 For some specific environmental topics, guidance on the nature of the effect requires differing criteria or scales for determining significance to be used. Where this is the case, this is set out in **Technical Chapters 7 – 14**. However, there has been consistency of terminology and conclusions to tie in with the above matrix. This ensures that the conclusions of the different effects can be compared during the decision-making process and robustly considered within the cumulative effects assessment (see **Chapter 15: Assessment of Cumulative Effects**).

2.52 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).

2.53 Effects have also been described in line with the requirements of the EIA Regulations (i.e. as direct or indirect, short / medium / long-term and temporary or permanent).

2.54 **Technical Chapters 7 – 14** provide a summary of effects table, which outlines the effects assessed, associated sensitive receptors, residual effects and whether the effect is 'Significant' or 'Not Significant'.

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

Limitations and Assumptions

2.56 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"

2.57 Where **Technical Chapters 7 – 14** experience limitations or are based on assumptions these have been clearly identified within the relevant chapter.

EIA Requirements at Later Stages

2.58 The ES has identified and assessed likely significant effects based on the information outlined above. This has ensured that all likely significant effects have been assessed and will inform the determination of the planning application, in accordance with PPG.

2.59 Should there be a change to the information outlined above or quantum and details, there may be a requirement to review any such details to determine any likely significant effects on the environment not previously identified. Any associated assessments will then be undertaken as required, at that stage.

References

[1] Department for Levelling Up, Housing and Communities (2020) Planning Practice Guidance [Online], available at: https://www.gov.uk/guidance/environmental-impact-assessment [Accessed: 06/11/2024].
[2] IEMA (2015), Environmental Impact Assessment Guide to: Shaping Quality Development
[3] IEMA (2016) Environmental Impact Assessment Guide to: Delivering Quality Development.
[4] IEMA (August 2024), Implementing the Mitigation Hierarchy from Concept to Construction.
[5] East Village Central Development Framework. Manchester Picadilly SRF Addendum – November 2022. 10359-SHP-RP-03. Available at: East_Village_Final_Accessible.pdf

3. Site Context

Introduction

3.1 This Chapter aims to provide a high-level overview of the existing characteristics of the Site and the surrounding area assessed and reported on in this ES.

3.2 A high-level description of the Site has been provided in this Chapter to avoid the need for repetition within **Technical Chapters 7 – 14**. The relevant detailed baseline characteristics of the Site and the surrounding area in relation to the environmental topics 'scoped into' the EIA are considered within the relevant Chapter (**Technical Chapters 7 – 14**). A summary of the sensitive receptors assessed in **Technical Chapters 7 – 14** is included in **Table 3.1**.

3.3 For further context, the baseline characteristics of the environmental topics 'scoped out' of the EIA are presented in **Chapter 6**.

Location and Context

3.4 The Site (**Figure 1.1**) is approximately 0.5ha, located in the administrative area of MCC, and comprises Stocktons furniture store, and associated parking and landscaped areas. The Site is bound by Great Ancoats Street (A665 Ring road) to the east, Store Street to the south, industrial units to the west, and Ducie Street to the north.

3.5 The wider surrounding areas comprise: to the east beyond Ancoats Street lies the now demolished site which used to be the Central Retail Park, which lies undeveloped, and next to this are several flat blocks with small ground floor retail uses; to the south is the 'Oxygen Manchester' residential development and behind this small scale residential flats and the Ashton Canal Tow Path and canal; to the west old industrial buildings, some of which still comprise industrial uses but some which have been redeveloped into event spaces; and to the north lies several small business units and flats.

Identification of Sensitive Receptors

3.6 **Table 3.1** lists the sensitive receptors on which likely significant effects may occur and their relationship to the 'factors' or 'receptor groups' (termed 'receptor categories') outlined in Regulation 4, Paragraph 2 (and expanded on in Schedule 4) of the EIA Regulations. These are assessed within **Technical Chapters 7 – 14** and **Chapter 15: Assessment of Cumulative Effects**, where appropriate, and further detail on the receptors is provided within these Chapters.

Table 3.1: Identified Sensitive Receptor(s)

Chapter	Sensitive receptor(s)	Receptor Category
Chapter 7: Townscape and Visual	Viewpoint 1 Old Mill Street Viewpoint 2 Old Mill Street Viewpoint 3 New Islington Basin Viewpoint 4 Rochdale Canal Viewpoint 5 Great Ancoats Street Viewpoint 6 Vantage Quay Bridge Viewpoint 7 Rochdale Canal Viewpoint 8 Store Street Viewpoint 9 Great Ancoats Street Viewpoint 10 Pollard Street Viewpoint 11 Great Ancoats Street Viewpoint 12 Old Mill Street Viewpoint 13 Store Street Viewpoint 14 Store Street Viewpoint 15 Redhill Street Viewpoint 16 Ducie Street	Population and Human Health
	Zone C Piccadilly Viewpoints 6, 7, 13, 14 and 16 Zone D Eastern Gateway Viewpoint 8 Zone G Ancoats Viewpoints 11 and 15 Zone H New Islington Viewpoints 1, 3, 4, 5 and 12 Zone I Miles Platting Viewpoint 2 Zone J Medlock Valley Viewpoints 9 and 10	Landscape
Chapter 8: Built Heritage	Stocktons Site (non-designated heritage asset)	Cultural Heritage
Chapter 9: Wind	Pedestrians at thoroughfares, entrances, waiting areas and recreational spaces within and	Population and Human Health

Chapter	Sensitive receptor(s)	Receptor Category
	around the Site, in the vicinity of the taller elements of the Proposed Scheme, where acceleration of wind has the potential to be most significant[1]	
Chapter 10: Daylight, Sunlight and Overshadowing	Oxygen 47 Ducie Street Quantum William Jessop Court 5 Wharf Close John Smeaton Court Thomas Telford Basin Paradise Mews Laystall Street Consented Scheme Islington Wharf Phase 2 Islington Wharf Phase 3 Islington Wharf Phase 1 BLK A Islington Wharf Phase 1 BLK B Islington Wharf Phase 4 Laystall House 32-34 Laystall Street 57-59 Ducie Street Jutland House Whittle's Croft Wharf Piccadilly Village Store Street Scheme	Population and Human Health
Chapter 11: Solar Glare	Road users[2] Tram drivers	Population and Human Health
Chapter 12: Socio-Economics and Human Health	Labour force in MCC and Greater Manchester People requiring housing in the local impact area (MCC)	Population and Human Health
Chapter 13: Climate Change	Global climate system	Climate

[1] See **Chapter 9: Wind** for the specific receptors assessed.
[2] See **Chapter 11: Solar Glare** for the specific road locations assessed.

Chapter	Sensitive receptor(s)	Receptor Category
Chapter 14: Noise and Vibration	Residential apartment building to the north-west on Ducie Street[3]	Population and Human Health
	Residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street[4]	
	Proposed residential receptors	

[3] Considered a worst-case proxy position for other receptors and so by meeting the noise and vibration targets at this position, noise and vibration targets at all other receptors are also therefore expected to be achieved.
[4] As above.

4. Development Specification

Introduction

4.1 This Chapter provides a description of the Proposed Scheme, including a description of construction methods and its timescales. This description, together with the supporting detailed plans within the ES, form the basis for the technical assessments presented in **Technical Chapters 7 – 14**.

4.2 All temporary and permanent works will take place within the Site boundary, as shown on **Figure 1.1: Location Plan**. The description of the Proposed Scheme should be read in conjunction with the supporting detailed plans, as follows:

Site Wide:

- **Figure 4.1: Level B1 Site Plan**
- **Figure 4.2: Level 00 Site Plan**
- **Figure 4.3: Level 02 Lower Site Plan**
- **Figure 4.4: Level 22 Mid Site Plan**
- **Figure 4.5: Level 43 Upper Site Plan**
- **Figure 4.6: Roof Site Plan**

Building A:

- **Figure 4.7: Building A General Arrangement Plan – Basement Level 3**
- **Figure 4.8 Building A General Arrangement Plan – Basement Level 2**
- **Figure 4.9: Building A General Arrangement Plan – Basement Level 1**
- **Figure 4.10: Building A General Arrangement Plan – Level 00**
- **Figure 4.11: Building A General Arrangement Plan – Level 01**
- **Figure 4.12: Building A General Arrangement Plan – Level 02**
- **Figure 4.13: Building A General Arrangement Plan – Typical Floor Type 01 – Levels 03-08**
- **Figure 4.14: Building A General Arrangement Plan – Level 09**
- **Figure 4.15: Building A General Arrangement Plan – Level 10**
- **Figure 4.16: Building A General Arrangement Plan – Typical Floor Type 02 – Levels 11-18**

- **Figure 4.17: Building A General Arrangement Plan – Level 19**
- **Figure 4.18: Building A General Arrangement Plan – Level 20**
- **Figure 4.19: Building A General Arrangement Plan – Level 21**
- **Figure 4.20: Building A General Arrangement Plan – Typical Floor Type 01 – Levels 22-32**
- **Figure 4.21: Building A General Arrangement Plan – Level 33**
- **Figure 4.22: Building A General Arrangement Plan – Level 34**
- **Figure 4.23: Building A General Arrangement Plan – Typical Floor Type 02 – Levels 35-47**
- **Figure 4.24: Building A General Arrangement Plan – Level 48**
- **Figure 4.25: Building A General Arrangement Plan – Level 49**
- **Figure 4.26: Building A General Arrangement Plan – Roof Level**
- **Figure 4.27: Building A General Arrangement Section AA**
- **Figure 4.28: Building A General Arrangement Elevation – North East**
- **Figure 4.29: Building A General Arrangement Elevation – South East**
- **Figure 4.30: Building A General Arrangement Elevation – South West**
- **Figure 4.31: Building A General Arrangement Elevation – North West**

Building B:

- **Figure 4.32: Building B General Arrangement Plan – Level B2**
- **Figure 4.33: Building B General Arrangement Plan – Level B1**
- **Figure 4.34: Building B General Arrangement Plan – Level 00**
- **Figure 4.35: Building B General Arrangement Plan – Level 01**
- **Figure 4.36: Building B General Arrangement Plan – Level 02**
- **Figure 4.37: Building General Arrangement Plan – Level 03**
- **Figure 4.38: Building B General Arrangement Plan – Level 04**
- **Figure 4.39: Building B General Arrangement Plan – Typical Floor Plan Type 01 – Levels 05-19**

- **Figure 4.40: Building B General Arrangement Plan – Typical Floor Plan Type 02 – Levels 20-24**
- **Figure 4.41a: Building B General Arrangement Plan – Roof Level Plan Lower**
- **Figure 4.41b: Building B General Arrangement Plan – Roof Level Plan Upper**
- **Figure 4.42: Building B General Arrangement Section AA**
- **Figure 4.43: Building B General Arrangement Elevation – North East**
- **Figure 4.44: Building B General Arrangement Elevation – South East**
- **Figure 4.45: Building B General Arrangement Elevation – South West**
- **Figure 4.46: Building B General Arrangement Elevation – North West**

Landscape Plans:

- **Figure 4.47: Landscape General Arrangement Plan**

Demolition:

- **Figure 4.48: Demolition Plan**

The Completed Project

Land Use Classes and Maximum Quantum

4.3 The Proposed Scheme is described as:

4.4 "*Full planning permission for the demolition of existing buildings and erection of 2no. new buildings providing up to 758 apartments (Use Class C3), Class E floorspace (comprising flexible office accommodation (Use Class Eg(i)) and Class Ea and b) and associated hard and soft landscaping (including works within the public highway), formation of vehicle accesses and servicing access together with associated works"*

4.5 The Proposed Scheme is for the following use classes and quantum (with supporting ancillary amenity use):

- Residential (Use Class C) – up to 758 units;
- Flexible office accommodation, (Use Class Eg(i) and) – up to 4,165m^2 Gross External Area (GEA); and
- Café space (Use Class Ea and b) – up to 119m^2 GEA.

4.6 The Proposed Scheme will be delivered across two buildings, with Building A in the south of the Site and Building B in the north of the Site (**Figure 4.2**). In Building A the accommodation split will be 17.2% studio; 17.2% 1 bed; 0.7% 1 bed duplex; 62% 2 bed; 1.1% 2 bed duplex; and 1.8% 3 bed apartments. In Building B the split will be 17.5% studio; 15.5% 1 bed; and 67% 2 bed apartments.

Layout / General Arrangement

4.7 Public realm / landscaping will be provided between the two buildings.

4.8 Building A includes one café bakery / amenity (seating area and co-working spaces) on ground floor. Residential amenity (including gym, changing rooms, lounge, games room) will also be provided at Level 20 and 33 (**Figure 4.18** and **4.21**). All other levels above ground in Building A will provide residential units. Building A will have a three level basement (**Figure 4.7 – 4.9**). The basement will provide bike storage; sprinkler tanks; substation; bin store; chillers; life safety switch room and main LV switchroom; plant; and riser.

4.9 Building B will provide co-working space at ground floor and Levels 1 – 3 (**Figure 4.34 – 4.37).** Internal and external amenity will be provided on Level 4. All other levels above ground will provide residential units. Level 04 will include amenity space (including gym/yoga space) and external amenity (**Figure 4.38**). Building B will also have a two level basement which will include a residential store; bins; cleaners store; bike storage; a drying room; changing rooms; a security office; comms room; a life safety switch room. A generator and roof plant will be provided on the roof of Building B (**Figure 4.41**).

Heights

4.10 Building A will be up to 49 storeys plus roof (+201.910mAOD).

4.11 Building B will be up to 24 storeys plus roof (+129.210mAOD).

Building Materials

4.12 The Proposed Scheme will be constructed of the following materials (externally):

- Building A:
  - Anodised aluminium/glass curtain wall system; and
  - Fully glazed at ground floor.
- Building B:
  - Precast concrete;
  - Aluminium panels;
  - Glass; and
  - Perforated stainless steel.

Landscaping and Public Realm

4.13 The landscape and public realm proposals include the creation of a new public square located off Great Ancoats street and accessed from Store Street and Ducie Street. The new square includes significant areas of new tree and shrub plantings, along with defined accessible routes punctuated with seating opportunities. Public realm proposed is shown on **Figure 4.47**.

4.14 In addition, there are a series of outdoor terraces associated with both the office and residential elements of the Proposed Scheme located at various levels.

4.15 The landscape and public realm supports the creation of a safe and attractive active travel route from Piccadilly Gardens through the wider East Village SRF area[1] to Islington Wharf.

Operational Access Arrangements

4.16 All private cars (for pick-ups and drop-offs), taxis, refuse lorries and other servicing vehicles will access the site from Store Street and egress via Ducie Street. Vehicles will be able to stop in front of each building to perform these duties.

4.17 Pedestrians will have multiple access points to the Site, including ramped or at-level access points from Great Ancoats Street and via the aforementioned servicing road (off Store Street and Ducie Street) and staircases from Store Street.

Parking Provision

4.18 The MCC Manchester Core Strategy 2012 to 2027[2] does not include car or cycle parking standards for developments within the city centre, as it is the case, with each application being assessed individually.

4.19 The existing 40 car parking spaces will be removed from Site, and no spaces are proposed to be provided for the Proposed Scheme. There are on street parking bays on Store Street and Ducie Street which can be used by disabled persons with a blue badge for free.

4.20 It is expected that the majority of trips to and from the Site will be made by modes other than the private car. The Site is located within the city centre, in an accessible location for walking, cycling and public transport use. Therefore, providing no car parking spaces at this location is considered acceptable.

Operational Hours

4.21 Given the nature of the Proposed Scheme, the residential elements will be in use 24 hours a day/7 days a week. It is assumed that the commercial elements of the Proposed Scheme will be operational 07:00 - 23:00 daily.

Lighting Strategy

4.22 Given the urban nature of the Site and surrounding area, artificial lighting will largely be contained to the areas of public realm and the interior of the building.

4.23 Lighting within the public realm will comprise amenity/ architectural lighting. This will be achieved through various lighting elements, including ambient lighting, task lighting, accent lighting and decorative lighting elements.

4.24 Where lighting is proposed it will be designed and installed in line with relevant industry best practice and guidance, including:

- CIE 150: 2017 – Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition[3];

- ILP GN01 - Guidance Notes for the Reduction of Obtrusive Light 2021[4];
- ILP PLG08: Guidance on the Application of Adaptive Lighting within the Public Realm[5];
- ILP Lighting Landscapes[6];
- BS EN 13201-2:2015 – Road Lighting – Part 2: Performance Requirements[7];
- BS EN 12464 – 2 2014 – Outdoor Work Spaces; SLL Guide to Limiting Obtrusive Light 2012[8];
- SLL Lighting Handbook 2009[9];
- LG 6 (CIBSE) – The Exterior Environment 2016[10]; and
- ILP Guidance Note 08/18 Bats and Artificial Lighting in the UK[11].

4.25 Lighting is assumed to be operational 24 hours a day to provide a safe place for pedestrians, members of the public 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

4.26 The final building management company will have in place the required emergency producers/practices (i.e. Fire Emergency Evacuation Plan) 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 B: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations.

4.27 The design of the Proposed Scheme will be informed by 'Secure by Design' principles and appropriate design and site management measures (including appropriate lighting (as described above) and digital entry systems). Whilst the majority of the Site has been purposely developed to be publicly accessible, there will be areas where controlled access is required (i.e. entry to the residential areas).

Surface Water Drainage Strategy

4.28 The Proposed Scheme will have a dedicated surface water drainage system that will collect the rainwater from the proposed building roof, and impermeable external areas before discharging into the Shooters Brook Culvert crossing the Site.

4.29 The Shooters Brook Culvert will be diverted through the Site. The diversion line and any associated easements over the culvert are to be agreed with MCC.

4.30 The proposed connection into the Shooters Brook Culvert will be subject to agreement with MCC.

4.31 The proposed surface water drainage will not increase the runoff rate and will include an allowance for climate change in accordance with relevant guidance[12].

4.32 The proposed drainage system will be designed in accordance with BS EN 752:2017 and Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage network as rain gardens and permeable surfacing, in accordance with CIRIA 753 – The SuDS Manual[13] where practical.

Foul Water Strategy

4.33 The Proposed Scheme will have two dedicated foul water networks that will collect the foul water associated with each of the blocks. The network serving Building A will connect into the 600x450mm combined water sewer within Ducie Street and the network serving Building B will connect into the 1500mm diameter combined sewer in store street.

4.34 The proposed drainage system will be designed in accordance with BS EN 752:2017, Building Regulation Approved Document Part H.

4.35 The proposed connections to the public sewer system will be subject to agreement with United Utilities under the Section 106 Agreement.

Potable Water Strategy

4.36 The Proposed Scheme is estimated to use the following quantities of water for domestic purposes (informed by the storage quantities for the water supply):

- Building A: 49,275m^3/year; and
- Building B: 25,915m^3/year.

4.37 Measures to reduce water consumption, including the provision of water efficient fixtures and fittings, i.e. low flow taps and low water use WCs will be implemented.

Energy Strategy

4.38 Both buildings will be constructed to a high standard of fabric insulation and airtightness and will utilise a range of renewable energy technologies including roof mounted solar PV and Air Source Heat Pumps. The development will be all-electric, with no gas boilers, meaning that the carbon intensity of each building will reduce over time, ultimately reaching net zero in line with the decarbonisation of the grid.

4.39 An Energy Strategy has been prepared for the Proposed Scheme demonstrating how dwellings will comply with the requirements of the current Building Regulations Part L 2021 and the requirements of PfE policies JP-S1, JP-S2 and JP-S3, through incorporation of energy hierarchy principles. Further energy modelling will be undertaken prior to construction, with the development aiming to achieve RIBA 2025 operational energy target for domestic buildings of 60 kWh/m^2/y.

Waste Arisings and Strategy

4.40 Waste generated during the operational stage is anticipated to include generic waste streams arising from the residential and office.

4.41 British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice[14] suggests that the weekly waste arisings from a 'domestic' use is equal to the number of

dwellings x [(70 litres x average number of bedrooms[a]) +30]. Waste arisings from 'office' use is equal to the volume arising per employee [50l] x number of employees. Waste arisings from a 'restaurant' use is equal to the volume per number of covers [75l]. The number of employees nor the number of covers in the café is not known as the office space would be used as a co-working space rather than new commercial office space and the café would be more informal than restaurant covers. Therefore the calculations of waste generation below have not considered the office or cafe use.

4.42 These benchmarks, the Proposed Scheme would be considered to generate approximately 128,860 litres (l) (circa 128.86m^3) a week, approximately 6,700,720l (circa 6,700.72m^3) per annum. It should be noted that this does not take account of any waste arising reused, recycled or diverted from landfill by another means, and is considered to be a worst case calculation.

4.43 The Proposed Scheme will be designed in order to take account of appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling. In addition, it is assumed that all waste storage/handling facilities will be designed in accordance with BS 5906:2005 Waste Management in Building – Code of Practice. A Waste Management Strategy has been submitted with the Application which sets out the principles, strategy and targets for the management and storage of waste and maximise recycling, in accordance with MCC established policy.

Resilience to Climate Change

4.44 The evolving climate has been considered throughout the design of the Proposed Scheme. The evolving climate is expected to include an increase in mean summer and winter temperatures; increase in annual precipitation; decrease in mean summer precipitation; and increase in extreme weather events. The following key climate resilience measures are integral to the Proposed Scheme:

- The Building Regulations[15] will be met in relation to the impact of ground movement in foundation design;
- Incorporation of landscaping proposals to maximise ecological value which will include the selection of climate change tolerant species;
- In accordance with national guidance the potential effects of climate change to minimise risk of flooding will be considered in the surface water drainage system, which will take into account the 1 in 100 year storm event and required climate change allowances; and
- The residential development within both Buildings A and B have undergone overheating assessment in line with the requirements of Part O of the Buildings Regulations[16] using CIBSE TM59 methodology in order to assess and reduce the risk of summer overheating by taking into account future climate scenarios. All apartments will have access to natural ventilation via perimeter purge panels within the unitised facade. Auxiliary ventilation will be provided with MVHR's.

[a] 2-beds has been used as the average number of bedrooms, which is informed by the proposed mix.

The results from the final overheating simulation showed that all of the assessed bedrooms and Kitchen/Living/Dining Areas comply with the TM59 overheating criteria. Additionally, residential corridors will be assessed from an overheating perspective during the stage 3 design process. Commercial units will be comfort cooled, as such any impacts from increasing temperatures and overheating will be accommodated.

Construction of the Proposed Scheme

Construction Programme and Phasing

4.45 Site preparation and construction of the Proposed Scheme is anticipated to commence (at the earliest) in Q4 2025, with the demolition being completed over approximately 3 months and construction being completed over approximately 5 years. The Proposed Scheme is anticipated to be operational in 2031.

4.46 The key stages of the construction works, broadly in chronological order, have been detailed below. Where assumptions have been made these have been clearly stated.

4.47 A commitment has been made to a number of environmental mitigation measures (as set out within **Volume 3: Environmental Management Plan**) to be adopted throughout the construction stage, intended to be secured and managed through a Construction Environmental Management Plan (CEMP).

Hoarding of the Site and Security

4.48 The Site will be secured through a combination of secure fencing, barriers and hoarding. 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 Access and Vehicle Movements

4.49 Construction access will be via Store Street and Ducie Street. This is in line with the construction strategy of other developments under construction along Great Ancoats Street, which have their construction access point off minor roads.

4.50 The creation of the new vehicular access points will have an impact on the on-street parking bays and crossing facilities on Ducie Street and Store Street respectively.

4.51 The egress will require three bays on Ducie Street to be relocated. They are proposed to be relocated around the Store Street / Millbank Street junction or adding an additional bay on Ducie Street closer to the junction with Great Ancoats Street. It is also suggested to move the existing bays to the east of the proposed access point slightly to the east. No loss of on-street parking will result.

4.52 Similarly, the existing pedestrian crossing on Store Street would be only 16m away from the proposed access point on this road, and therefore MCC could consider relocating it to the bellmouth of the junction with Great Ancoats Street, where there is already an informal, uncontrolled crossing point.

4.53 It is proposed by the applicant that a Section 278 agreement is reached for the above works.

4.54 Consideration has been given to the likely daily construction vehicular movements, which would result in a minimum of 20 vehicular movements per day (10 arrivals and 10 departures) at the less demanding phase, as mobilisation, site preparation and finishing (16 HGVs and 4 LGVs movements) and a maximum of 50 vehicular movements per day (25 arrivals and 25 departures) during the construction of superstructure, walls and partitions (44 HGVs and 6 LGVs movements).

4.55 The demolition phase would require up to 20 vehicles per day (40 vehicular movements, 36 HGVs and 4 LGVs).

4.56 This equates to between 2 and 4 vehicular movements per hour throughout the working day.

4.57 A Construction Traffic Management Plan (CTMP) will be prepared by the principal contractor (when appointed) which will set out the proposed routing of construction traffic and measures to enforce such routing (i.e. signage). This will be agreed with MCC Highways.

Construction Compound

4.58 During construction, a central compound will be required for the contractor and appointed subcontractors. The exact location of the construction compound(s) is unknown at this time, but it will be within the Site.

4.59 The principal contractor will identify the proposed compound locations 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

4.60 The Principal Contractor will be responsible for implementing the drainage system to manage storm water run-off and foul water effluent generated during the temporary construction stage (including water arising from excavations, rainfall and staff welfare). Management of this water may include the ongoing use of the existing channels, gullies and outlets, construction in part of the final development drainage system or by providing temporary connections into the existing public sewer network. All connections will require approval from MCC and United Utilities prior to implementation.

4.61 The Shooters Brook Culvert will be diverted between the structures on the Site and it is proposed that the drainage connects into it. Connection to the culvert will be subject to agreement with the Lead Local Flood Authority.

4.62 A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)[17] and BS8582:2013 Code of practice for surface water management for development sites[18]) will be required to be established on Site by the contractor to control and manage surface water run-off. This will include the use of the existing drainage system to collect and contain run-off including any discharge agreements with the local sewer authority. It may also be necessary to introduce

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

Utilities Strategy

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

4.64 The works / route of any new connections are 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

4.65 The Proposed Scheme will require demolition of the existing Stockton's building (**Figure 4.48**).

4.66 The demolition of the building will likely comprise the following general practices:

- Internal 'soft-strip' exercise, with all waste arisings removed from the building and segregated into allocated skips for appropriate processing/recycling/disposal;
- Any hazardous materials (including asbestos) will be removed, handled and disposed of in line with appropriate guidance and regulations;
- Demolition works will be undertaken using mechanical demolition techniques (i.e. no form of explosive demolition will be required) from the highest point downward. All waste arisings will be separated into allocated skips to maximise material recycling;
- Where required appropriate fencing/exclusion zones will be identified and implemented by the appointed contractor; and
- Removal of floor slabs, foundations, and other areas of hardstanding.

Earthworks, Levels and Material Management

4.67 To obtain appropriate development plateau levels, it is anticipated there will be both areas where levels will reduce (areas of cut) and areas where level will increase (area of fill). It is assumed there will be a requirement for cut to be exported off-Site, given the excavation that will be required for the proposed basements.

4.68 The proposed basements will be the following depths:

- Building A:
  - Basement Level 1: +40.750m;
  - Basement Level 2: +37.525m; and
  - Basement Level 3: +34.300m.

- Building B:

  – Basement Level 1: +40.110m; and

  – Basement Level 2: +36.610m.

4.69 Local excavation and trenching works will be required to install services, drainage runs and foundations for structures.

4.70 All waste arisings during construction are to be controlled through the implementation of a CEMP and a best practice waste management strategy (described further in **Volume 3: Environmental Management Plan**).

Remediation Strategy

4.71 Contaminated made ground has been recorded in one area on Site, contaminated with heavy metals and PAHs, with asbestos. Where required, a cover system in areas of soft landscaping will be provided as a minimum. Where required, a programme of mitigation or remediation work will be carried out as part of the enabling works in line with a Remediation Strategy approved by the regulators and MCC.

Foundations Solution

4.72 The Proposed Scheme will require piled foundations.

4.73 Foundation design will be undertaken in accordance with relevant industry guidance, including but not limited to CIRIA Report C572: Treated ground engineering properties and performance, British Research Establishment document FB75: Building on Fill - Geotechnical Aspects and British Standard 6031:2009: Code of Practice for Earthworks.

Cranes

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

Working Hours

4.75 Construction working hours[19] (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.

Demolition and Construction Waste Arisings and Strategy

4.76 Sources of waste during the construction stage are assumed to relate to construction materials (including packaging). If required, the remedial solution may require removal of hazardous substances[20] which will require specialist removal. All such works will be undertaken by an appointed contractor and disposed of by the contractor in line with relevant regulations and legislation requirements.

4.77 The existing building to be demolished is estimated to be approximately 2,488m^2. Based on a standard working calculation which takes the assumed building/structure area and multiples this by 0.3 to estimate the likely demolition waste, the demolition of the existing Stocktons building is estimated to give rise to approximately 746.3m^3 of waste arisings. This value does not account for any form of recycling or reuse of waste and therefore represent and reasonable worst case.

4.78 Using the maximum floorspace of the Proposed Scheme multiplied by industry benchmarks[21] for construction waste arisings[22] (10 tonnes per 100m^2 for residential uses and 13 tonnes per 100m^2 as a worst case for non-residential uses), it is anticipated that 8,122.16 tonnes of waste will be generated from the construction stage.

4.79 Any waste considered to be hazardous, arising from demolition or remedial activities, will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.

4.80 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 1990[23] and the Environmental Protection (Duty of Care) Regulations 1991[24] 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.

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

Construction Environmental Management Commitments

4.82 The proposed construction works will be carried out by a competent contactor, 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.

4.83 A commitment has been made to a number of environmental measures and management practices during the construction stage and, where appropriate, these will be set out as part of the CEMP and will be agreed with MCC.

4.84 As an overview, the 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.

4.85 Full details of the CEMP measures committed to are provided within **Volume 3: Environmental Management Plan (EMP)**, in order to suitably manage environmental effects during the construction stage.

References

[1] East Village Central Strategic Regeneration Framework (SRF)(SRF) | Manchester City Council
[2] Core Strategy 2012-2027 | Core Strategy 2012-2027 | Manchester City Council
[3] CIE (2017). Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition. Available at: https://cie.co.at/publications/guide-limitation-effects-obtrusive-light-outdoor-lighting-installations-2nd-edition
[4] ILP (2021). Guidance Note on the Reduction of Obtrusive Light. Available at: https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/
[5] ILP (2008). Professional Lighting Guide Guidance on the Application of Adaptive Lighting within the Public Realm. Available at: https://theilp.org.uk/publication/plg08-guidance-on-the-application-of-adaptive-lighting-within-the-public-realm/
[6] ILP (2014) Lighting Landscapes. Available at: https://theilp.org.uk/publication/lighting-landscapes/
[7] BSI (2015). BS EN 13201-2:2015 – Road Lighting Part 2: Performance Requirements.
[8] BSI (2014). BS EN 12464-2:2014 – Light and Lighting. Lighting of work places. Outdoor work places.
[9] SLL (2009). Lighting Handbook.
[10] CIBSE (2016) LG6 The exterior environment.
[11] ILP (2023) Guidance Note on Bats and Artificial Lighting at Night. Available at: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/
[12] Flood risk assessments: climate change allowances (2022). Available at: Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk)
[13] CIRIA (2015). The SuDS Manual C753. Available at: SuDS Manual C753 Chapter List (ciria.org)
[14] untitled
[15] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf
[16] https://www.gov.uk/government/publications/overheating-approved-document-o
[17] CIRIA (2015). The SuDS Manual (C753).
[18] 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)
[19] Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: Noise from building sites | Tackle a noise problem | Manchester City Council
[20] The Hazardous Waste (England and Wales) Regulations 2005, No. 894.
[21] BRE (2018). Home Quality Mark ONE, Technical Manual England. Available at: Home Quality Mark ONE

[22] This has been established using professional judgement and is based on good practice principles developed within the Home Quality Mark.
[23] Environmental Protection Act 1990 No. 43 Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents
[24] 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



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NORTH

Rev	Date	Description
P01	2024-12-17	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Existing
Site Roof Plan


Project No
10359

Scale
1 : 200@ A1

PROJ - ORG - ZONE - ROLE - CLAS - TYPE - LOT - SEQ
Revision
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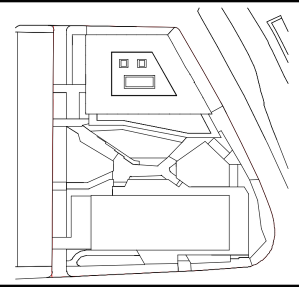
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Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Existing
Site Location Plan

Project No
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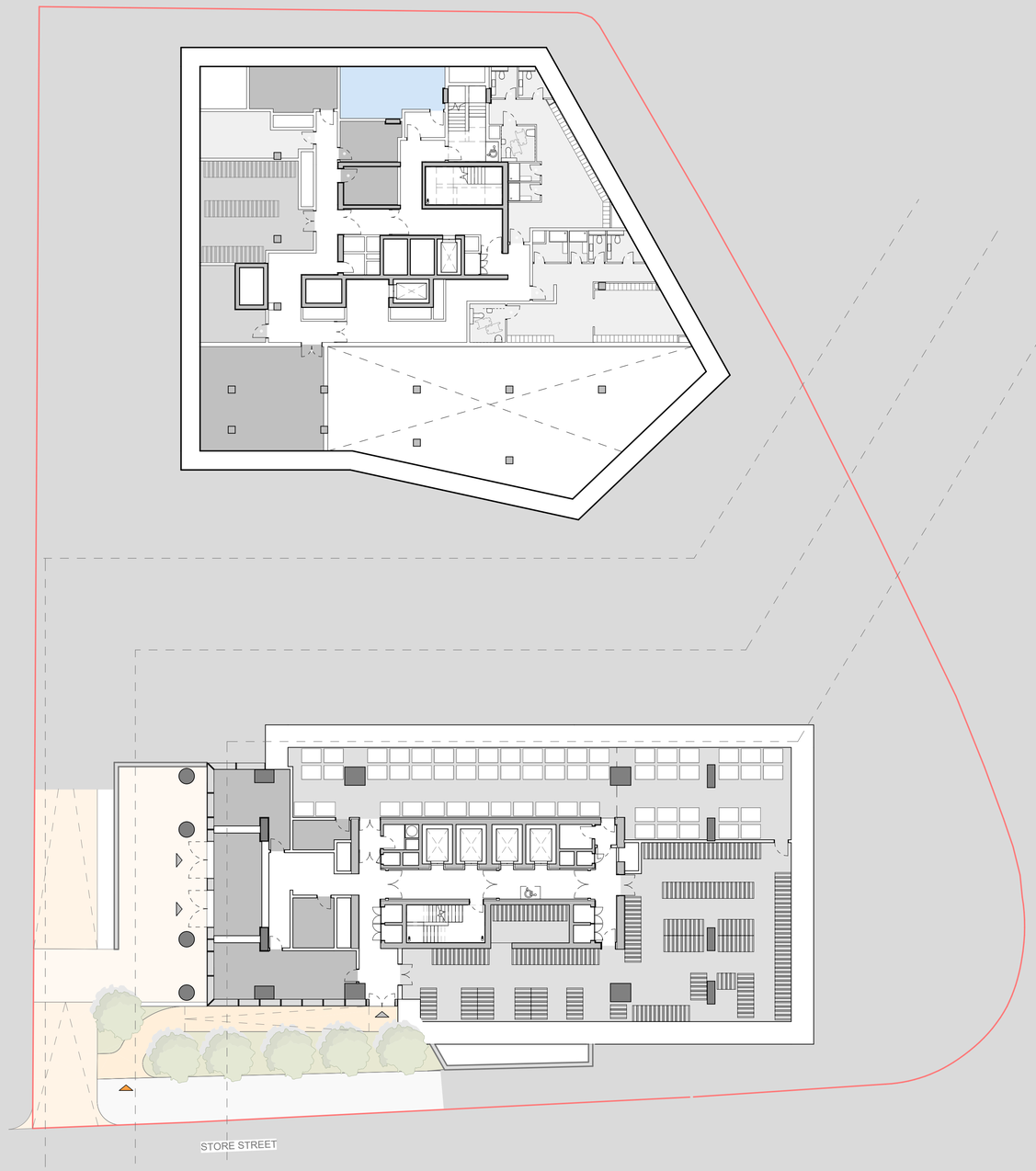
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SCALE 1:200

0 4m 8m 12m 20m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Level B1 Site Plan

Project No
10359

Scale
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SCALE 1:200

0 4m 8m 12m 20m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Level 00 Site Plan

Project No
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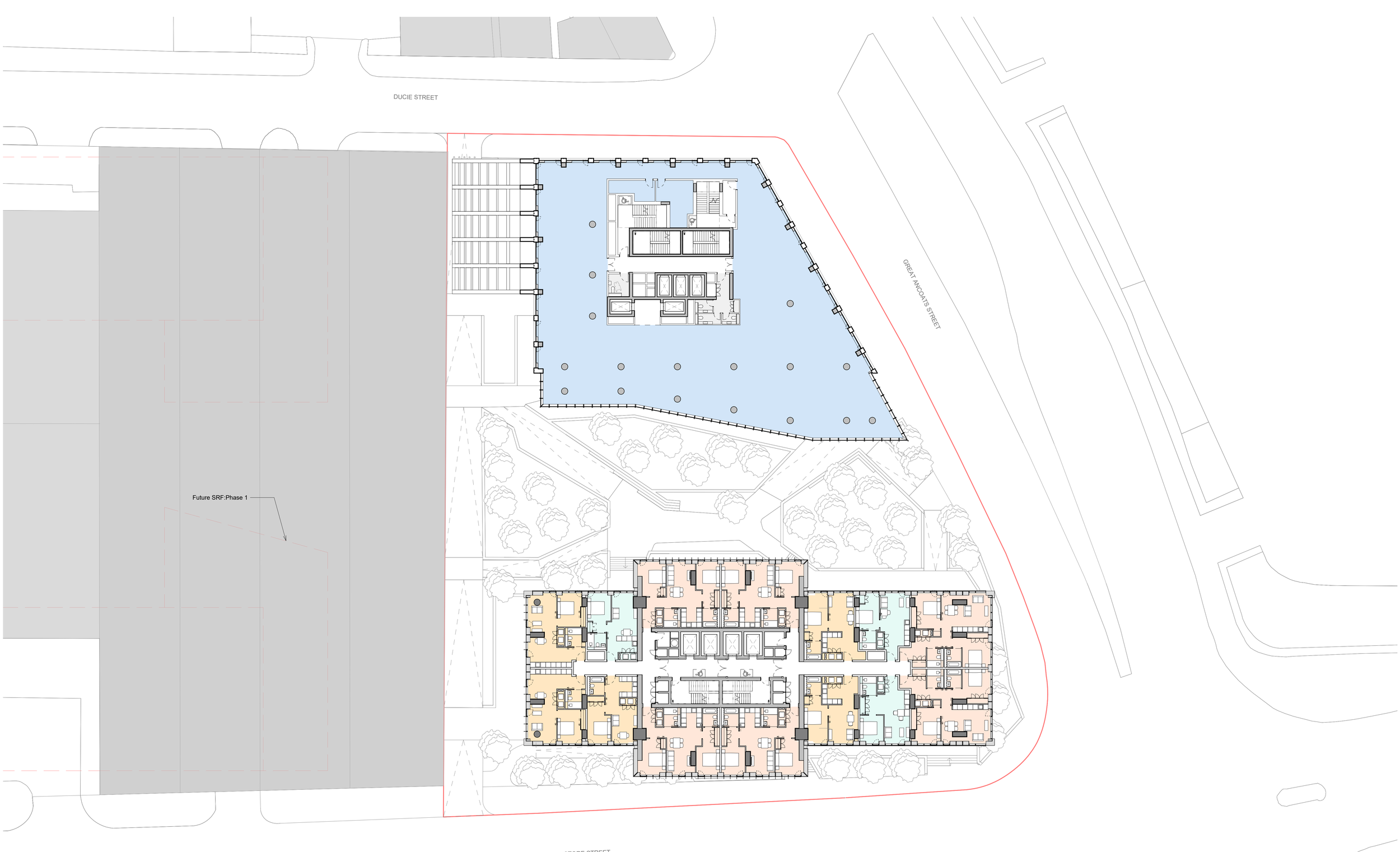
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0 4m 8m 12m 20m

Studio	Amenity	Fire Escape
One Bed Apartment	Plant	Residential Entrance
Two Bed Apartment	Office	Office Entrance
Three Bed Apartment	Cafe	Cafe Entrance
		BOH Entrance
		Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Level 02 Lower Site Plan

Project No
10359

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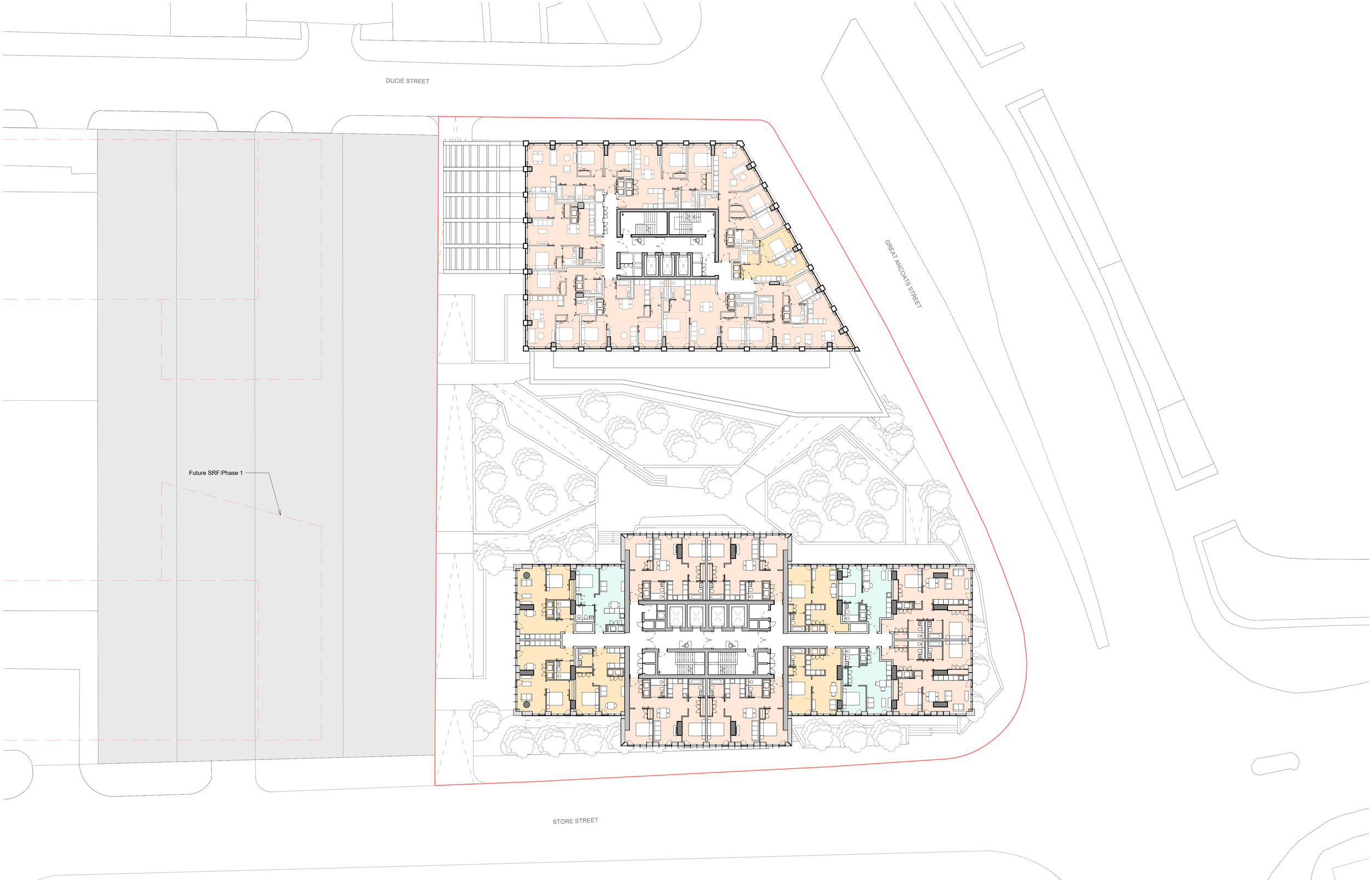
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SCALE 1:200

0 4m 8m 12m 20m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
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Status
PLANNING

Drawing Title
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Proposed
Level 22 Mid Site Plan

Project No
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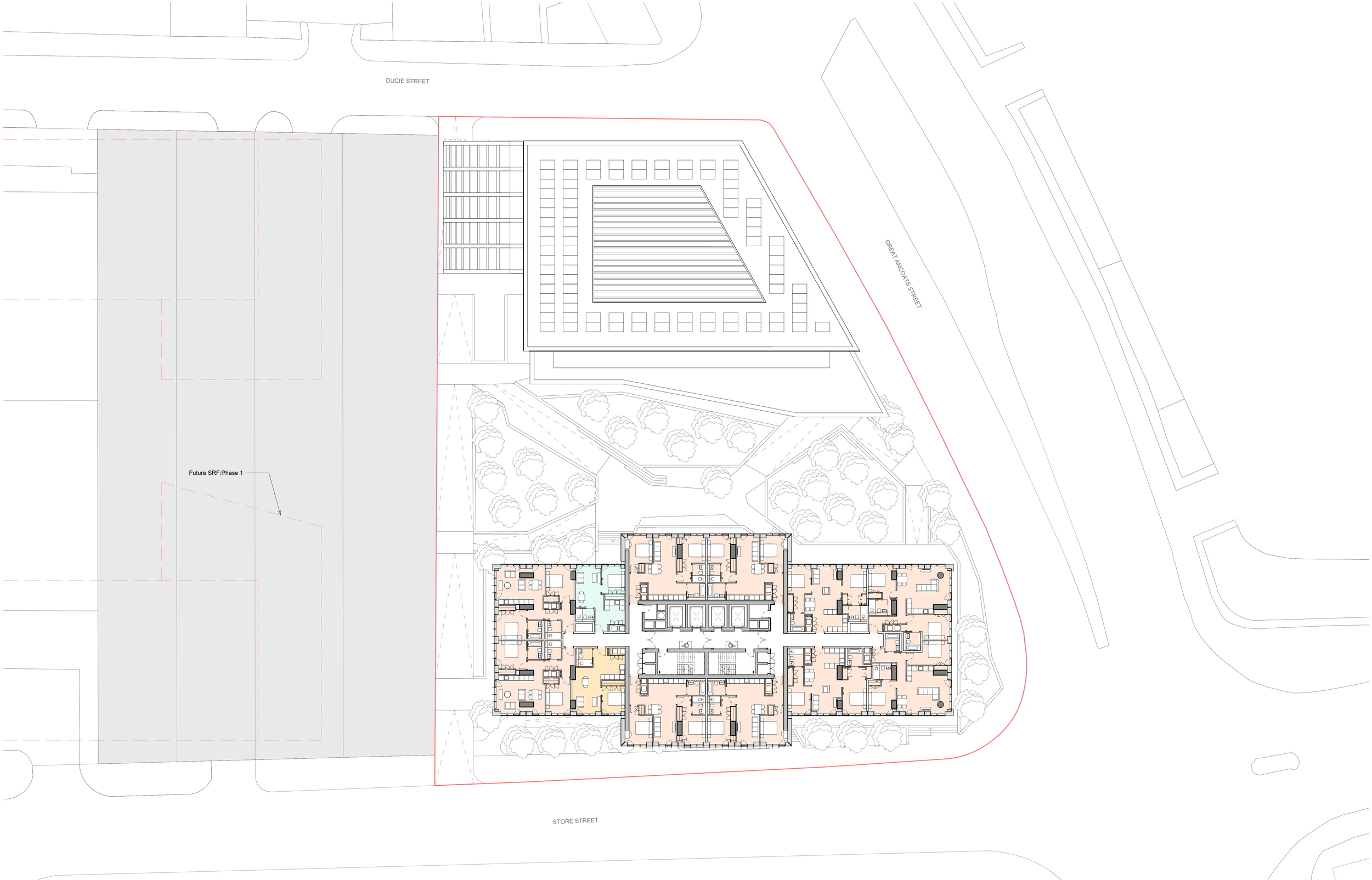
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SCALE 1:200

0 4m 8m 12m 20m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Level 43 Upper Site Plan

Project No
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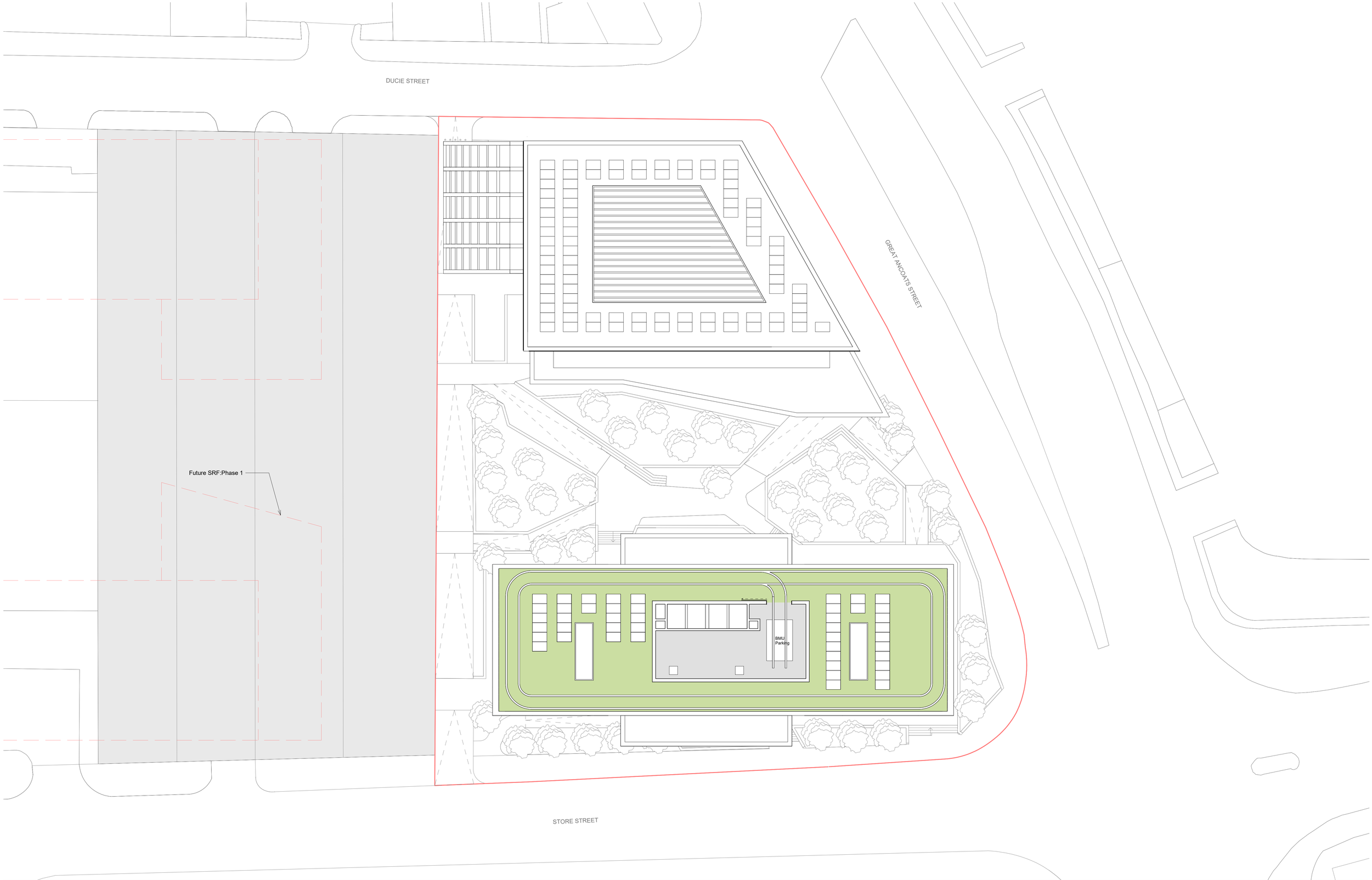
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0 4m 8m 12m 20m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Roof Site Plan

Project No
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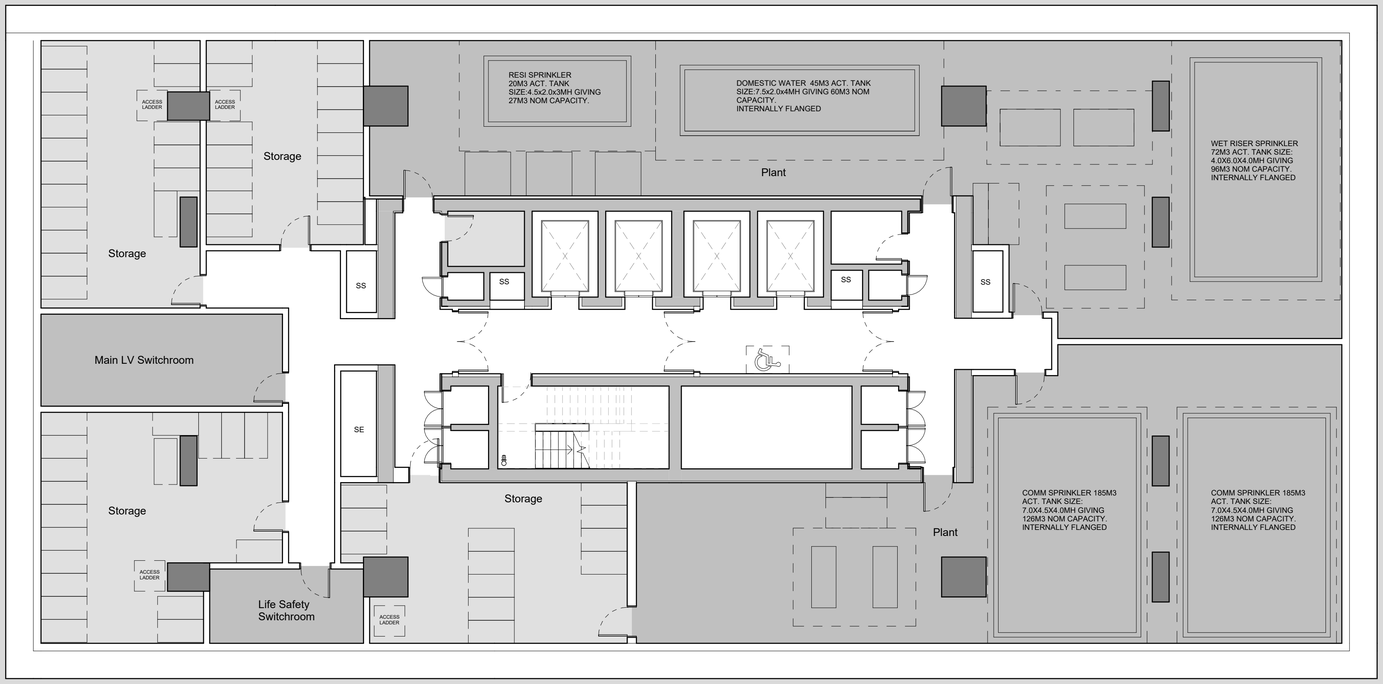
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level B3 Floor Plan

Project No
10359

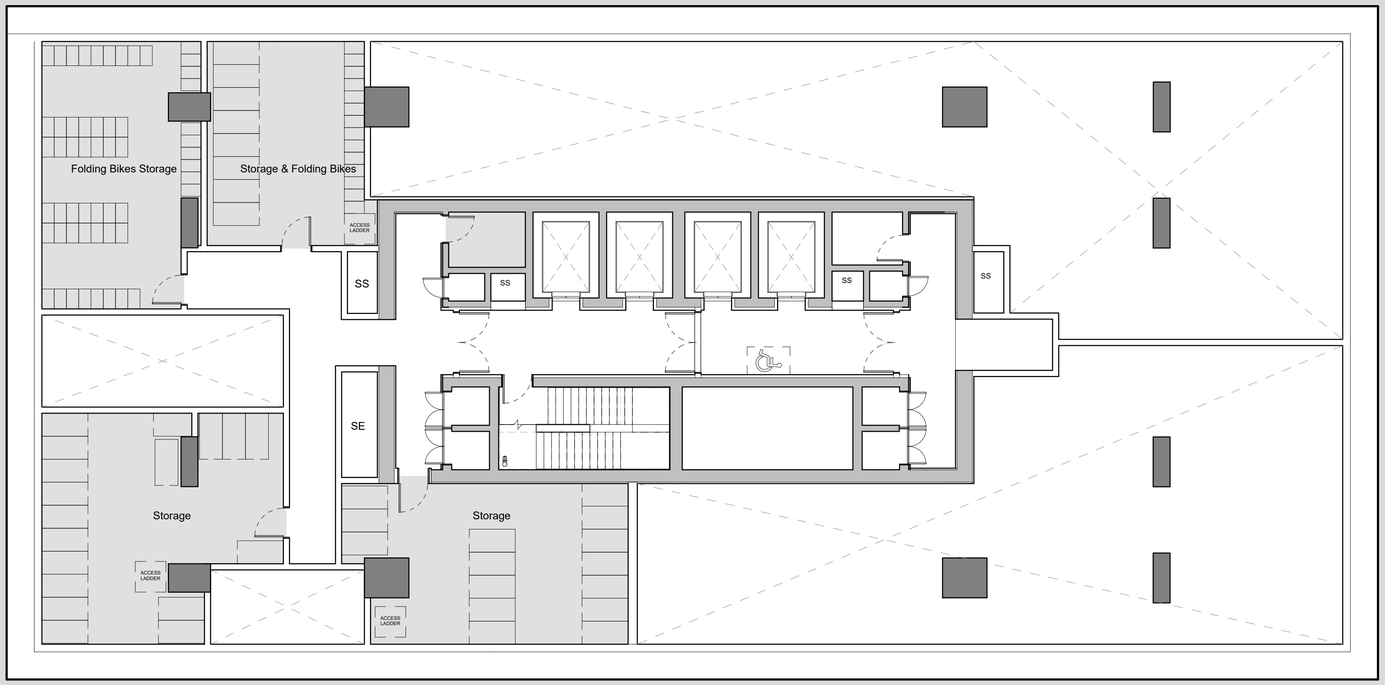
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SCALE 1:100

0 2m 4m 6m 10m

Studio
One Bed Apartment
Two Bed Apartment
Three Bed Apartment
Amenity
Plant
Office
Cafe
Fire Escape
Residential Entrance
Office Entrance
Cafe Entrance
BOH Entrance
Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level B2 Floor Plan

Project No
10359

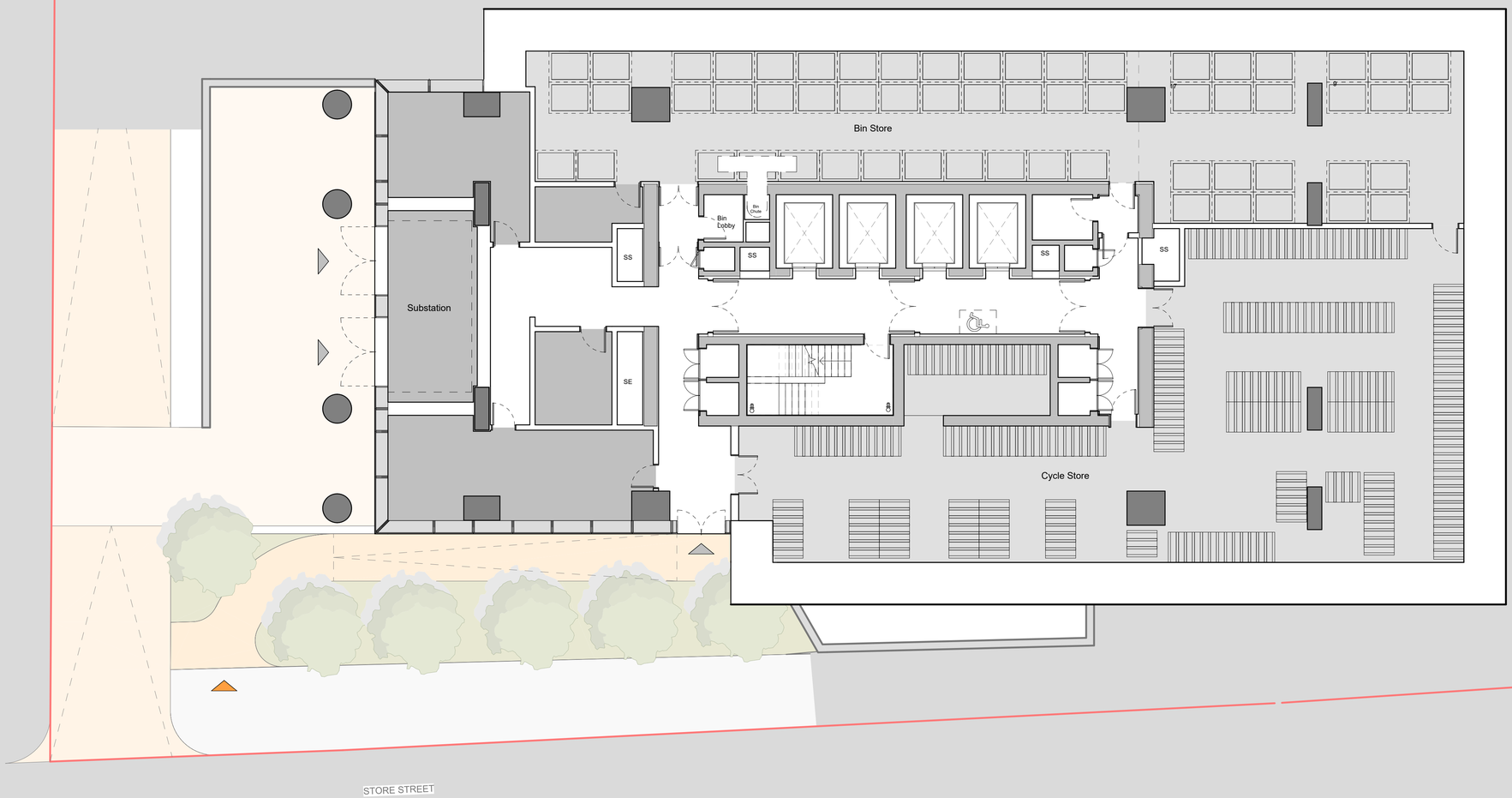
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level B1 Floor Plan

Project No
10359

Scale
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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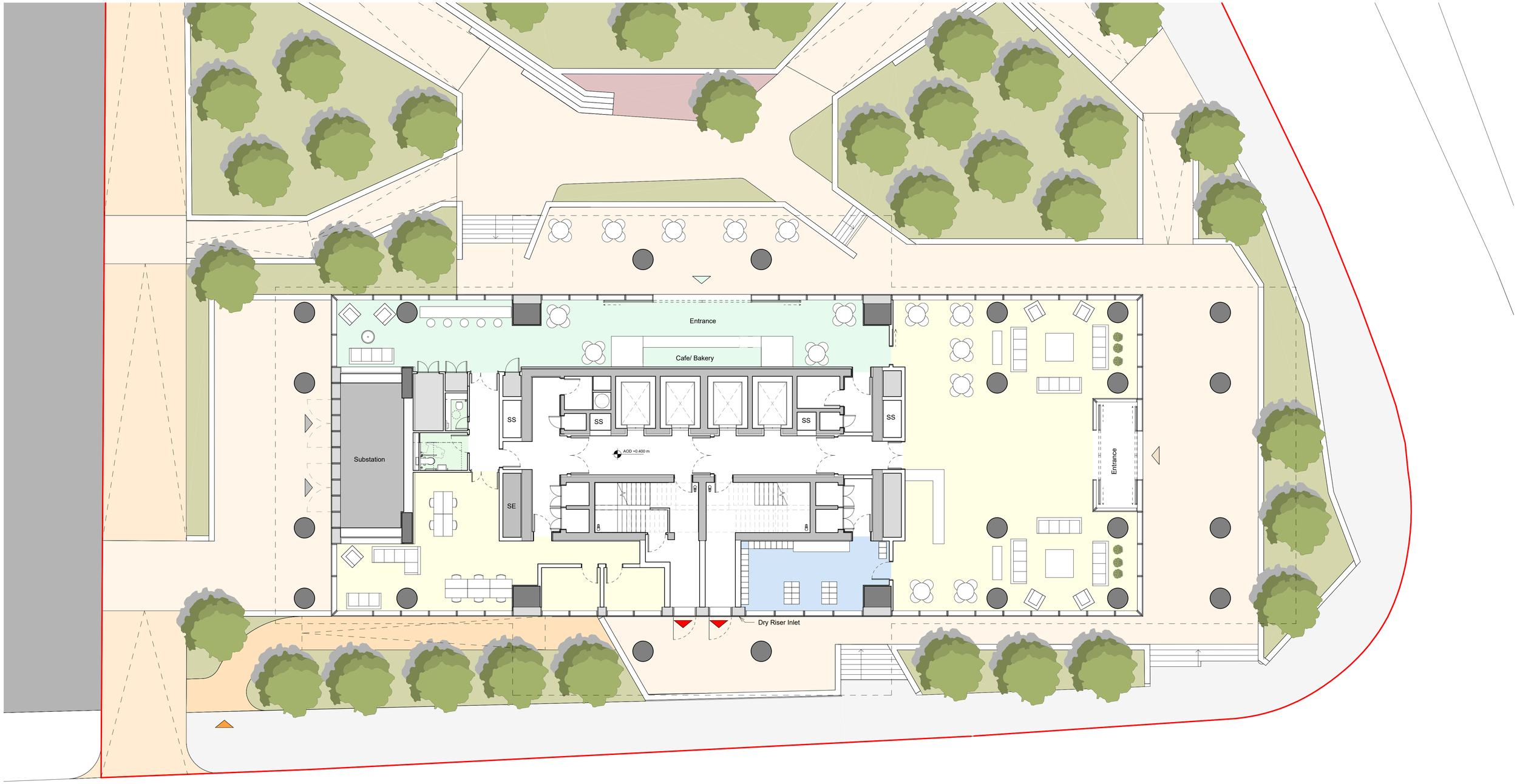
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 00 Floor Plan

Project No
10359

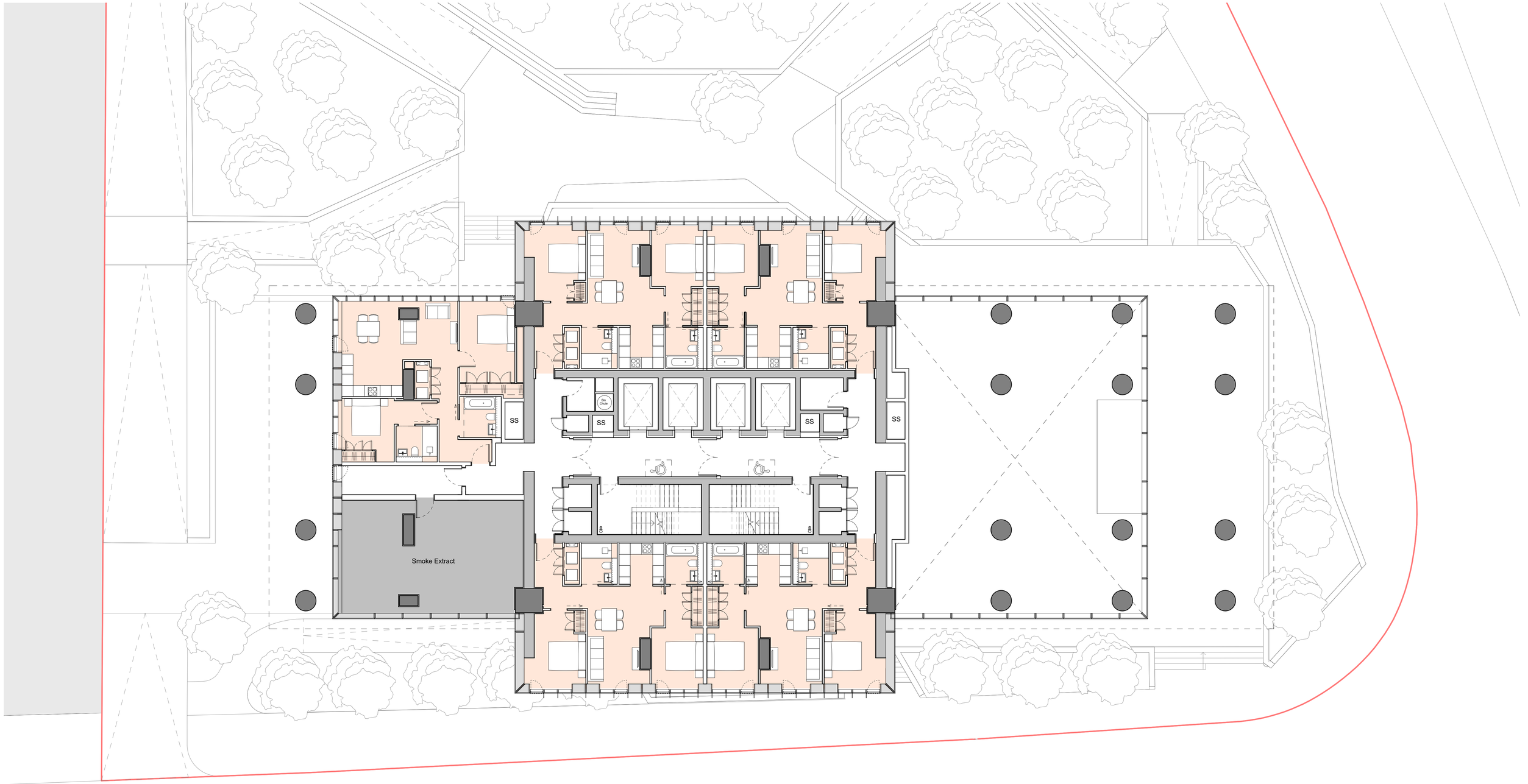
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 01 Floor Plan

Project No
10359

Scale
1 : 100 @ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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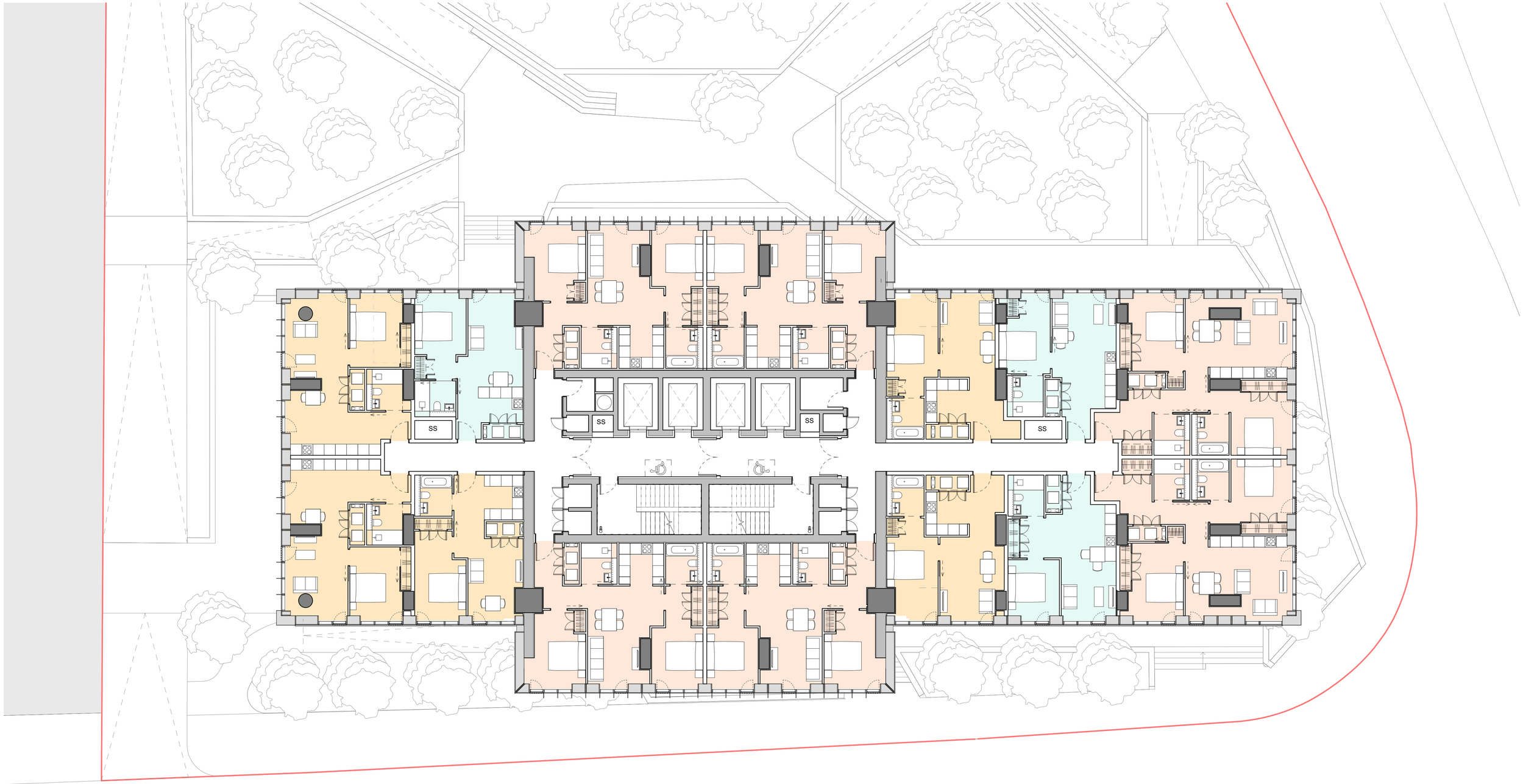
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 02 Floor Plan

Project No
10359

Scale
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PROJ - ORIG - ZONE - PROF - CLAS - TYPE - LOC - SEQ
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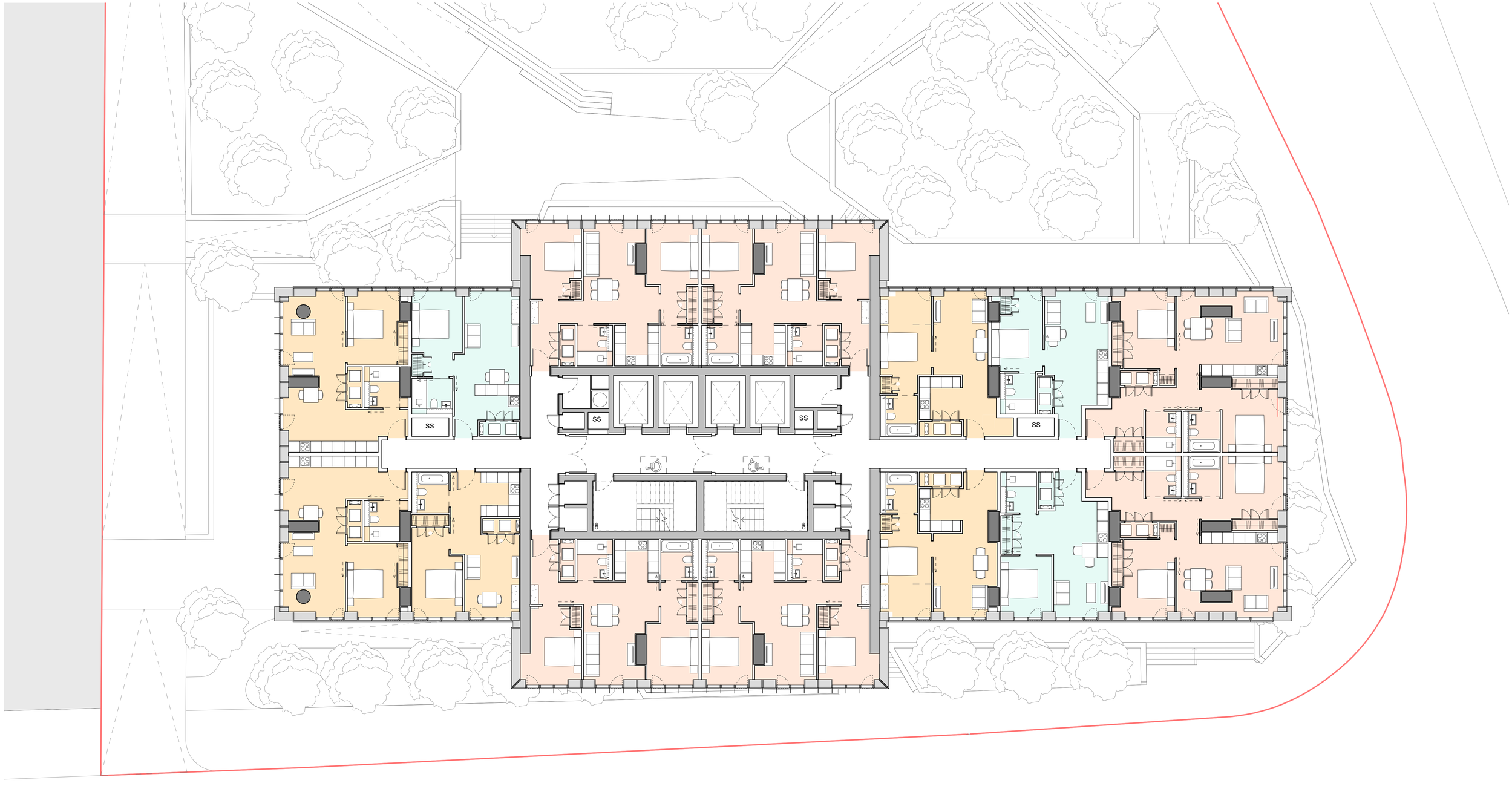
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Typical Floor Plan Type 01 - Levels 03-08

Project No
10359

Scale
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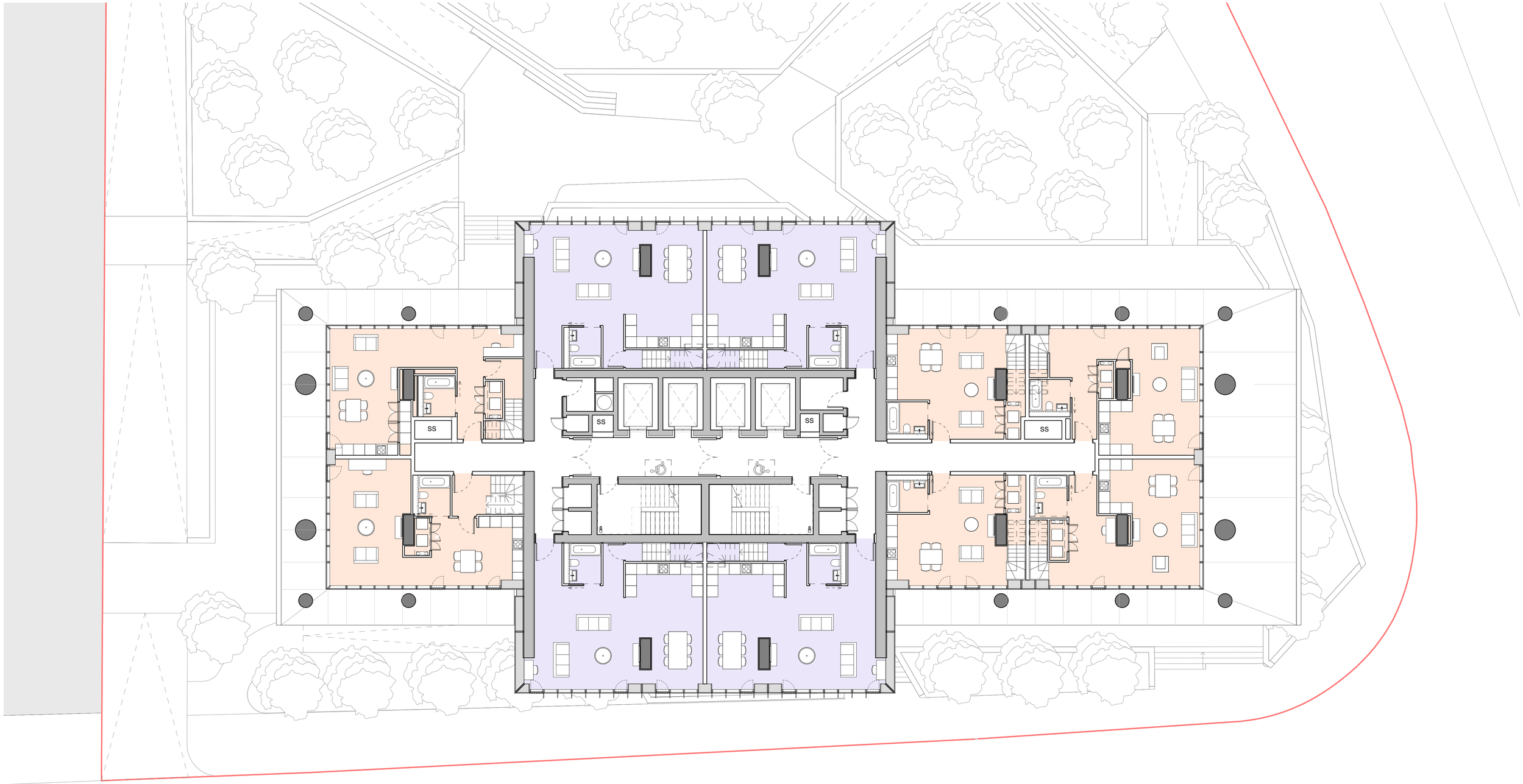
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 09 Floor Plan

Project No
10359

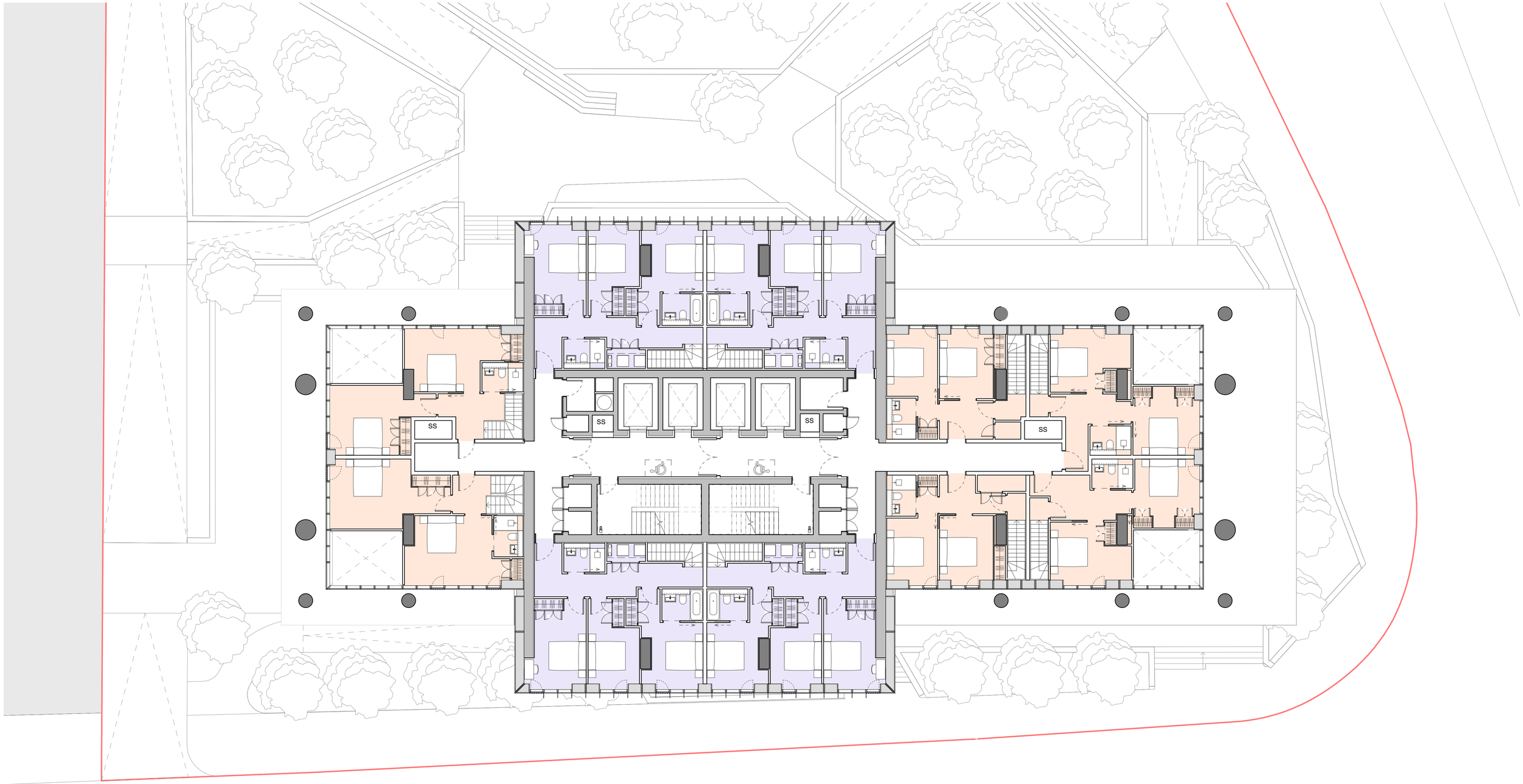
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 10 Floor Plan

Project No
10359

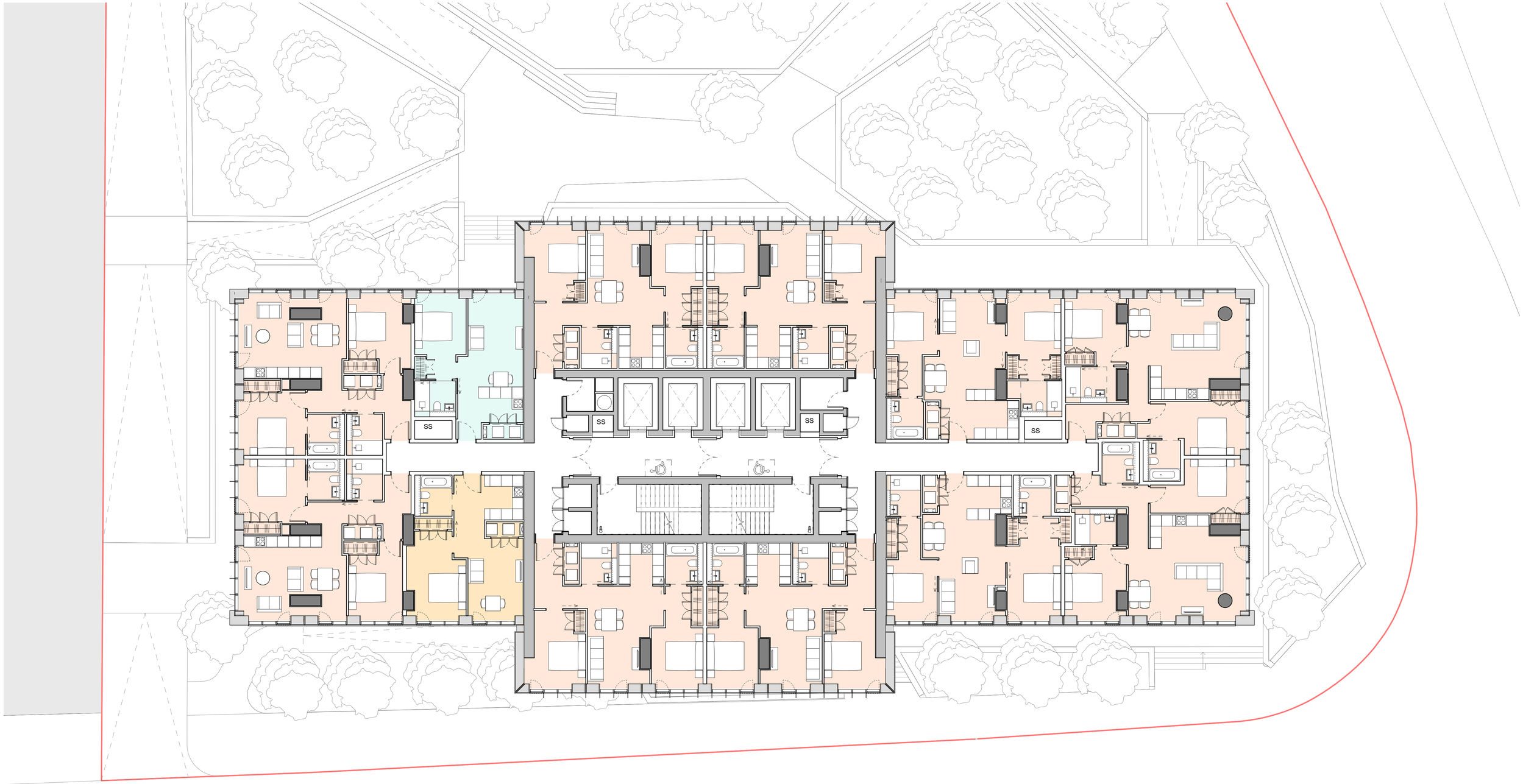
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Typical Floor Plan Type 02 - Levels 11-18

Project No
10359

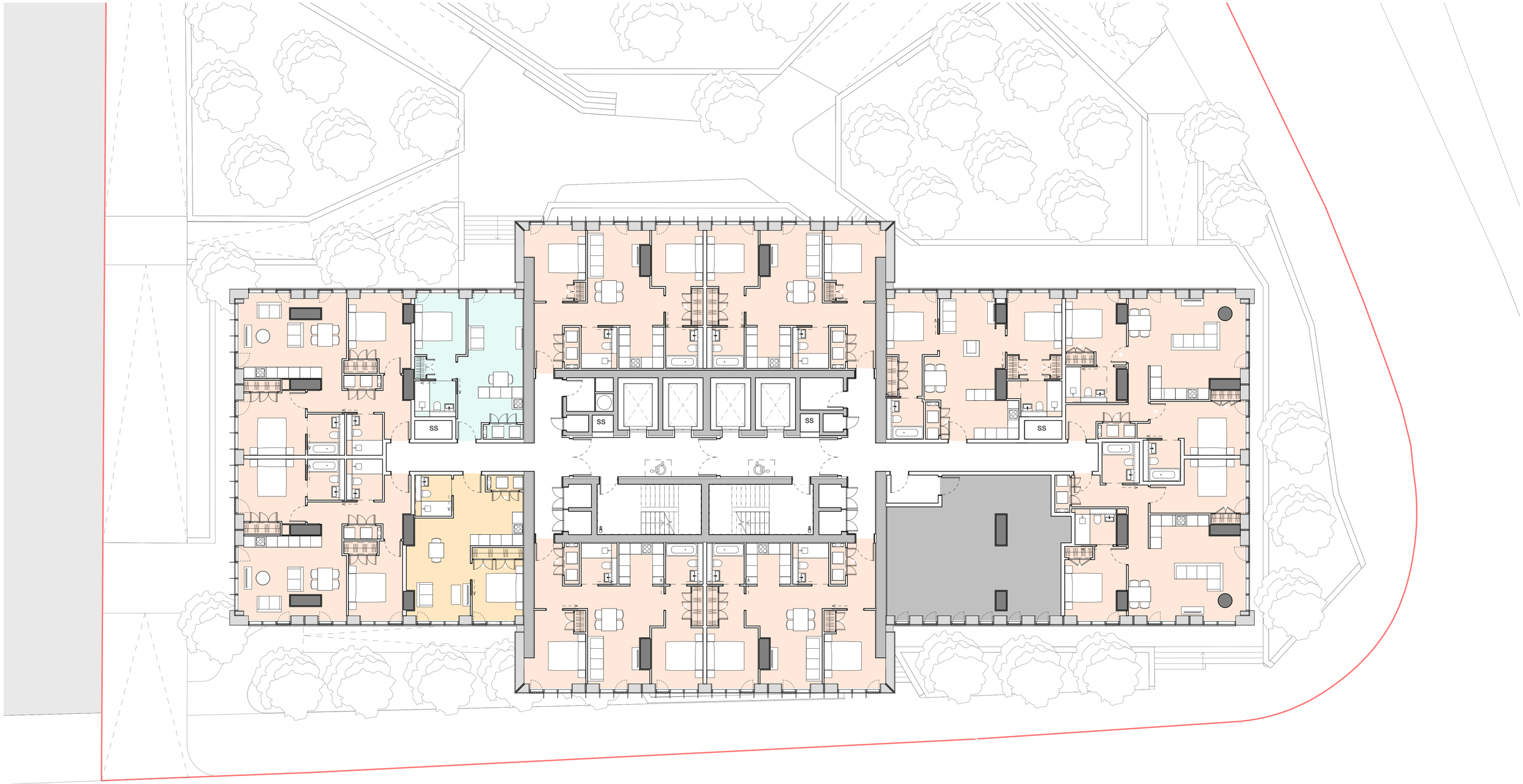
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 19 Floor Plan

Project No
10359

Scale
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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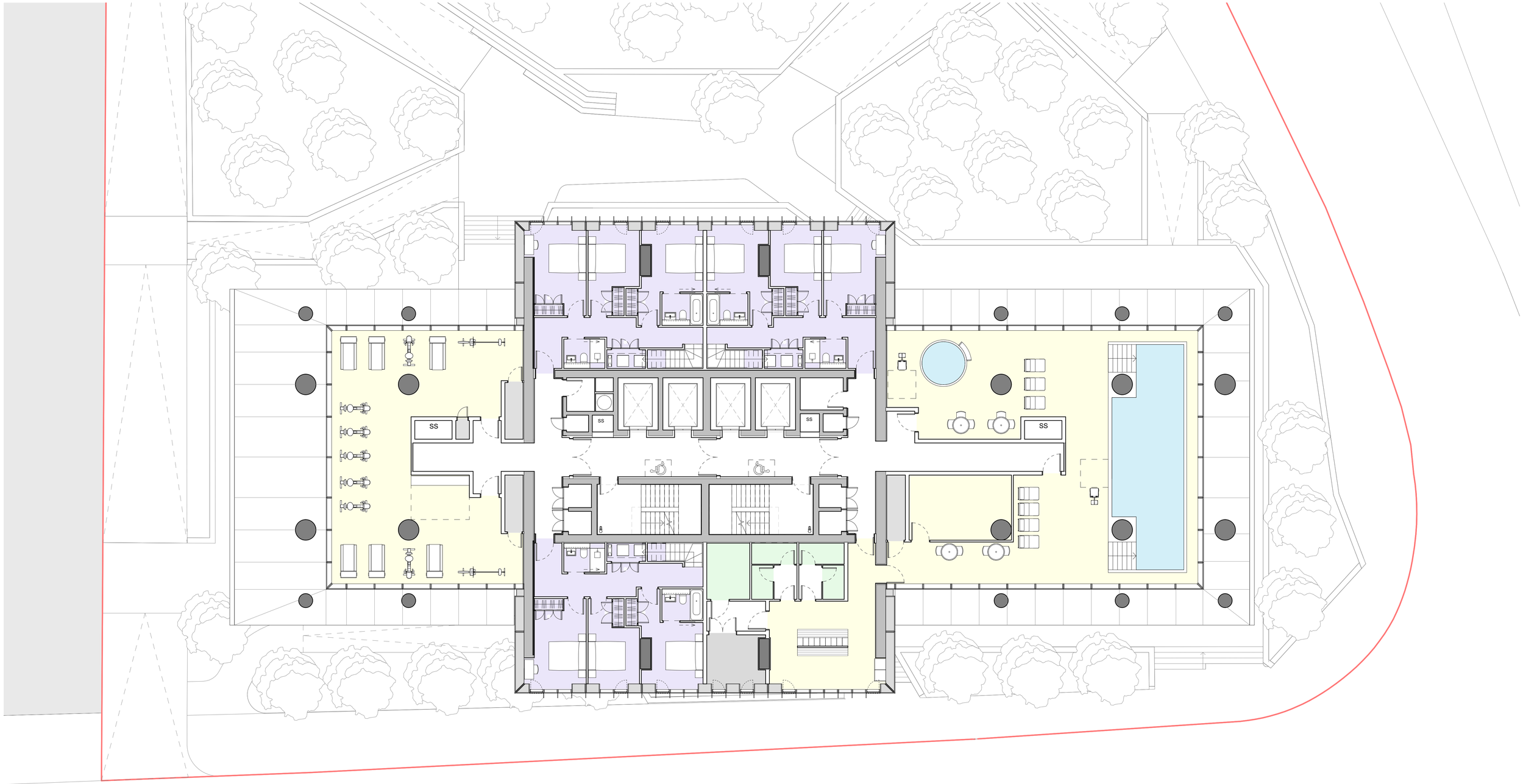
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 20 Floor Plan

Project No
10359

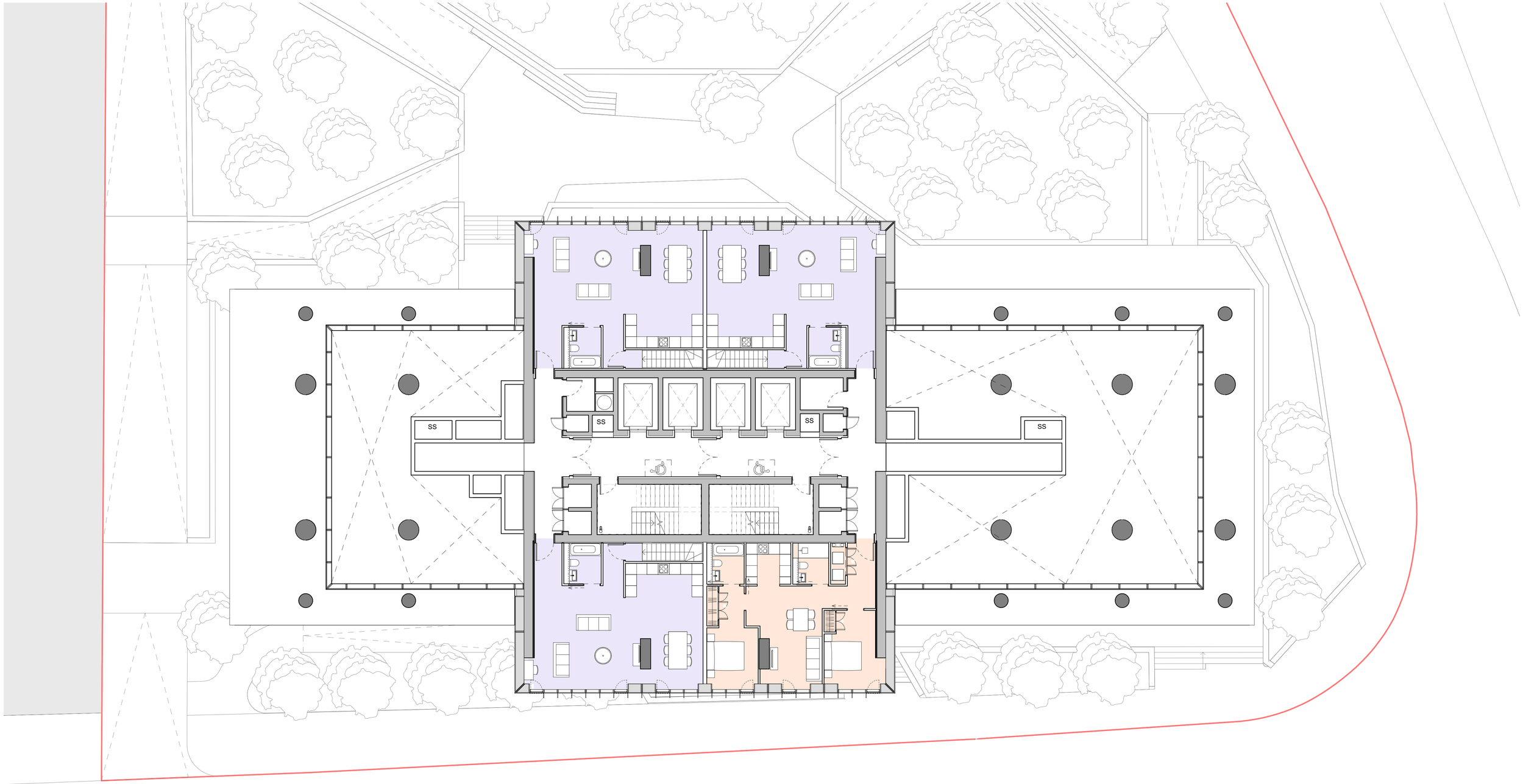
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 21 Floor Plan

Project No
10359

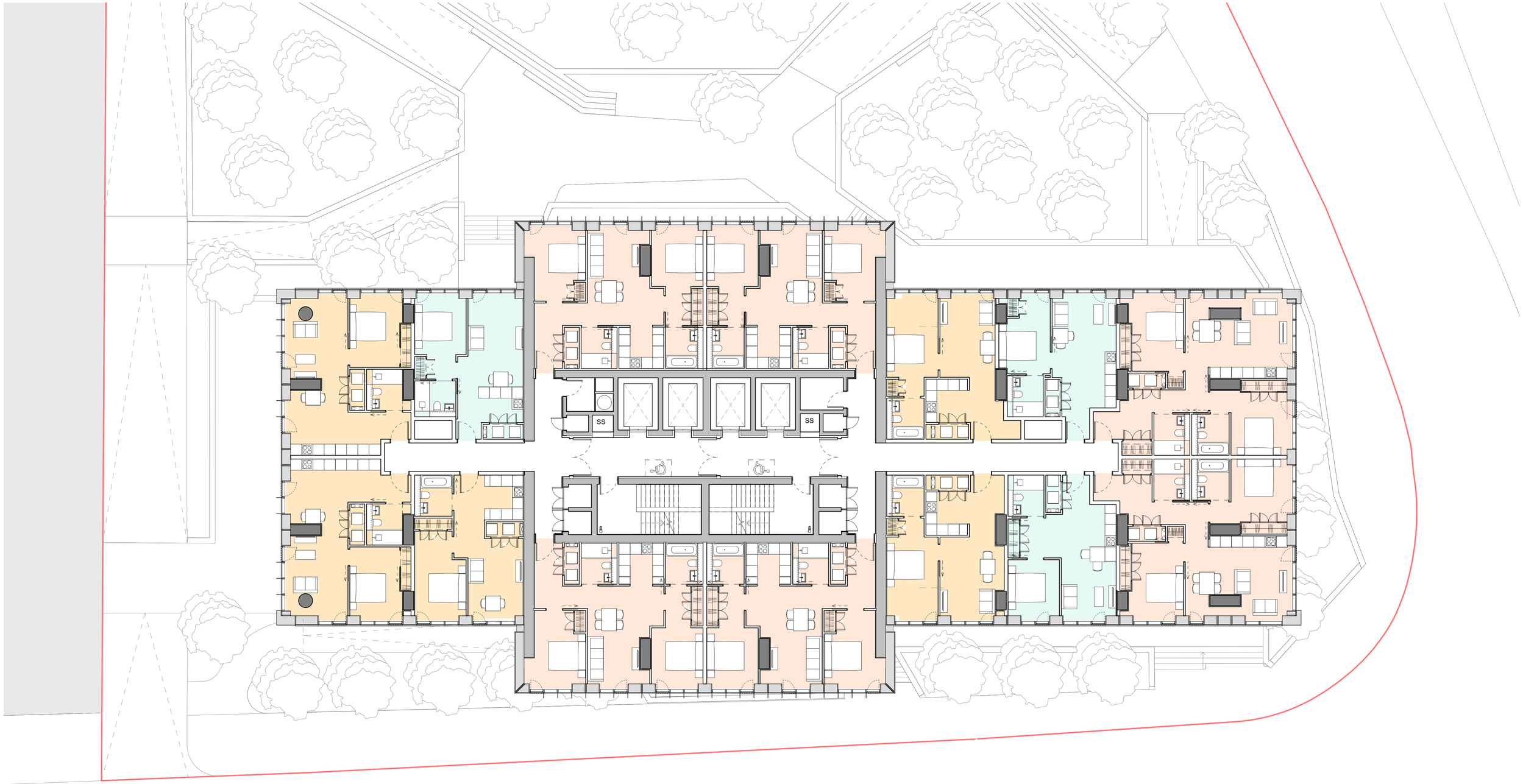
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Typical Floor Plan Type 01 - Levels 22-32

Project No
10359

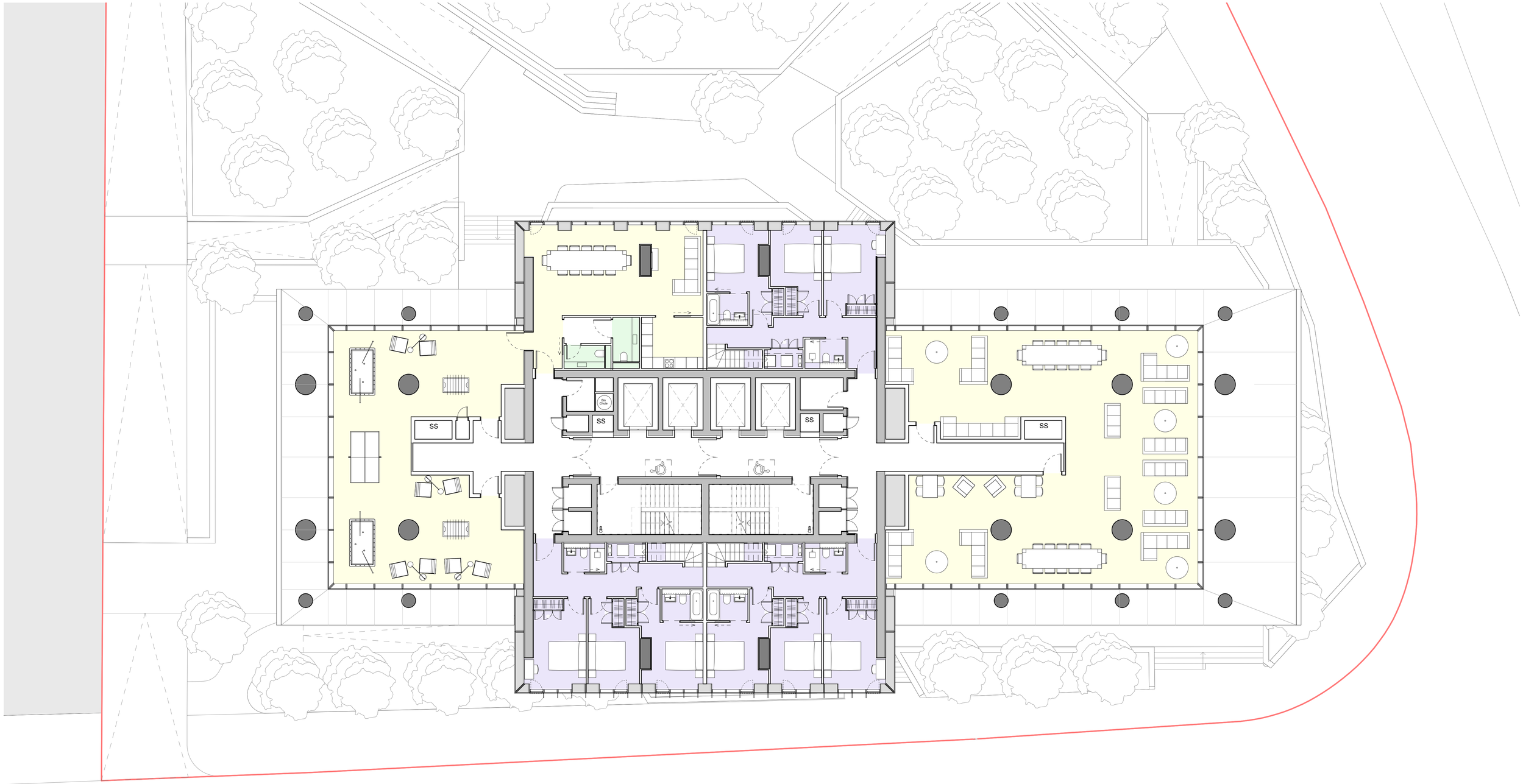
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PROJ - ORIG - ZONE - MOLF - CLAS - TYPE - LOC - SEQ
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 33 Floor Plan

Project No
10359

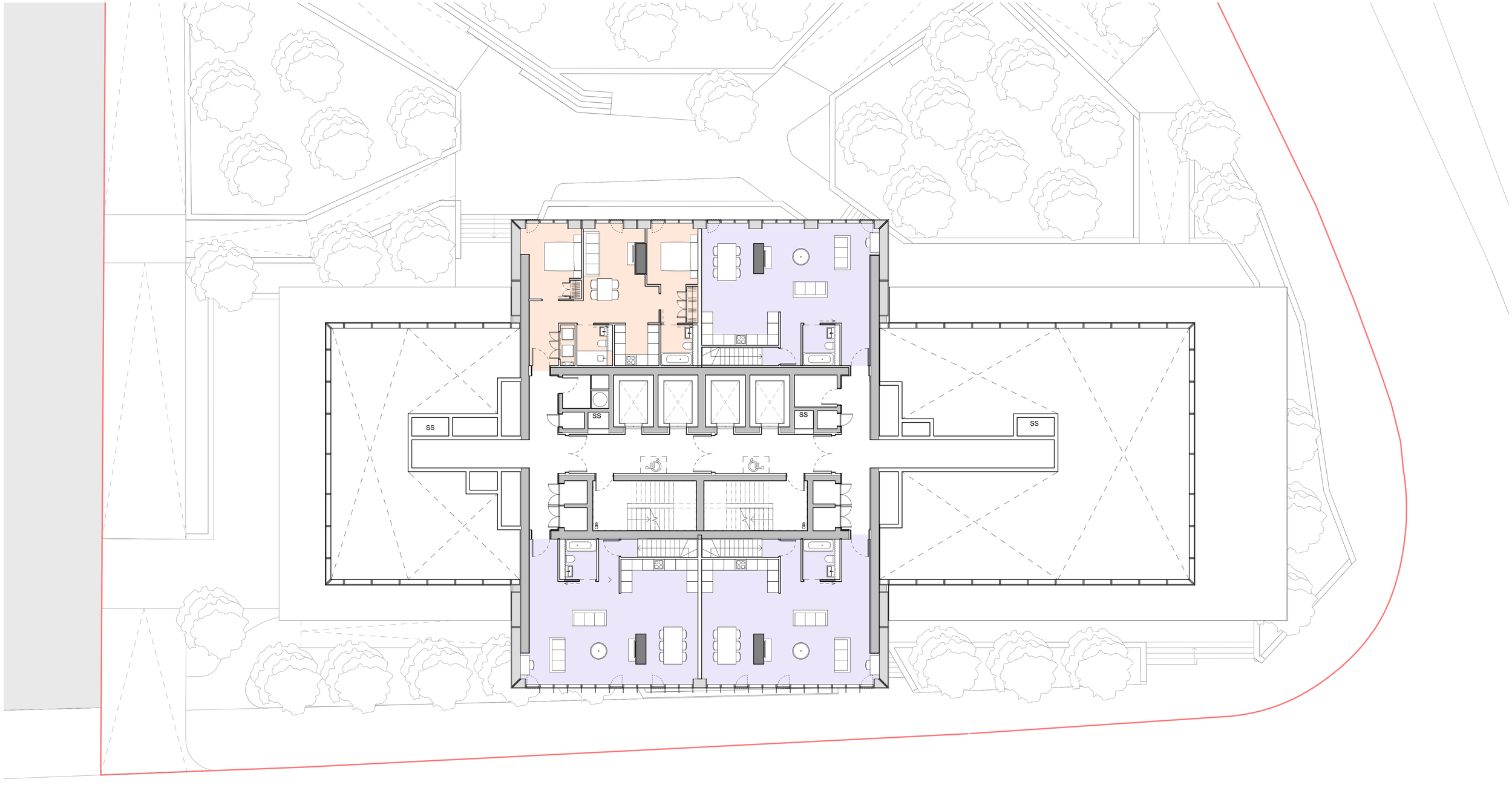
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 34 Floor Plan

Project No
10359

Scale
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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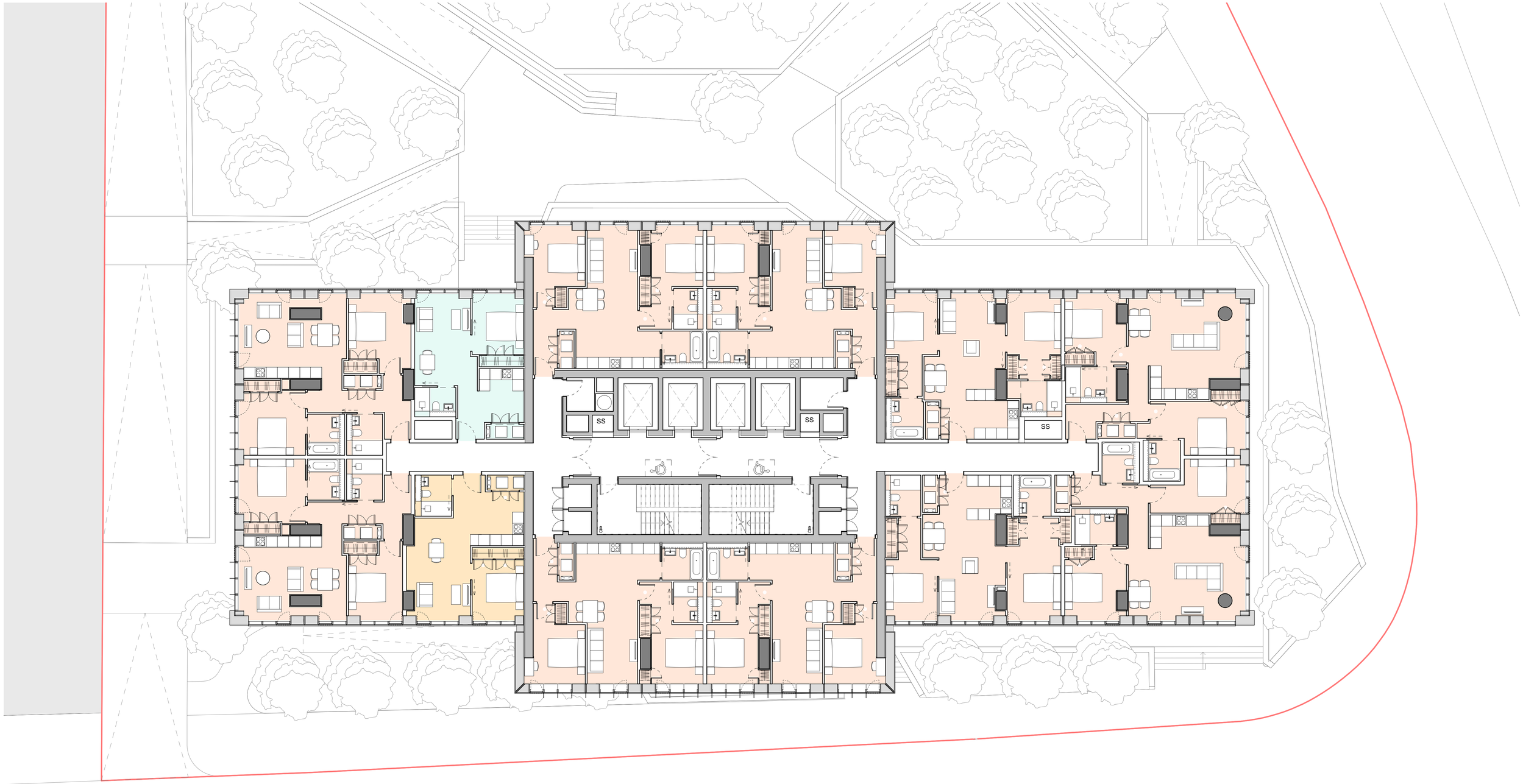
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Typical Floor Plan Type 02 - Levels 35-47

Project No
10359

Scale
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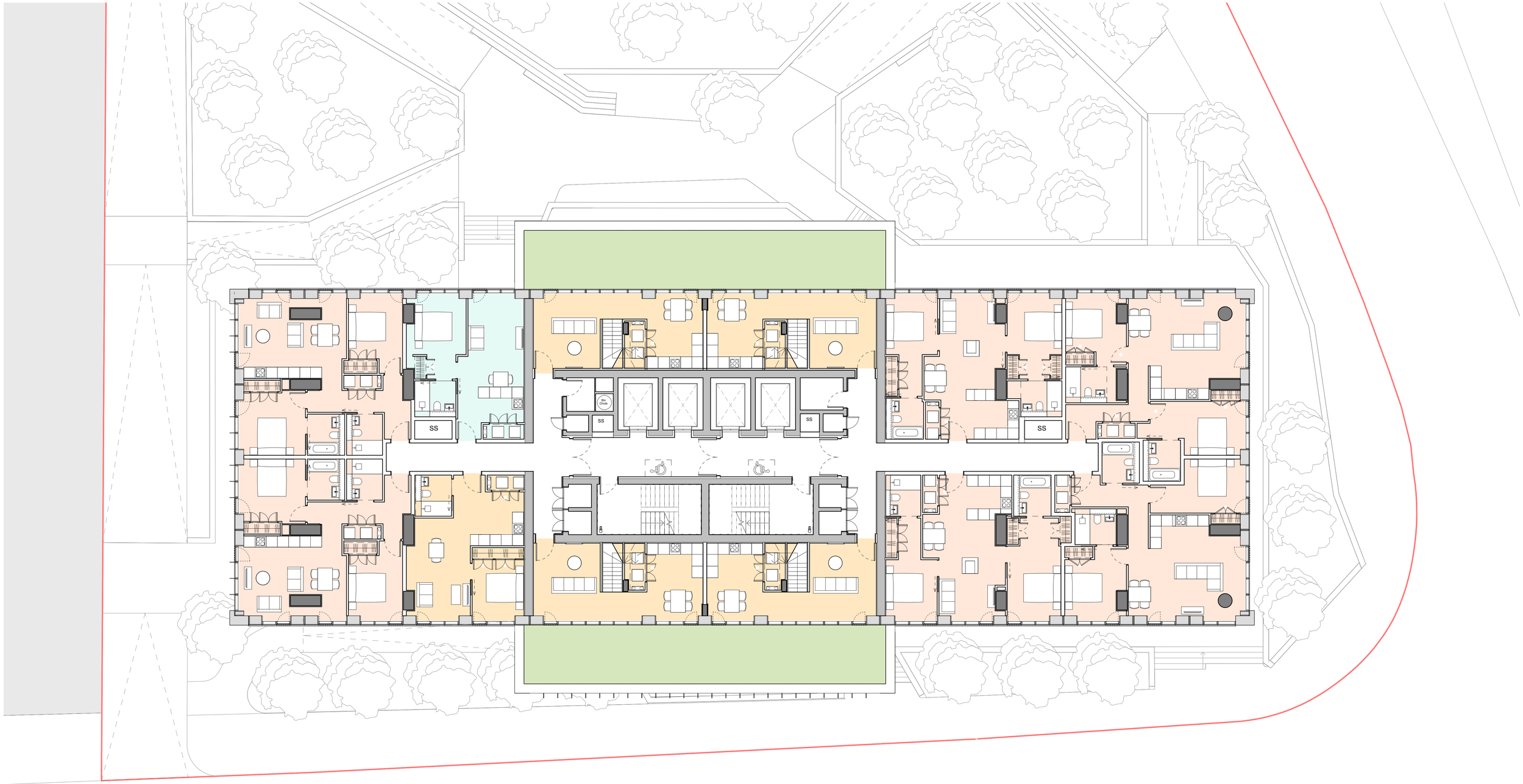
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 48 Floor Plan

Project No	Scale
10359	1 : 100 @ A1

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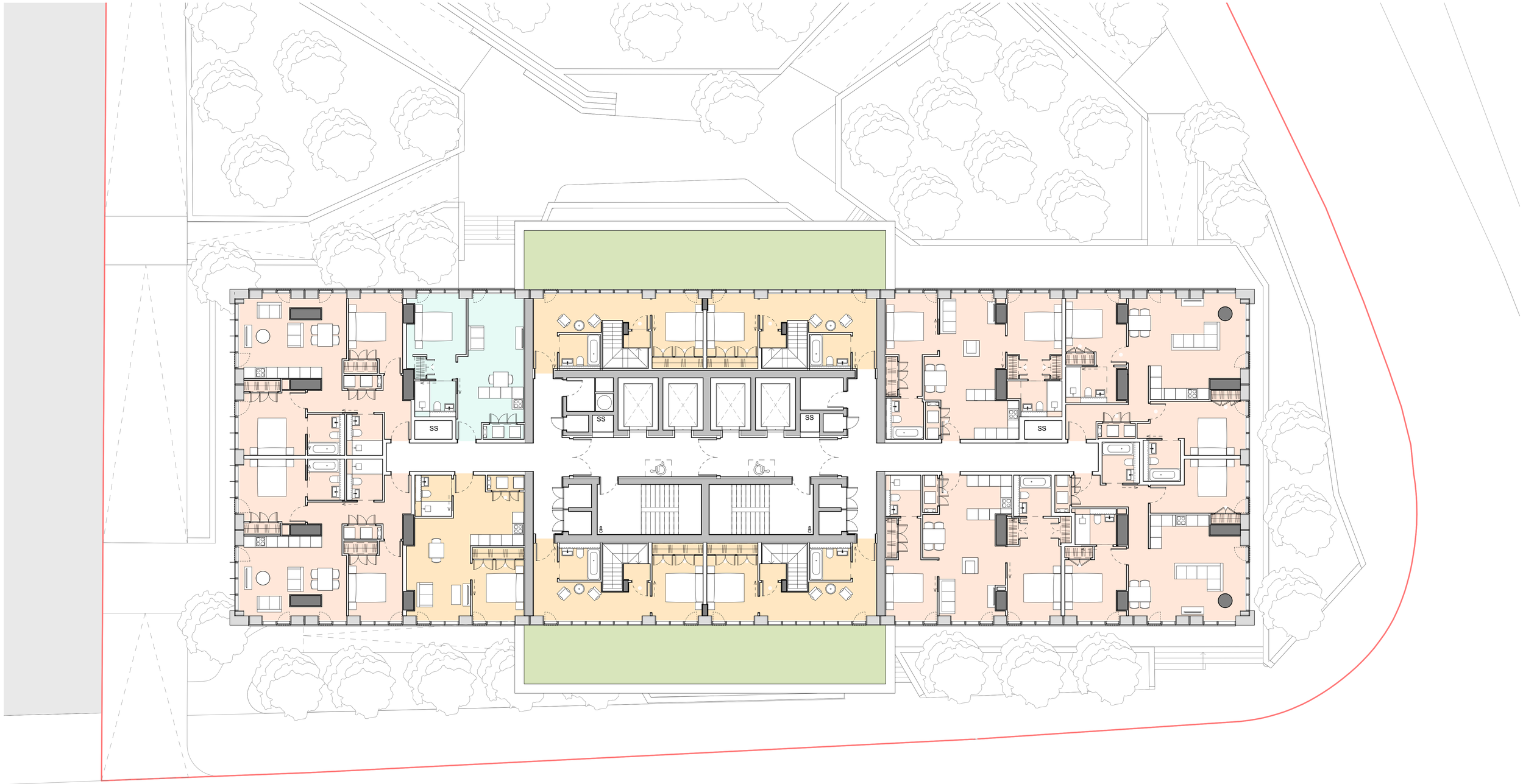
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Level 49 Floor Plan

Project No
10359

Scale
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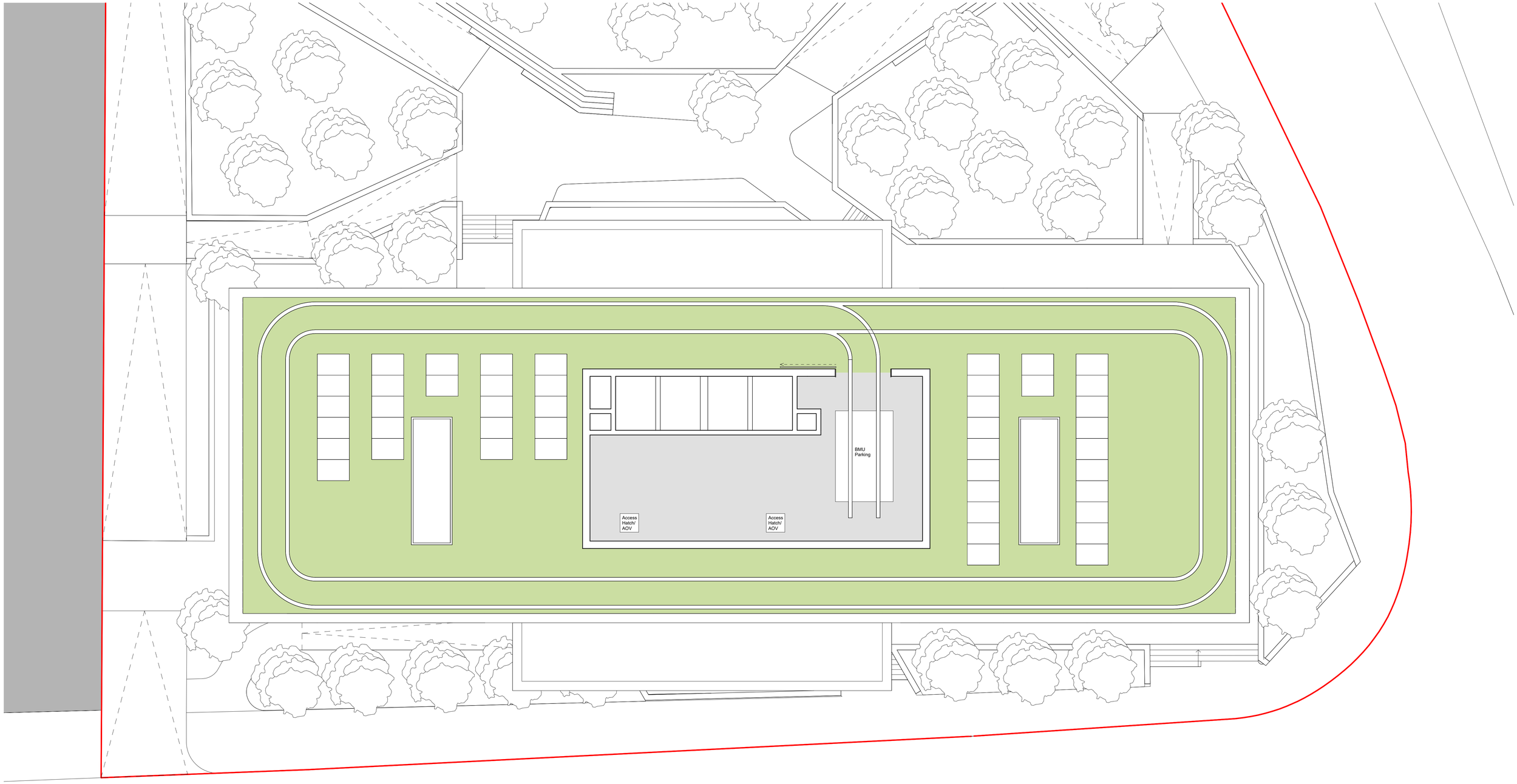
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Roof Level Plan

Project No	Scale
10359	1 : 100@ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC -SEQ

	Revision
10359-SHP-Z1-A-B5D9-G200-PL-RF-001	P01

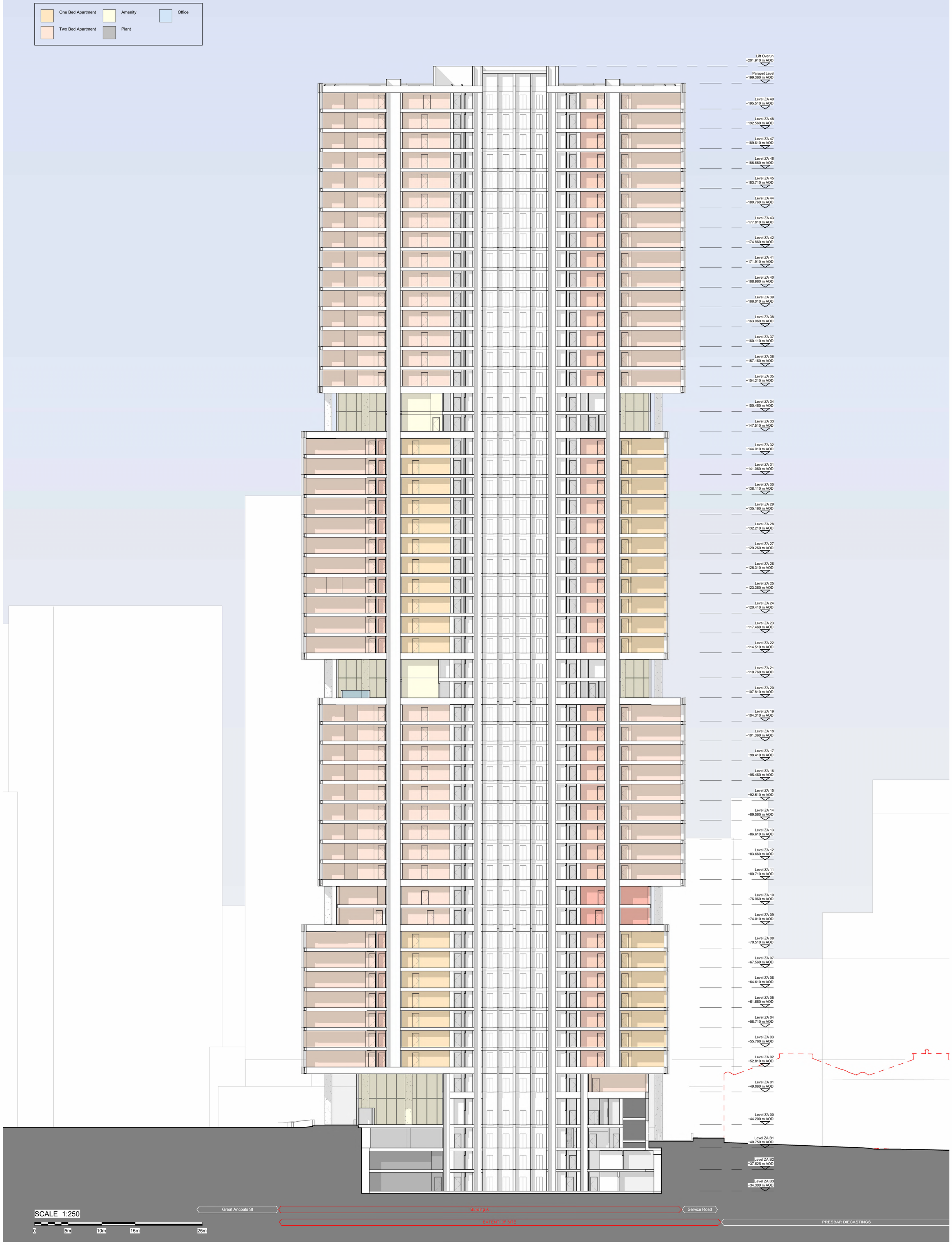
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One Bed Apartment
Amenity
Office
Two Bed Apartment
Plant

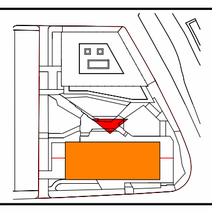


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Rev	Date	Description
P01	2024-12-20	Planning Submission



Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
Section AA

Project No
10359

Scale
1:250 @ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC -SEQ
10359-SHP-Z1-A-B5D9-G200-SE-AA-001

Revision
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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building A
General Arrangement - Proposed
North East Elevation

Project No
10359

Scale
1 : 250 @ A1

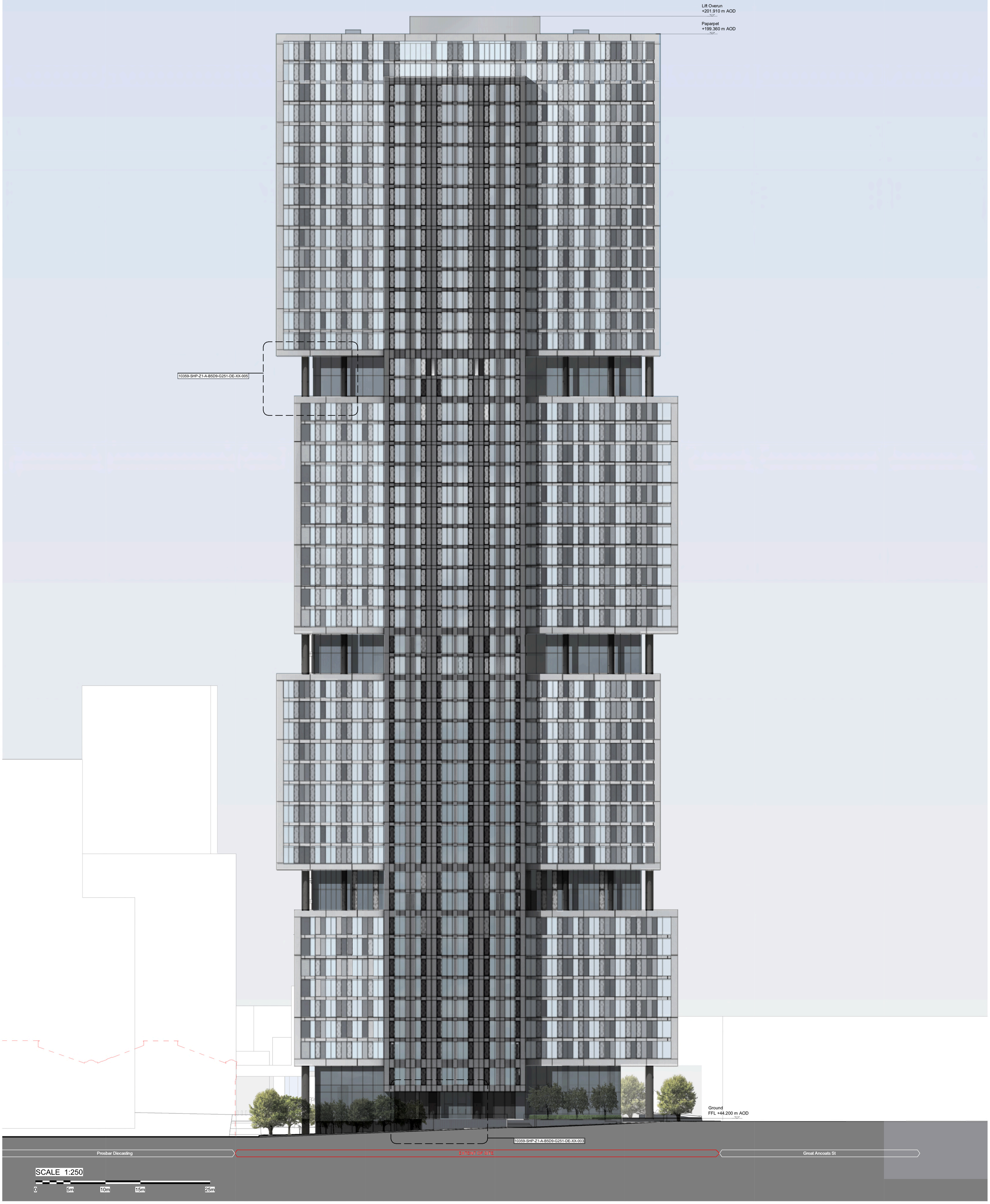
Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z1-A-B5D9-G200-EL-NE-001

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building A
General Arrangement - Proposed
South East Elevation

Project No
10359

Scale
1 : 250@ A1

Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z1-A-B5D9-G200-EL-SE-001

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building A
General Arrangement - Proposed
South West Elevation

Project No
10359

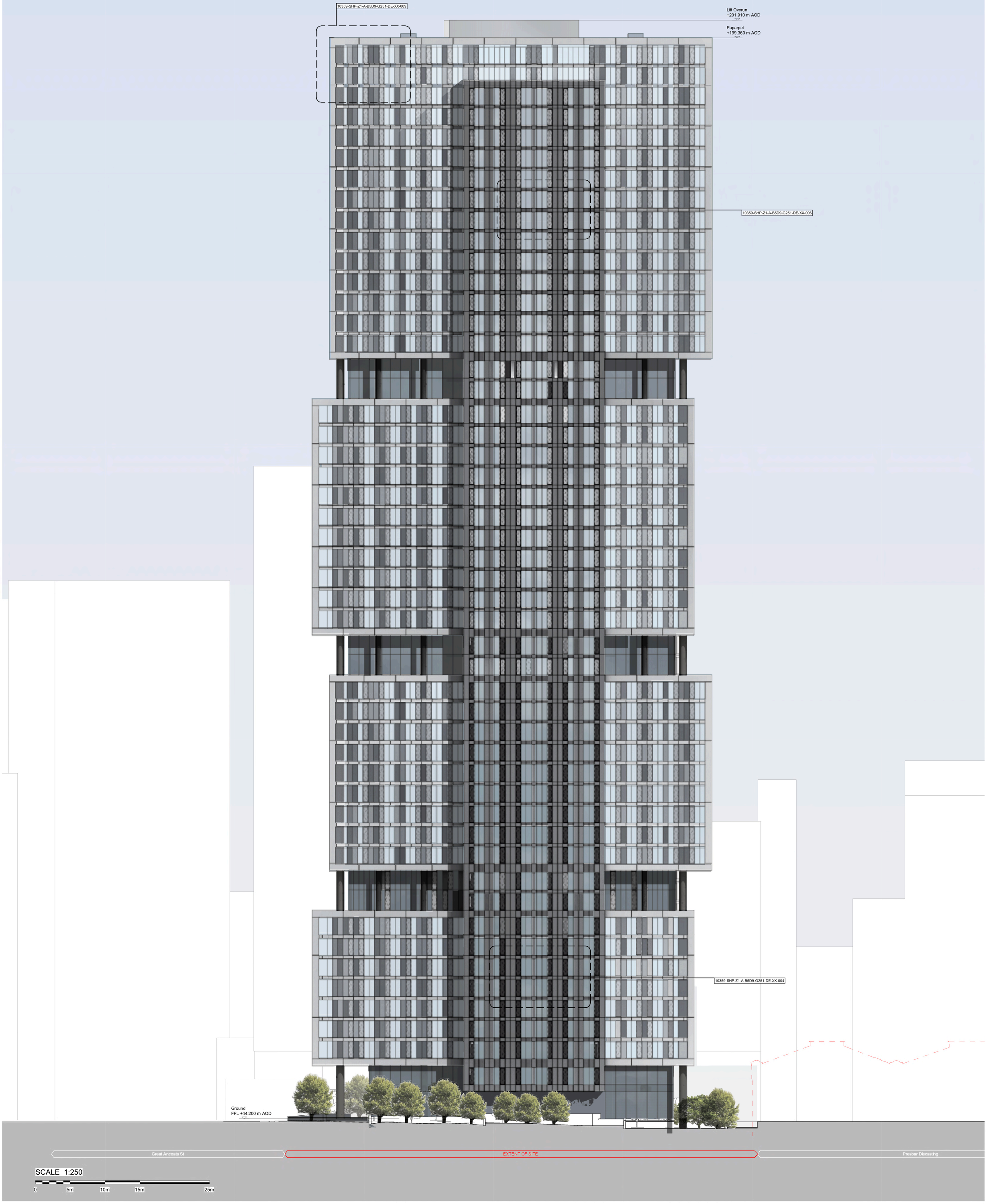
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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building A
General Arrangement - Proposed
North West Elevation

Project No
10359

Scale
1 : 250 @ A1

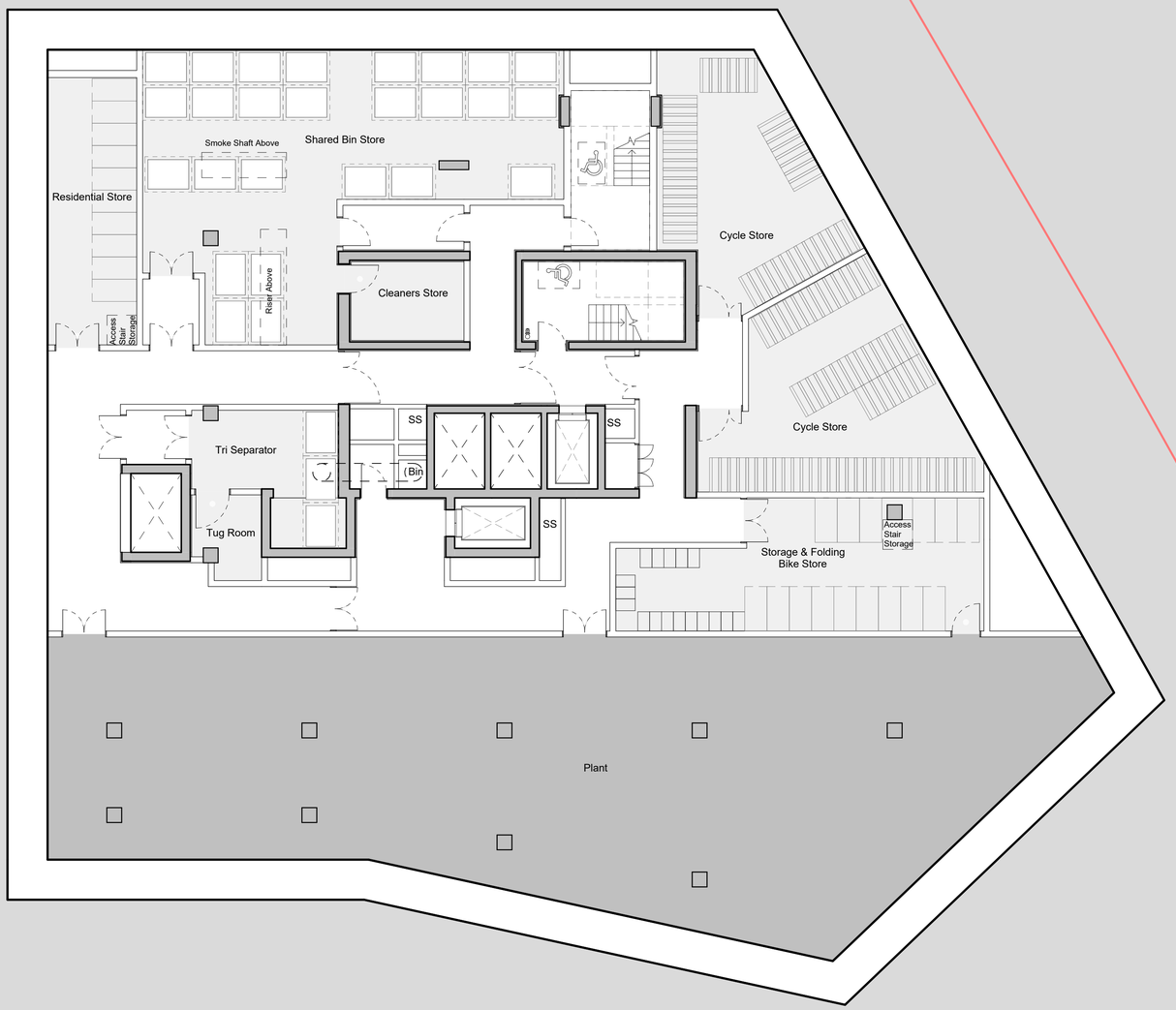
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z1-A-B5D9-G200-EL-NW-001

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SCALE 1:100

0 2m 4m 6m 10m

Studio
One Bed Apartment
Two Bed Apartment
Three Bed Apartment
Amenity
Plant
Office
Cafe
Fire Escape
Residential Entrance
Office Entrance
Cafe Entrance
BOH Entrance
Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
Level B2 Floor Plan

Project No
10359

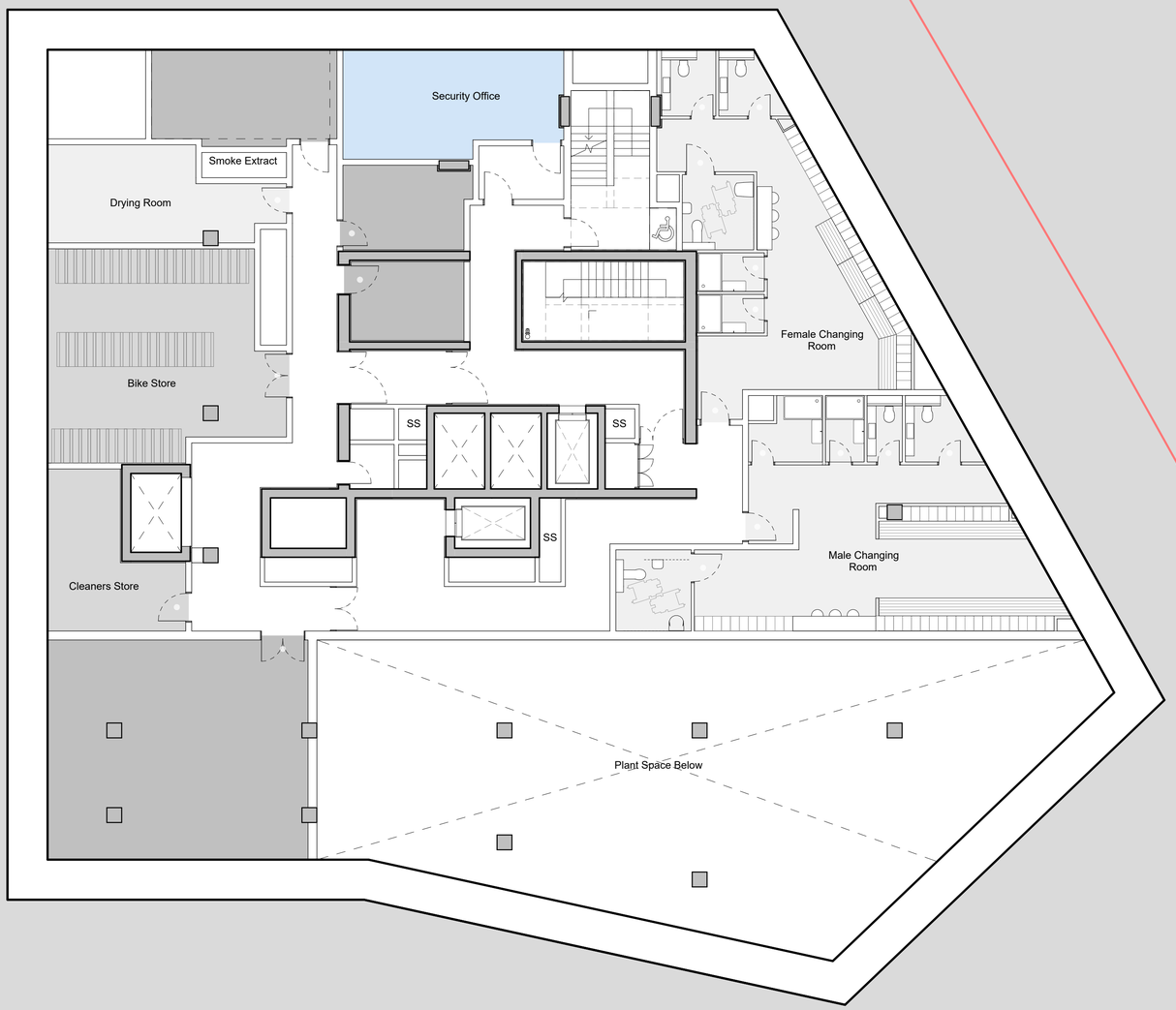
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-B2-001

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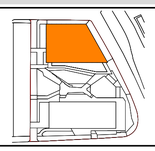
SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission



Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
Level B1 Floor Plan

Project No
10359

Scale
1 : 100@ A1

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DUCIE STREET

GREAT ANCOATS STREET

Lobby

Substation

Art Wall

Smoke Extract

Post

Parcel Room

Art Wall

Art Wall

Cafe Entrance & Bin/Bike Service Access

WC

SS

Bin

EL

EL

FF

SS

WC

Riser

Riser

SS

Store

Coffee Bar

Reception

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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
Level 00 Floor Plan

Project No
10359

Scale
1 : 100@ A1

PROJ - ORG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-00-001

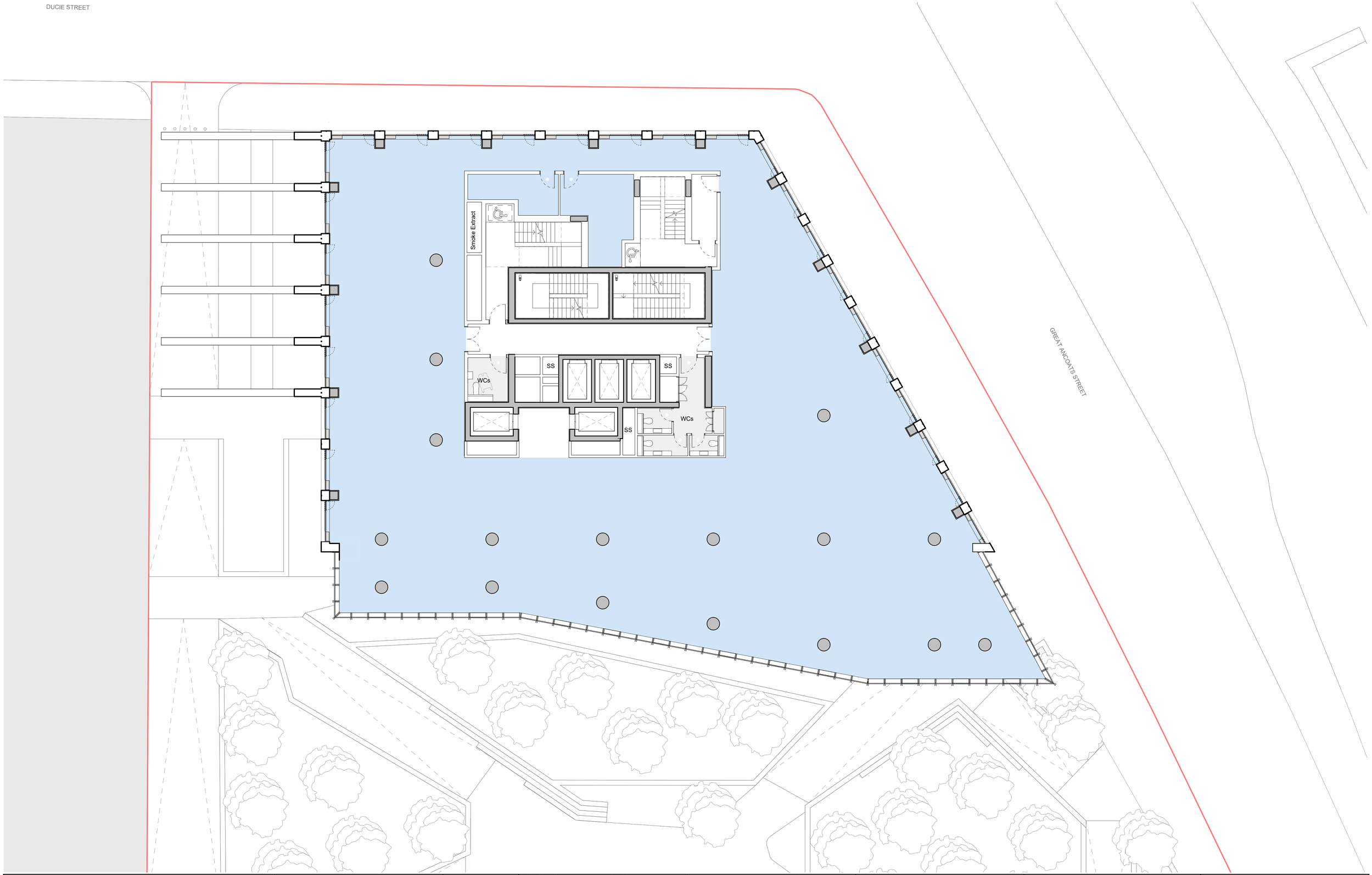
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Level 01 Floor Plan

Project No
10359

Scale
1 : 100 @ A1

Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-01-001

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DUCIE STREET

GREAT ANCOATS STREET

Smoke Extract

SS

WCs

SS

WCs

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SCALE 1:100

0 2m 4m 6m 10m

Studio	Amenity	Fire Escape
One Bed Apartment	Plant	Residential Entrance
Two Bed Apartment	Office	Office Entrance
Three Bed Apartment	Cafe	Cafe Entrance
		BOH Entrance
		Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Level 02 Floor Plan

Project No
10359

Scale
1 : 100 @ A1

Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-02-001

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DUCIE STREET

GREAT ANCOATS STREET

Smoke Extract

Smoke Extract

SS

WCs

SS

SS

WCs

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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Level 03 Floor Plan

Project No
10359

Scale
1 : 100 @ A1

Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-03-001

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DUCIE STREET

GREAT ANCOATS STREET

SS

SS

SS

SS

Reception

External Amenity

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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
Level 04 Floor Plan

Project No
10359

Scale
1 : 100@ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-04-001

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DUCIE STREET

GREAT ANCOATS STREET

SS

SS

SS

SS

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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Typical Floor Plan Type 01 - Levels 05-19

Project No
10359

Scale
1 : 100@ A1

Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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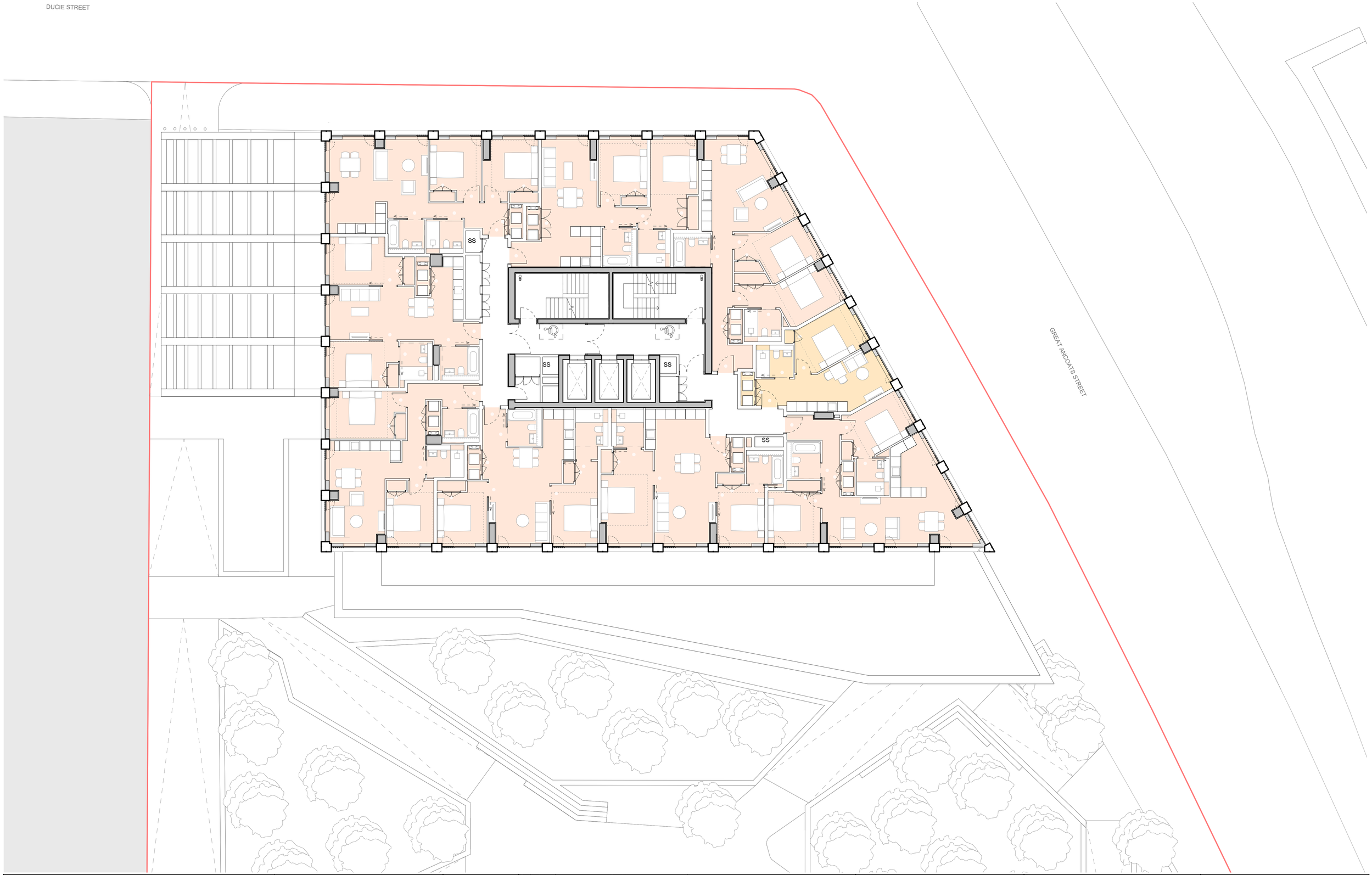
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
Typical Floor Plan Type 02 - Levels 20-24

Project No
10359

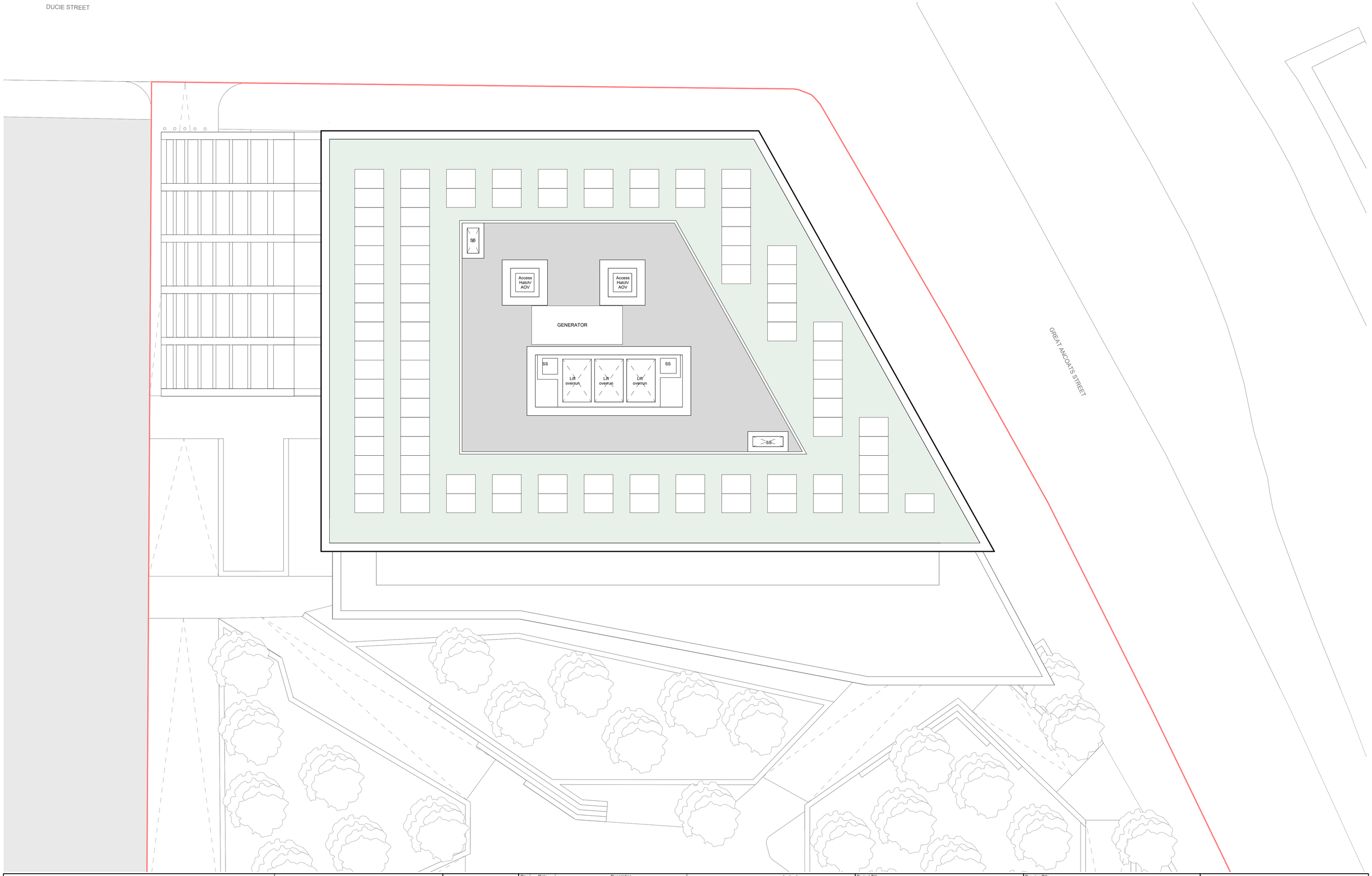
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-PL-TY-002

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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Roof Level Plan Lower

Project No
10359

Scale
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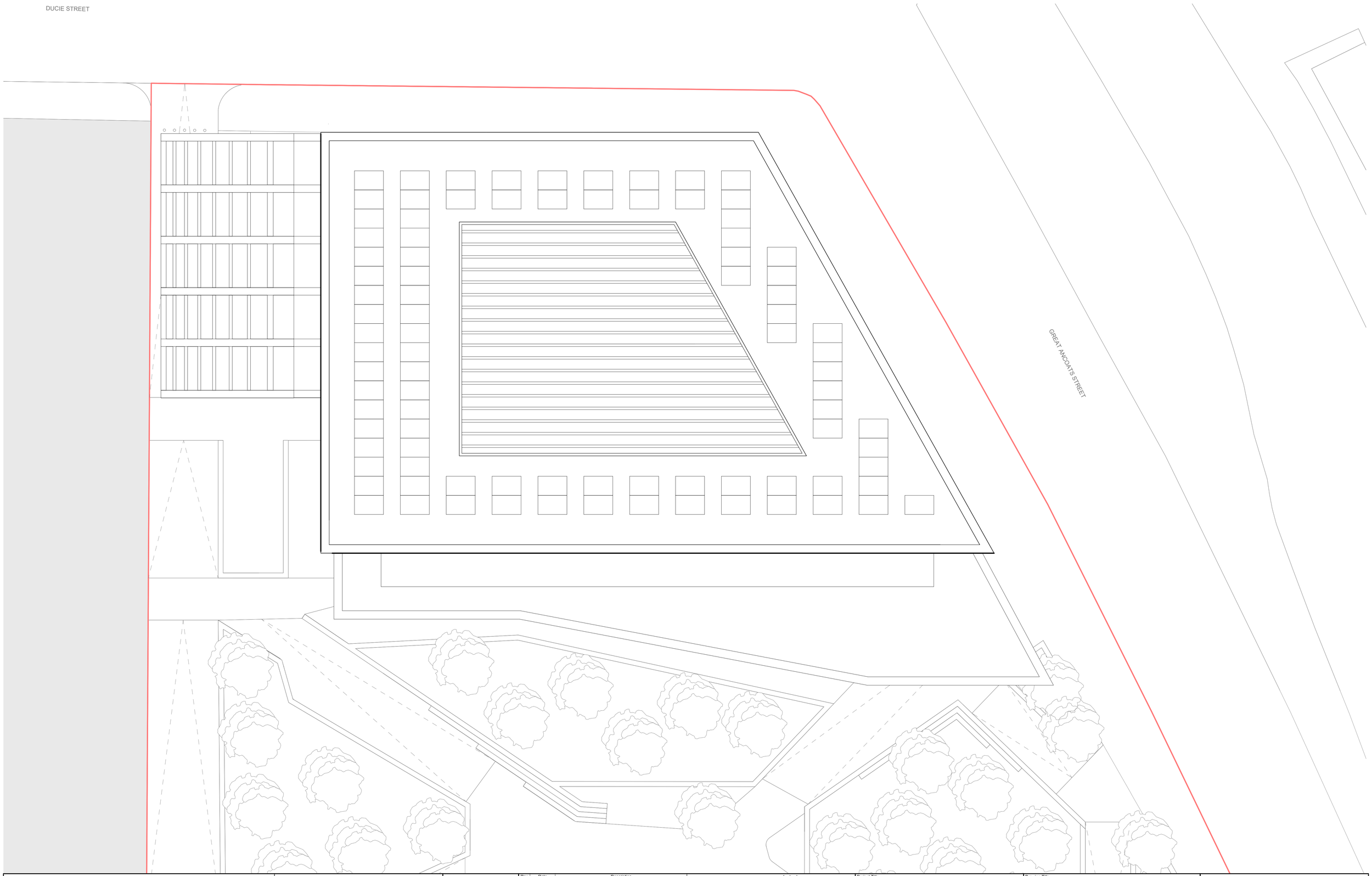
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SCALE 1:100

0 2m 4m 6m 10m

- Studio
- One Bed Apartment
- Two Bed Apartment
- Three Bed Apartment
- Amenity
- Plant
- Office
- Cafe
- Fire Escape
- Residential Entrance
- Office Entrance
- Cafe Entrance
- BOH Entrance
- Cycle Entrance

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Roof Level Plan Upper

Project No
10359

Scale
1 : 100@ A1

Status
PLANNING

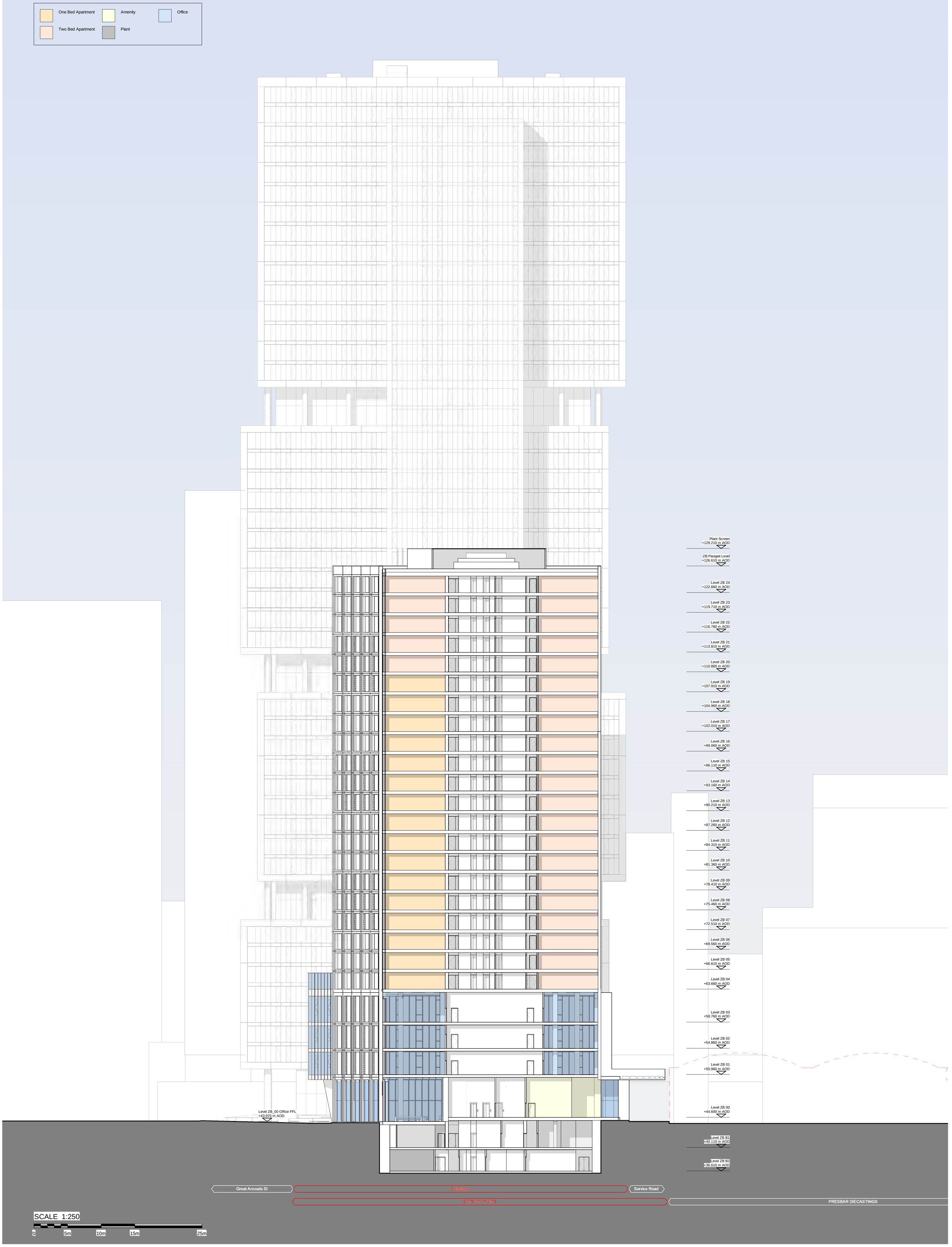
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10359-SHP-Z2-A-B5D9-G200-PL-RF-001

Revision
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One Bed Apartment
Two Bed Apartment
Amenity
Plant
Office

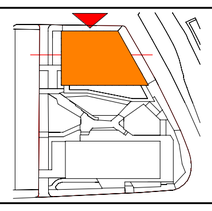


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Rev	Date	Description
P01	2024-12-20	Planning Submission



Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
Section AA

Project No
10359

Scale
1:250 @ A1

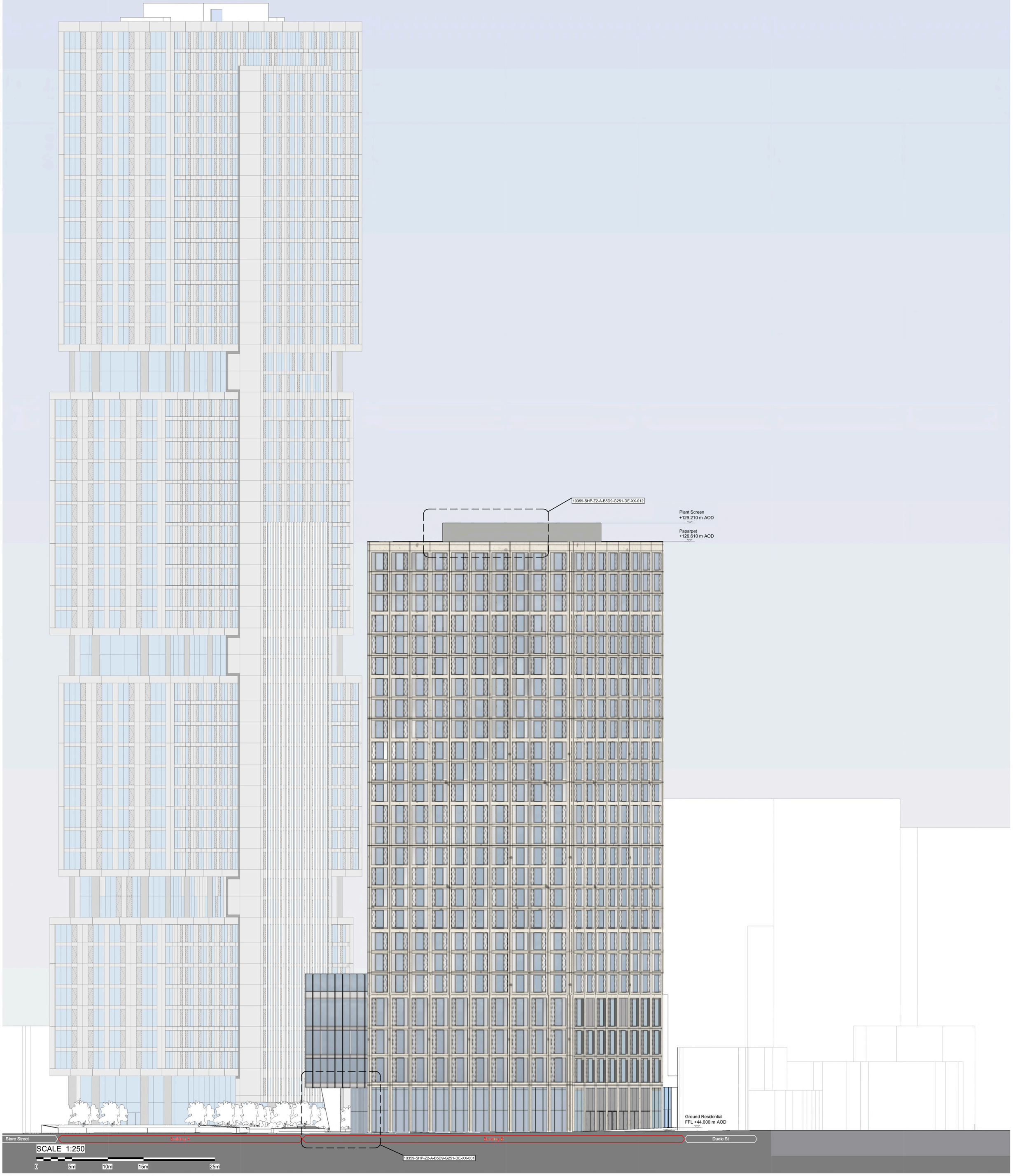
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC-SEQ
10359-SHP-Z2-A-B5D9-G200-SE-AA-001

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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
North East Elevation

Project No
10359

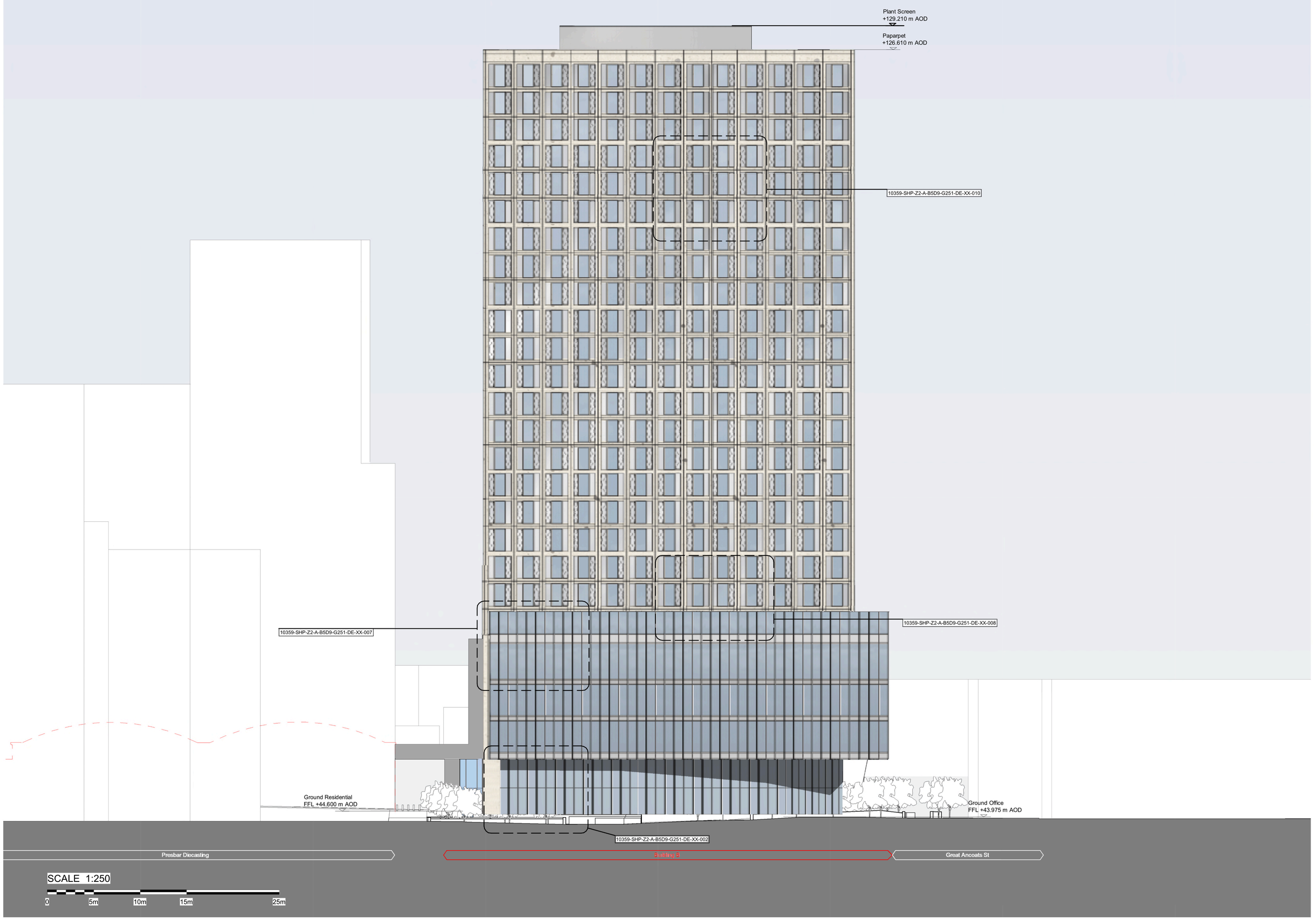
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PROJ - ORG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
South East Elevation

Project No
10359

Scale
1 : 250@ A1

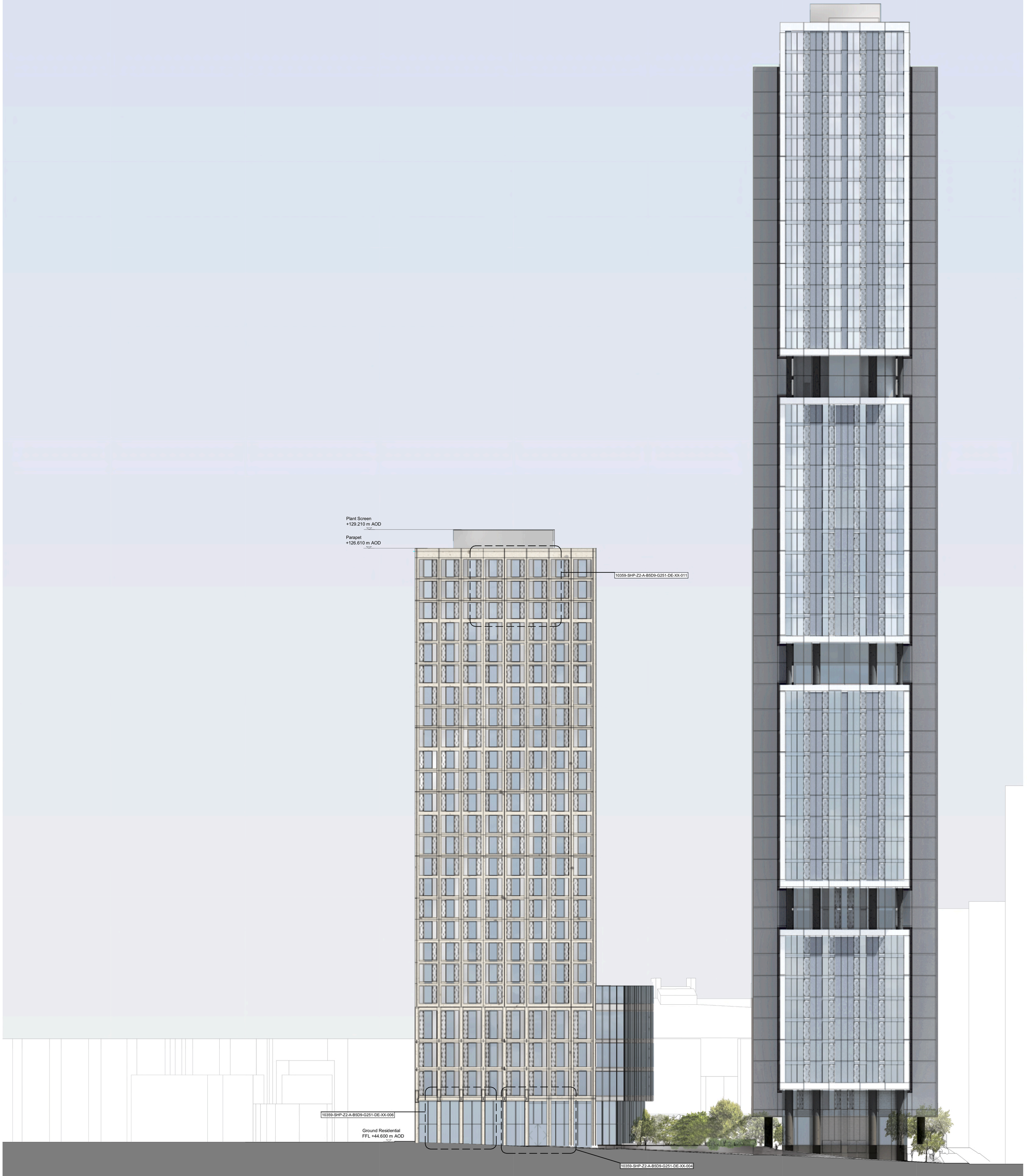
Status
PLANNING

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-EL-SE-001

Revision
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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Drawing Title
Building B
General Arrangement - Proposed
South West Elevation

Project No
10359

Scale
1 : 250 @ A1

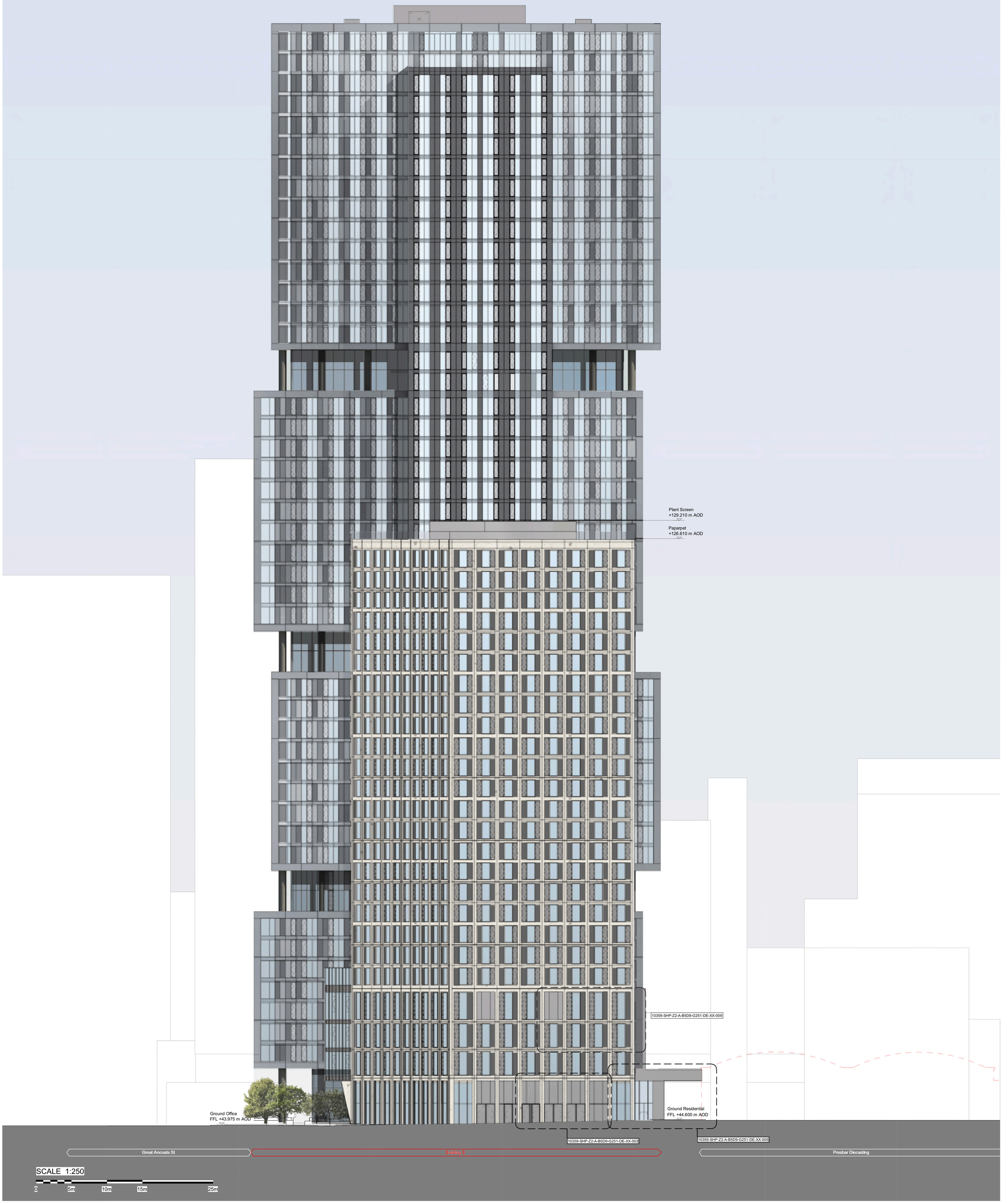
Status
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PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
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Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Building B
General Arrangement - Proposed
North West Elevation

Project No
10359

Scale
1 : 250 @ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z2-A-B5D9-G200-EL-NW-001

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Notes

1. All dimensions in mm, unless otherwise stated.
2. Scaling from drawing if printed incorrectly may lead to errors.
3. All information outside red line boundary shown for contextual purpose only.
4. All hatch patterns are indicative only unless stated otherwise.
5. This drawing is to be read in conjunction with all relevant documentation from the design team
6. Levels information on this drawing illustrates the design intent. The contractor is to check and verify all levels and dimensions against site survey information.
7. Any discrepancies in the design information are to be brought to the attention of re-form landscape architecture, in writing, prior to commencement of construction works.
8. All proprietary products shall be installed in strict accordance with manufacturers written instructions.
9. Refer to other consultants' drawings and specifications for the following design information:
   - Foundation details
   - Base course and/or sub bases design & specification
   - Waterproofing of any element
   - Lighting and ducting
   - Existing & proposed utilities
10. Plant quantities are to suit site areas in accordance with scheduled plant densities.
11. Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.

KEY

- Planning application boundary
- High quality public realm paving
- High quality paving for seating zone
- Platform
- Proposed steps
- Access to cycle store
- Proposed trees
- Ornamental planting
- Service route integrated into public realm
- Secondary play route through planting
- Public footpath to S278 requirements

N

Date	Description of revision	Drawn by	Checked by	Approved by	Revision
18.12.24	Stage 2 issue	JSt	JSt	JM	P01

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Project
FORMER STOCKTONS SITE, MANCHESTER
RF24-1118

Client
CITYSIDE

Document title
ILLUSTRATIVE LANDSCAPE GA

Paper size
A1

Scale
1:200

Status
FOR INFORMATION

S2

Drawing number
1118-RFM-XX-00-DR-L-90100

Revision
P01

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SCALE 1:200

0 4m 8m 12m 20m

Demolition of existing structures

NORTH

Rev	Date	Description
P01	2024-12-20	Planning Submission

Project Title
Stocktons Site

Status
PLANNING

Drawing Title
Site Wide
Proposed
Demolition Plan

Project No
10359

Scale
1 : 200 @ A1

PROJ - ORIG - ZONE - ROLE - CLAS - TYPE - LOC - SEQ
10359-SHP-Z0-A-B5D9-JC20-XP-00-001

Revision
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5. Reporting of Alternatives

Introduction

5.1 This Chapter reports the 'reasonable alternatives' studied by the developer with respect to the Proposed Scheme.

5.2 Paragraph 2, Schedule 4, of the EIA Regulations[1] states that an ES should include:

> *"…a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects".*

5.3 Planning Practice Guidance (PPG)[2] indicates that where alternative approaches to development have been considered, the 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.

5.4 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. This is the case for alternatives sites and technologies, as set out below.

Alternative Sites (Location)

5.5 Alternative sites have not been considered as the Applicant has the ability to deliver development on this Site.

5.6 In addition, the aspirations for the development on-Site are noted to be within the East Village Central Development Framework[3]. The vision and aspiration for 'East Village Central' is '*providing space and a place which benefits the city and the surrounding communities living and working close to the site'*.

Alternative Technologies

5.7 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.

5.8 The Proposed Scheme is a residential-led development and given this proposed use, alternative 'technologies' are not considered to be applicable as they would be for other types of development (i.e. industrial processes or energy generation).

Do-Nothing Scenario

5.9 The EIA (as reported within this ES) has assessed the likely significant effects based on a deviation from the baseline environment. **Technical Chapters 7 – 14** have also stated a 'future baseline' in the absence of the Proposed Scheme coming forward (i.e. a 'do nothing' scenario) (albeit this has not informed the assessment of likely significant effects). 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).

Reporting of Alternatives

5.10 The alternatives considered (which are in relation to alternative designs) have been reported below, and where applicable, a comparison of the environmental effects of the alternatives considered is set out.

Alternative Development Designs

5.11 The design, scale and massing of the Proposed Scheme has evolved in response to environmental constraints, surveys and studies, and feedback from pre-application meetings. In addition, consideration has also been given to the requirements for the development of the Site which has been set out in the East Village Central Development Framework and further explored how the Proposed Scheme would fit into Manchester City Council's wider vision for the Piccadilly Ward area.

5.12 The following design alternatives were considered.

Building Placement

5.13 An initial iteration of the Proposed Scheme that followed the principles of the East Village Central Development Framework was presented to MCC through the first pre-application meeting. Initial surveys of the Site noted a brook ('Shooter's Brook') through the Site and that the brook had been diverted through a culvert that intersects a site on the corner of Great Ancoats and Store Street. Therefore, the culvert would need to be diverted through the middle of the Site, in between two proposed buildings ('Building A' and 'Building B') and into Store Street.

5.14 Overall, the new culvert diversion and the easements required for any future maintenance helped in determining the location and footprint of both Building A and Building B. The design team worked with the wider team to develop this design further into the current proposal as described in **Chapter 4: Development Specification**.

Massing

5.15 Early massing explorations tested what the proposed height would look like and how it would relate to the surrounding context. Therefore, initial studies explored a larger tower on the corner of Great Ancoats Street and Ducie Street (mirroring the massing set out for the Site in the East Village Central Development Framework). However, the result of the massing exploration created a greater contrast with the existing low-rise buildings of the neighbouring properties at the north-west of the Site. The idea of a full frontage of buildings along Great Ancoats Street was also explored, effectively shielding the public space from traffic noise. However, this study resulted in an enclosed, 'citadel' type form that would have made connecting into future nearby developments difficult and was therefore discarded.

5.16 The initially explored distance between the two proposed buildings (less than 18m apart) taking into account the maximum permitted heights (according to the East Village Central Development Framework massing arrangement) also had a negative impact in relation to overlooking between apartments and overshadowing effects. The location of Building B was therefore moved towards the corner of Ducie Street and

Great Ancoats Street (from a position that was initially located away from the street corner) to maximise the space in between the two buildings that will, in turn, increase the area available for the proposed public realm. Building B's new location now restores the 'street edge' in line with the East Village Central Development Framework aspirations as well as creating an acoustic/noise buffer between the new public realm and the traffic noise along Great Ancoats Street.

5.17 Earlier iterations also noted that the explored width for one of the buildings was not suitable for residential use, creating an inefficient floorplan. Following this, the width was reduced creating a more efficient floorplan with suitable apartment layouts that could be designed to maximise daylight and reduce their dependency on mechanical and electrical services. Overall, reducing the width of the buildings helped to create a more slender profile, thereby reducing its impact on the skyline when viewing the development from Manchester City Centre. Therefore, this option was overall favoured in terms of townscape and visual, whilst also providing a design and floorplan that provides better daylight/overshadowing, noise and vibration, and socio-economics and human health effects.

Form

5.18 Variations of the mass and the development of a more expressive form while also meeting the East Village Central Development Framework and the brief's ambitions were explored through the design process, in particular through the selection of a façade grid that would help create an order to a mass while subverting and changing how the scale of the mass is perceived. Initially, options such as interlocking forms, stepped forms, and a combination of the above were explored. The form and scale of the Proposed Scheme have been considered against a number of new developments that have been granted planning permission and/or under construction. In addition, as a response to the various options, 'elements' that assist in breaking up the rectilinear volume into sections that change the scale of the development and add movement and interest to an otherwise 'static' form.

5.19 A vertical element (a 'holding piece') was introduced to visually break the length of the Building A. The introduction of this also helps with the design of the core and integration of vertical services. Horizontal breaks are also introduced to break the form into four volumes called 'drawers'. These vary in height and ascend in size from the ground floor up-to level 49, and are also then 'pulled' in and out through the 'holding piece' in opposite directions to create a sense of movement and dynamism. Overall, fenestrations are added creating a residential 'grain' to the facade further breaking down the mass of Building A. The horizontality of the 'drawers' are accentuated through the use of solid metal spandrel panels, evoking the industrial heritage of the Site.

5.20 Overall, the articulation of the 'drawers' explored above play a key role in creating variation and interest along Great Ancoats Street and help to break the regularity of the neighbouring buildings, in particular the Oxygen Tower. Variations of the 'drawers' concept were tested to ensure that the 'movement' was legible from the key approaches to the Site while also ensuring the Proposed Scheme was deliverable.

5.21 As set out above, the design of the Proposed Scheme helps with breaking the regularity of the tall buildings and adding movement and dynamism to views along Great Ancoats Road whilst keeping with the architectural history and industrial heritage of the area. This was considered to improve visual effects and heritage impacts and was seen as the more favoured option in terms of townscape and visual, and built heritage.

Façade and Materiality

5.22 With respect to materiality, the Proposed has evolved from a reaction to the wider Piccadilly area and East Village Central Development Framework's desire to reinstate the 'city block' and break down the large industrial and commercial warehouses into smaller plots.

5.23 Therefore, Building A will be a modern, smooth, lightweight and bold collage of subtle shades of grey anodised aluminium that will vary in expression depending on the façade, evoking the 'industrial heritage' of the wider area and referencing the Vulcan Iron Works that used to be on the Site in the 1800s.

5.24 The façade of Building B was developed as a response to its position on the Site, reinstating the street edge while helping to shield the new public space from the busy Great Ancoats Street. Concrete was chosen to give Building B its own identity adding to the varying 'texture' of different facade types along Great Ancoats Street. Building B will be a strong form reinforced by a super-grid composed of light coloured concrete with infill lightweight glazing and aluminium. The concrete super-grid references the residential use of the upper levels and continues past the first four levels of office.

5.25 The office section in Building B evolved from the idea of giving the two different uses separate architectural identities. The office component will create a focal point for the proposed public realm and will be dressed in a lightweight glass facade with rhythmic vertical fins (added to the gable ends of the 'drawers', where needed for privacy and solar shading). In addition, the section of the office that faces the new public space appears as if 'pulled' out of Building B, similar to the 'drawers' on Building A and provided an opportunity to express the office use as a separate element. The folds in the façade evolved through the constraints on the Site, i.e. the location of the culvert, and helping to mitigate wind impacts.

5.26 In addition, an entrance canopy for Building B was developed as part of the wind mitigation measures needed to reduce the impact of the Proposed Scheme on the surrounding context. The canopy will be formed of perforated natural anodised aluminium panels that diffuse the wind.

5.27 The perforated panels / super-grid is seen as an opportunity to reference the Site's current use as a furniture store by employing the use of fabric weave patterns to create the perforations on the façade.

5.28 Overall, the proposed materiality / treatments (which has been further detailed in **Chapter 4: Development Specification** and associated figures) was taken forward as part of the Proposed Scheme as it was a more favourable option than the previous alternative designs in terms of better views along Great Ancoats Street, whilst also incorporating elements that are keeping with the industrial heritage of the wider area and the previous uses of the Site (i.e the Vulcan Iron Works). In addition, with the

provision of the entrance canopy and the detailing of the façade of the buildings, better wind conditions are provided than if the initial iteration without the design element was brought forward.

References

[1] Her Majesty's Stationery Office (2017) The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 SI 2017/517 (as amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018, SI 2018/695). Available at: http://www.legislation.gov.uk/uksi/2017/571/contents and https://www.legislation.gov.uk/uksi/2018/695/contents/made [Accessed: 06/12/2024].
[2] 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: 06/12/2024].
[3] East Village Central Development Framework. Manchester Picadilly SRF Addendum – November 2022. 10359-SHP-RP-03. Available at: East_Village_Final_Accessible.pdf

6. Topics which are Not Significant

Introduction

6.1 The approach to determining the scope of topics to be assessed within the ES is detailed within **Chapter 2: Approach to EIA**. As set out in **Chapter 2: Approach to EIA**, as part of the EIA process, based on the information available (**Chapter 4: Development Specification**), there are a number of environmental topics for which a further detailed assessment as part of the EIA is not justified, as they are not considered to be significant. These topics (and related effects) are appraised below and have not been reported further within the ES.

6.2 As set out in **Chapter 2**, the environmental topics for which no likely significant environmental effects have been identified are:

- Archaeology;
- Ground Conditions and Contamination;
- Flood Risk and Hydrology;
- Biodiversity;
- Transport;
- Air Quality;
- Lighting;
- Major Accidents and / or Disasters; and
- Waste.

6.3 The environmental topics listed above are considered in turn below in this Chapter. Based on the technical baseline and understanding of the Proposed Scheme, the effects for these topics are considered unlikely to be significant and will not be considered further in the ES. A factual evidence base has been provided for each topic scoped out. Where mitigation has been used to inform this judgement, the identified mitigation has been captured within **Volume 3: Environmental Management Plan** (EMP).

6.4 For some technical topics which are proposed to be 'scoped out', a standalone application report has been prepared and submitted with the Application, though this is not the case for all topics.

Archaeology

Technical Baseline

6.5 An archaeological desk-based assessment has been undertaken to identify archaeological assets that may be affected by the Proposed Scheme[1]. No designated

heritage assets are located within the Site, such as listed buildings, scheduled monuments or registered parks and gardens, however, several potential archaeological sites and remains of standing 19th-century buildings have been identified. Both the standing remains and the potential below-ground remains within the Site are linked to the industrial development and expansion of Manchester from the 18th to 20th centuries and include the iron and steel warehouse, Shooter's Brook Iron Works No.2 (Fairbairn's Foundry), Vulcan Iron Works, the culverted Shooter's Brook, the Rose and Crown public house, 18th-century buildings at Shooter's Brook, and houses and shops at Great Ancoats Street, Back Mather Street and Fairbairn's Buildings.

6.6 Few prehistoric remains have been identified within Manchester; however, the areas of Castlefield and Ardwick may have been conducive for late prehistoric settlements due to the geology and the natural topography of the Site nearby the River Medlock. Evidence of prehistoric activity in Ancoats is limited; however, a bronze palstave believed to date to the Bronze Age was found within the 250m study area in 1908 near the Whitworth Works. Despite this, the Site is considered to have low potential for prehistoric remains due to the lack of evidence recovered from the region coupled with the rapid development of the industrial period which would have removed archaeological remains dating to this period, had they been present.

6.7 The Roman military established the fort known as *Mamucium* within the Castlefield region of Manchester during the governorship of Agricola (AD 77-84). The fort was positioned at what is now Camp Street in Castlefield, located approximately 3.5km to the west of the Site. The road linking Manchester to Castleshaw may have run through the Site or through the study area. The projected road runs along Mill Street and then by Cemetery Road and Briscoe Lane to Newton Heath. The potential for Roman remains to survive within the Site is considered to be low due the disturbance caused during the development of the area during the industrial period.

6.8 Very little archaeological evidence dated to the period between the end of Roman occupation and the Norman Conquest has been recovered from within Manchester and Ancoats was predominately rural throughout the medieval period. It is thought that the settlement at Ancoats comprised cottages and farmhouses along Ancoats Lane (now Great Ancoats Street), Newton Lane (now Oldham Road), and Butler Lane[2]. Whilst there is some potential for medieval activity to have taken place within the Site, it is most likely that the activity would have been associated with agricultural practice and any surviving evidence would be very unlikely to survive due to disturbance caused during later development. The potential for remains dating to this period to survive within the Site is therefore considered to be low.

6.9 Throughout the 18th century, the demand for textiles increased and the construction of mills within the town transformed Manchester into a centre for the manufacture of cotton[3]. The transformation of Ancoats from a semi-rural area into a centre of industry began in the late 18th century when land was sold to developers. During the 18th century, several houses and buildings were located within the Site, as depicted on Green's map. In c 1817, William Fairbairn moved his works to the Site. William Fairbairn went onto become one of the most notable engineers of the 19th century and retained his works at Mather Street for several decades. Fairbairn worked with different partners over his career, including James Lillie in the early years and later

John Hetherington, who had the Vulcan Works at the site in the mid-19th century. By the late 19th century, the foundry had fallen out of use and the buildings were repurposed as an iron and steel warehouse. The structures survive within the Site.

6.10 No previous archaeological investigation has taken place within the Site. A desk-based assessment was produced for the Ashton Canal Corridor in 2001 by University of Manchester Archaeological Unit (UMAU). The Site is included briefly within the assessment, which states "At the eastern end of Store Street an iron works had been erected by 1849, the predecessor of the late 19th/early 20th iron and steel warehouse whose buildings still stand on this site"[4]. No recommendations were made specifically referring to the iron and steel works; however, the report concluded that the overall development would "damage or destroy archaeological remains and standing buildings of sufficient significance to warrant their preservation by record.". The report recommended that "a rapid survey, involving a photographic record and appropriate measured drawings, is undertaken ahead of the works.".

Effects not Considered to be Significant

Demolition of existing 19th-century iron and steel warehouse (also the Vulcan Works and No 2 Shooter's Brook Foundry)

6.11 The removal of the buildings within the Site will include the demolition of the 19th-century buildings within the Site, which are of medium importance based on criteria provided within the ICOMOS guidance[5]and are of historical and archaeological interest. These buildings represent the partial remains of the 19th-century iron works associated with William Fairbairn. It is anticipated that a historic buildings survey will be required prior to the commencement of works within the Site. This would include a photographic record and appropriate measured drawings. Greater Manchester Archaeological Advisory Service (GMAAS) will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[6]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage assets. Therefore, demolition of the existing 19th-century iron and steel warehouse (including the Vulcan Works and No 2 Shooter's Brook Foundry) is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of the Vulcan Works and No 2 Shooter's Brook Foundry

6.12 Ground-breaking works have the potential to affect the below-ground archaeological remains of the earlier phases of the Vulcan Works and No 2 Shooter's Brook Foundry. The iron works was established at the Site in c 1817 and therefore earlier phases of the works may survive beneath the existing warehouses. The potential remains of the Vulcan Works and No 2 Shooter's Brook Foundry are of medium (regional) importance based on criteria provided within the International Council on Monuments and Sites (ICOMOS) guidance and are considered to be of archaeological and historical interest due to their association with the engineer, William Fairbairn.

6.13 An archaeological investigation will be undertaken after the demolition of the buildings and prior to any construction within the Site, which would include a strip, map and record evaluation of the any remains associated with the iron works within the Site.

GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[7]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to the remains of the Vulcan Works and No 2 Shooter's Brook Foundry is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of the culverted Shooter's Brook

6.14 Ground-breaking works have the potential to affect the remains of culvert at Shooter's Brook, which was culverted in the first half of the 19th century, and will be realigned as part of the Proposed Scheme. The culverted course of the brook is of low (local) importance based on criteria provided within the ICOMOS guidance[8] and is therefore not considered to be of archaeological or historical interest. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[9]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to the culvert at Shooter's Brook is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of houses and shops at Great Ancoats Street

6.15 Ground-breaking works have the potential to affect the remains of houses and shops at Great Ancoats Street, which were constructed during the 18th and 19th centuries. The houses and shops are of low (local) importance based on criteria provided within the ICOMOS guidance[10] and are therefore considered to be of limited archaeological and historical interest. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[11]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to remains of the houses and shops at Great Ancoats Street is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of the Rose and Crown public house

6.16 Ground-breaking works have the potential to affect the remains of Rose and Crown public house, which was constructed within the Site during first half of the 19th century. The public house is of low (local) importance based on criteria provided within the ICOMOS guidance[12] and is therefore considered to be of little archaeological and historical interest. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[13]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to the Rose and Crown public house is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of 18th-century buildings at Shooter's Brook

6.17 Ground-breaking works have the potential to affect the remains 18th-century buildings at Shooter's Brook, which are visible on late 18th-century maps of the Site. The uses of the buildings are unknown and therefore the significance assessment is speculative; however, the remains of the 18th -century buildings are likely to be of low (local) or medium (regional) importance based on criteria provided within the ICOMOS guidance[14] and are of archaeological interest due to the lack of documentary sources. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 209 and 211 of the National Planning Policy Framework[15]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to the remains 18th-century buildings at Shooter's Brook is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of Fairbairn's Buildings

6.18 Ground-breaking works have the potential to affect the remains of Fairbairn's Buildings, which were a row of 19th-century terraced houses. The houses are of low (local) importance based on criteria provided within the ICOMOS guidance[16] and are therefore considered to be of little archaeological and historical interest. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[17]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to remains of Fairbairn's Buildings is not considered to be significant and will not be considered further in the ES.

Damage to or loss of remains of houses at Back Mather Street

6.19 Ground-breaking works have the potential to affect the remains of houses at Back Mather Street, which were constructed within the Site during first half of the 19th century. The houses are of low (local) importance based on criteria provided within the ICOMOS guidance[18] and are considered to be of archaeological interest as they included back-to-back housing. GMAAS will be informed of the proposals and mitigation will be agreed. Mitigation will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework[19]. These mitigation measures are considered an integral part of the Proposed Scheme and will prevent the impact of the Proposed Scheme from resulting in substantial harm to the heritage asset. Therefore, any disturbance to the remains of houses at Back Mather Street is not considered to be significant and will not be considered further in the ES.

Ground Conditions and Contamination

Technical Baseline

6.20 The Site has been developed since 1851 for industrial use including Shooters Brook Iron Works, Vulcan Iron Works, a boiler yard and a timber yard. By 1908 the Site was occupied by an Iron & Steel warehouse which is understood to be the current structure although the use has changed. A bedding works was recorded in the centre of the Site between 1955 and 1965 but is no longer present.

6.21 A Preliminary Investigation has been undertaken by WSP to confirm shallow ground conditions beneath the eastern area of the Site (currently utilised as car parking for the store), which identified the following:

- Hard surfacing present across the majority of the eastern area of the Site, comprising asphalt between 0.15m and 0.25m in thickness;
- Made ground comprising variable granular soils including layers of brick, sandstone and concrete cobbles with layers of sand and gravel. Ash was noted in some of the layers of Made Ground at varying depths. Made ground was noted to be to depths of 2.4m below ground level (bgl) in BH103 in the north, 4.4m bgl in BH101 in the south and to >5.00m bgl in BH102 in the east;
- Natural superficial deposits comprising stiff gravelly clay was encountered in BH101 and BH103 at depths from 4.60m bgl and 2.40m bgl, respectively;
- Bedrock comprising sandstone of the Chester Formation was not proven but anticipated to be present at 20-22m bgl; and
- Post site investigation groundwater monitoring revealed groundwater levels in the shallow boreholes, where present, at 4.24m to 4.81m bgl, representative of pockets of perched water within the granular made ground.

6.22 Chemical testing identified that the on-Site made ground contains elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and heavy metals, likely attributed to clinker and slag within the soil. Asbestos fibres were detected in one sample of made ground (BH103 0.40-055m bgl) although not quantified. No visual or olfactory evidence of contamination has been noted within soils and no sources of gross contamination have been identified on Site, to date.

6.23 Two visits of ground gas monitoring have been completed at the Site which did not identify any elevated concentrations of carbon dioxide or methane suggesting that no mitigation may be required. The Site is not in a radon affected area.

Effects not Considered to be Significant

Exposure to contaminated soils during construction

6.24 Construction workers and nearby properties / users may be exposed to elevated levels of contaminants via direct contact and inhalation from contaminated soils generated during construction which may require disposal off-site. However, no significantly elevated concentrations or gross contamination has been identified on the Site based on the preliminary ground investigation completed to date.

6.25 Site workers will be made aware of the possibility of encountering contamination through toolbox talks and good standards of personal hygiene, including welfare facilities on-site and the use of appropriate levels of personal protective equipment (PPE), will be enforced by the Principal Contractor as per CDM[20] requirements (i.e. tertiary mitigation). This will be included in the CEMP, to be secured by planning condition (which will also set out measures to avoid / control the risk of contamination from accidental spillages of contamination). Site workers will also adhere to health,

safety and environmental precautions in order to reduce the potential for any accidents and incidents. Methods to reduce the amount of dust, e.g. dust suppression, washing down of vehicles wheels and the covering of any exposed soils will be included in the CEMP.

6.26 Therefore, exposure to contaminated soils is not considered to be significant.

Exposure of future site users to contamination in soils during operation

6.27 Contaminated soils, if left exposed at the surface, could potentially impact visitors/ users of the Proposed Scheme via plant uptake and ingestion, direct ingestion, direct contact and inhalation of dusts. However, these potential pathways are unlikely to be available for contaminants in the soil to impact end users, given the proposed usage of the Site (commercial and residential but without plant uptake), as well as the presence of buildings and hard surfacing across the majority of the Site. Soft landscaping is proposed in the centre of the Site which may present a potential pathway. Where areas of soft landscaping are incorporated into the Proposed Scheme at ground level (i.e. centrally), a clean cover system comprising 450mm of "clean" validated topsoil / subsoil will be required, which will break any pathways between end users and contamination in the made ground, and act as a suitable growing medium.

6.28 Ground gas monitoring confirms there are no harmful ground gases impacting the Site, therefore mitigation is not required.

6.29 Overall, following redevelopment there will be no viable pathways between contaminants in the made ground and the Site end users – achieved by the new buildings and hard standing, as well as a clean cover system implemented in soft landscaping in accordance with a Remediation Strategy (to be secured by planning condition) to be undertaken. Further to this, any additional contamination encountered during further investigation will appropriately be addressed and remediated in line with a detailed remediation strategy and validated to ensure compliance.

6.30 Therefore, exposure of future site users to contamination during operation is not considered to be significant.

Exposure of groundwater to contamination from the Proposed Scheme during construction and operation

6.31 The preliminary geo-environmental assessments to date have concluded that the overall risks to surface waters and groundwaters is low, and no specific remedial measures have been recommended based on the low risk.

6.32 Preliminary investigation by WSP did reveal some marginal elevations of >C16 heavier end hydrocarbon fractions. However, due to the minimal quantity of water in BH103, the method of sampling was via 'grab sample' using a bailer which can disturb the groundwater column. The sample was noted to be very silty in the second bailer, and therefore the observed TPH concentrations may be a result of silt in the sample. The water samples is also considered to represent perched groundwater within the made ground and not representative of a true continuous groundwater body underlying the Site.

6.33 The risk assessments have considered the potential for leaching of contamination in the made ground and migration into groundwater resources within proximity of the Site. Proposed piling works have also been considered with respect to driving down solid contaminants and/or creation of new pathways for contaminant migration. A piling risk assessment will be provided following further investigation to specifically assess the risks associated with piling works.

6.34 However, the overall concentrations of contaminants within both soils and groundwater encountered to date are generally low, no gross contamination has been encountered on Site, and there is a lack of viable pathways to the identified receptors. The presence of hard standing across the majority of the Proposed Scheme will continue to limit surface water infiltration and mitigate the risk of contaminants leaching from the shallow made ground (i.e. primary mitigation).

6.35 Therefore, exposure of groundwater resources to contamination during construction and operation is not considered to be significant.

Flood Risk and Hydrology

Technical Baseline

Watercourses

6.36 The Shooters Brook, a tributary to the River Medlock, is culverted and passes beneath the Site flowing from north to south. The culvert has been partially traced with an access survey upstream and onto the Site from an access point within Store Street. The survey did not identify any flows in the culvert due to high levels of silt approximately 13m from the upstream northern Site boundary.

6.37 In addition to the Shooters Brook, the Ashton Canal is located circa 100m south of the Site.

Flood Risk

6.38 Following review of the Environment Agency flood maps it has been identified that the Site lies within Flood Zone 1, meaning that is has a 0.1% annual probability of flooding in any given year.

6.39 The Environment Agency flood risk mapping indicates that the risk of flooding from rivers and sea, sewer flooding, groundwater flooding and reservoir flooding are low.

6.40 The risk of flooding from surface water is considered to be high.

6.41 The flood zone extents are derived from the Environment Agency flood maps and compared with the Site topography.

Existing Drainage

6.42 The United Utilities (UU) sewer asset map indicates an extensive network of public combined sewers within the highways that surround the Site. These networks range in size from 300mm diameter up to 3660mm diameter. The records also indicate there is a small 300mm diameter run of combined sewer within the Site boundary that connects into a larger sewer within Store Street.

6.43 The existing drainage network beneath the Site has been traced with a CCTV survey and this has confirmed the Site is currently drained via a number of private drainage networks, however the survey was unable to trace the connectivity of the private drainage network due to high levels of silt. Therefore, the networks are assumed to connect into either the surrounding United Utilities Combined Sewer network or the Shooters Brook Culvert which passes through the Site.

Effects not Considered to be Significant

Increased flood risk during operation

6.44 Development of the Site could increase surface water flows into the Shooters Brook Culvert, resulting in its capacity being exceeded. This effect would potentially cause flooding on and off Site along the line of the culvert.

6.45 The Site is to be developed in accordance with the Lead Local Flood Authority requirements for reducing peak surface water flow off Site. This includes the use of Sustainable Urban Drainage System (SuDS) features, including rain gardens and permeable paving with appropriately sized surface water storage to allow the surface water flow rate off site to be restricted to acceptable levels.

6.46 Overland flood routing for the Proposed Scheme will be routed away from sensitive areas of the Site in an exceedance event or failure of the below ground drainage system. Further details of the drainage system are set out in **Chapter 4**.

6.47 The likelihood of the Shooters Brook Culvert Capacity being exceeded due to increased surface water flows from the Proposed Scheme is therefore not considered to be significant as mitigation in place will reduce flows to acceptable levels.

6.48 The Flood Risk Assessment (FRA) concludes that the risk to flooding from surface water is considered to be high. To mitigate the risk associated with surface water flooding, the design of the Proposed Scheme will ensure Finished Floor Levels (FFL) are set above external levels with falls provided away from Buildings A and B. The design also includes a dedicated surface water drainage network that will actively drain the Site, whilst providing attenuation and flow reductions to the surrounding sewerage infrastructure.

6.49 The FRA also concludes that all other sources of flooding are considered to be low risk and therefore are not considered any further in this document.

6.50 Therefore, risk of flooding is not considered to be significant.

Increased flood risk from surrounding sewers and wider sewer network during operation

6.51 Development of the Site will increase foul water flows leaving the Site. This will increase flows to the surrounding public sewers and the wider sewer network, ultimately resulting in their capacity being exceeded and causing the sewer network to flood and/or combined sewage overflowing from the sewer into a watercourse.

6.52 A predevelopment enquiry has been submitted to UU and they have confirmed that the surrounding sewer network has capacity to accept the foul flows from the Proposed Scheme. Therefore, this is not considered to be significant.

Risk of pollution during construction

6.53 During the construction works there will be a number of Site activities that could impact on the quality of drainage run-off from the Site and the creation of airborne pollutants such as;

- Materials handling, moving and stockpiling on Site;
- Earthworks movements and disposal during excavation and filling works;
- Wet works such as concreting and mortaring;
- Use of hydrocarbons for temporary electricity generation on Site; and
- Use of heavy construction plant and associated risk of hydrocarbon spills.

6.54 Good environmental practices will be adopted throughout the duration of the Site works, which will be detailed in the Construction Environmental Management Plan (to be secured by planning condition). Key measures include (but are not limited to);

- The implementation of a temporary drainage system by the contractor as required to suit the proposed works programme. This will help to reduce overland flows and sediment build-up in the effluent water;
- Wheel cleaning of vehicles prior to leaving the Site;
- Dust suppression techniques;
- Works carried out in line with the approved remediation strategy and materials management plans for the Site; and
- Existing drainage networks protected via capping off any temporary free ends and protecting existing gullies/downpipes to prevent sediment spills into the network.

6.55 It is considered that adopting good environmental practices throughout the duration of the construction works will prevent this effect from being significant.

6.56 Any future construction works will be controlled by a CEMP, which will be prepared to set out best practice methods to mitigate environmental impacts and submitted for approval by the LPA (and review by the relevant statutory consultees). On this basis, the effect is not considered to be significant.

Biodiversity

Technical Baseline

6.57 The Site is comprised entirely of hardstanding and buildings, with one row of young planted trees at the edge of the Site boundary. The Site is subject to anthropogenic disturbance, with light pollution at all hours and little connectivity to suitable habitat in the wider environment.

6.58 Desk based records have been recorded invertebrates; birds; bats; and hedgehog within 1km of the Site in the last 10 years. No evidence has been observed to suggest presence of bat roosts on Site, with overall bat activity on Site and adjacent to the Site being limited.

6.59 There are no sites that form part of the National Site Network located within 5km of the Site; or any statutory sites located within 2km of the Site. There are two non-statutory designated sites within 2km of the Site. These are the Ashton Canal (West), approximately 150m south east of the Site; and the Rochdale Canal, approximately 250m north west of the Site.

Effects not Considered to be Significant

Disturbance to designated sites, habitats and protected species

6.60 As set out above, there are two non-statutory designated sites (both waterways) which could potentially be affected by debris and dust pollution during demolition and construction. As set out under 'Flood Risk and Hydrology' above, a number of measures will be implemented through the CEMP to avoid pollution to waterways.

6.61 The Site contains negligible habitat for local wildlife.

6.62 The Site offers some minor suitable nesting habitats for birds (trees and old buildings), however due to the heavy urban disturbance on the Site the features are considered to be suboptimal and unlikely to be used. Following site visits (a stand alone Preliminary Ecological Appraisal[21] sets out the surveys undertaken), feral pigeons are the only species considered likely to nest in the buildings. If nesting birds are found to be present during construction, a general licence issued by Natural England will be sought. This will be confirmed in the CEMP.

6.63 The existing buildings on Site have been assessed to have low to negligible bat roosting potential. No roosts were found during surveys in 2023, along with negligible bat activity. There are also minimal nearby commuting features for bats, and the 24 hour lighting and noise disturbance at the Site is considered likely to negate any commuting potential outside of rare occurrences for more disturbance resistant common pipistrelle species. As demolition works are anticipated to commence after the beginning of the 2025 survey season (from May onwards), at least one further emergence survey will be required to reaffirm the lack of bat roosts in the building. This will be secured by planning condition. Should a bat roost be identified during the development works, an ecologist will be notified and development works paused for further surveys and a licence obtained (if surveys confirm this is required). This will be set out in the CEMP.

6.64 For all other protected species, no desk based records were returned, and/or there is no suitable habitat on Site, therefore they are not considered to be present on Site.

6.65 Overall, effects to designated sites, habitats and protected species are not considered to be significant.

Transport

Technical Baseline

6.66 The study area encompasses the following highway links:

- Store Street;
- Old Mill Street;
- A665 Great Ancoats Street (north of Laystall Street to south of Store Street);
- Ducie Street; and
- Laystall Street.

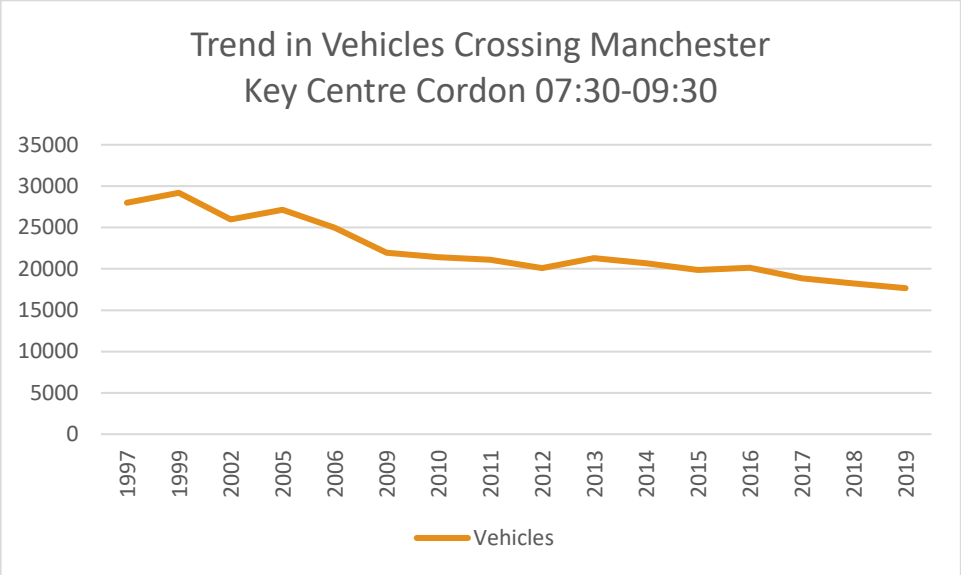
6.67 Baseline information has been collected through on-site observations and desk-based studies.

6.68 A series of on-site observations have been undertaken to establish the current characteristics of the existing highway network in the vicinity of the Site.

6.69 Traffic flows on the surrounding highway network have been reviewed making reference to Department for Transport (DfT) traffic data available from their Road Traffic Statistics website[22] and also publicly available data from nearby development application reports.

6.70 This review of traffic flows shows that annual average daily traffic flows have been decreasing over time. For Manchester the gradual fall in traffic levels in the city centre is evidenced through the Transport for Greater Manchester Key Centre Monitoring database as shown in **Figure 6.1** below[23].

Figure 6.1 Trend in peak period Manchester City Centre traffic flows since 1997



6.71 This trend reflects improved public transport provision, greater numbers living within the city centre, reduced car park availability and more recently increased levels of Working from Home. For this reason, it is not intended to apply growth factors to the Baseline traffic flows as the future traffic levels are not expected to rise.

6.72 For the assessment, traffic data was obtained from various data sources including peak hour manual traffic counts, DfT and TfGM Traffic Count data as well as traffic forecasts from committed development. Where traffic is in peak hour flows these have been factored to daily flows using factors from TfGM ATC data in the area.

6.73 The Baseline Annual Average Daily Traffic (AADT) Flows are given in **Table 6.1**.

Table 6.1: Baseline Annual Average Daily Traffic Flows

Link	AADT	%HGVS
A: Store Street	5624	4%
B: Old Mill Street	11941	3%
C: A665 Great Ancoats Street (S)	48327	4%
D: A665 Great Ancoats Street (N)	46987	4%
E: Ducie Street	3697	3%
F: Laystall St	3451	3%

6.74 A review of highway safety has been undertaken via reference to the TfGM accident database[24] and this shows that during the most recent 5-year period for which data are available (up to June 2022), there have been no accidents on the streets adjacent and no accident clusters in the wider area.

6.75 The sensitive receptors within this study area have been identified as follows:

- Driver Delay on the local highway network;
- Local Residents on Store Street; and
- Pedestrians / cyclists with the study area.

6.76 The Site currently generates traffic movements as part of its furniture retail business. By factoring up the peak hour surveys to a Daily figure it is forecast that the existing site generates around 42 vehicle arrivals and 42 departures a day. With 3 HGV movements a day.

6.77 The city centre location of the Site means that there are excellent sustainable transport links including Piccadilly Rail Station within a 5-minute walk, a range of bus services and good levels of walking and cycling infrastructure.

Effects not Considered to be Significant

6.78 To inform this scoping assessment it is noted that the Proposed Scheme will provide no car parking on site thereby seeing a reduction from the existing 40 spaces available. The Site is also located in close proximity to a wide range of frequent public transport services and within walking distance of many city centre amenities.

6.79 There are on street parking bays on Store Street and Ducie Street which can be used by disabled persons with a blue badge for free. Subject to discussions with MCC it is possible that two on street pay and display parking bays could be lost with development.

6.80 The Proposed Scheme is therefore forecast to generate very limited traffic flows, with those generated being associated primarily with servicing and delivery activity, taxis etc. This traffic has been forecast using the TRICS trip rate database and it is expected that the Proposed Scheme could generate in the order of a nett increase of c.75 vehicles per day as a reasonable worst-case scenario, including 12 Heavy Goods Vehicle movements (in excess of 7T).

Table 6.2: Development Daily Traffic Flows

Link	AADT	%HGVS
A: Store Street	80	12%
B: Old Mill Street	19	13%
C: A665 Great Ancoats Street (S)	63	13%
D: A665 Great Ancoats Street (N)	59	23%
E: Ducie Street	118	9%
F: Laystall St	111	9%

Table 6.3: Change in AADT Flows with Proposed Scheme

Link	AADT Change %	HGV Change %
A: Store Street	1.4%	4.1%
B: Old Mill Street	0.2%	0.6%
C: A665 Great Ancoats Street (S)	0.1%	0.4%
D: A665 Great Ancoats Street (N)	0.1%	0.7%
E: Ducie Street	3.2%	9.7%
F: Laystall St	3.2%	9.9%

6.81 Consideration has been given to the likely daily construction vehicular movements, which would result in a minimum of 20 vehicular movements per day (10 arrivals and 10 departures) at the less demanding phase, as mobilisation, site preparation and finishing (16 HGVs and 4 LGVs movements) and a maximum of 50 vehicular movements per day (25 arrivals and 25 departures) during the construction of superstructure, walls and partitions (44 HGVs and 6 LGVs movements).

6.82 The demolition phase would require up to 20 vehicles per day (40 vehicular movements, 36 HGVs and 4 LGVs). This equates to between 2 and 4 vehicular movements per hour throughout the working day.

6.83 This construction traffic forecast is preliminary given that the details of construction traffic requirements will only be known once a contractor is appointed to undertake construction, however a robust approach has been taken. In addition, it is not known from which road construction access would be taken.

6.84 Taking into account the forecasts of construction and operational stage traffic, the likely effect of any additional traffic generated by the Proposed Scheme upon the operation of the surrounding highway network in capacity terms is therefore negligible.

Driver delay as a result of construction stage traffic and/or operational stage traffic [drivers on the A665, Store Street, Ducie Street, Old Mill Street, and Laystall Street]

6.85 The traffic generated by the Proposed Scheme has the potential to affect the operation of the surrounding highway network in terms of driver delay, both in the construction and operational stage of development. The Institute of Environmental Management and Assessment (IEMA), has published Guidance Notes No:1 Guidelines for the Environmental Assessment of Road Traffic (2023) commonly referred to as the 'IEMA Guidelines'[25].

6.86 This set out the broad principles of how to assess the magnitude of effect for driver delay, stating that such delays "*are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system*".

6.87 Based upon the forecast operational stage and construction stage traffic movements generated by the Proposed Scheme, the likely effect of any additional traffic generated

by the Proposed Scheme upon the operation of the surrounding highway network in capacity terms is negligible and the surrounding highway network is not at or close to being at capacity. For example, the weekday peak hour traffic movements during the operational stage are forecast at most to be an increase in 7 vehicles in the busiest peak hour or around one vehicle every 10 minutes.

6.88 As described in **Table 6.3** the increase in traffic with development is limited to less than a 1% increase on Great Ancoats Street and Old Mill Street, 4% on Store Street and just under 10% on Ducie Street/Laystall Street.

6.89 These volumes are not considered to be significant to given rise to any measurable impact on Driver Delay on the local network and therefore will not be considered further in the EIA or reported in the ES.

Severance as a result of construction stage traffic and/or operational stage traffic [pedestrians / cyclists on the local highway network]

6.90 The IEMA Guidelines sets out that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. The change in traffic as a result of the Proposed Scheme will be below 10% on any link therefore there will be no perceptible effect upon severance.

6.91 Therefore, severance to pedestrians / cyclists on local highway network is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Pedestrian delay as a result of construction stage traffic and/or operational stage traffic [pedestrians on the highway local to the site]

6.92 The IEMA Guidelines sets out that changes in the composition or speed of the traffic may affect the ability of people to cross the roads. The guidance suggests that assessors use their judgement to determine whether pedestrian delay is a significant impact. The change in traffic as a result of the Proposed Scheme will not significantly change the composition or speed of traffic on the surrounding highway network due to the limited number of additional vehicles. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a CEMP incorporating a Construction Traffic Management Plan (CTMP) in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. Therefore, there will be no perceptible effect upon pedestrian delay.

6.93 Therefore, delay to pedestrians on the local highway is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Pedestrian amenity as a result of construction stage traffic and/or operational stage traffic [pedestrians on the highway local to the site]

6.94 The IEMA Guidelines set out that pedestrian amenity is affected by traffic flow, traffic composition and pavement width / separation from traffic. The guidance suggests a tentative threshold for judging the significance of changes in pedestrian amenity of where traffic flow (or its lorry component) is halved or doubled. The change in traffic as a result of the Proposed Scheme will not significantly change the flow or composition of traffic on the surrounding highway network due to the limited number of additional vehicles generated and the low numbers of Heavy Goods Vehicles (HGVs) comprising the forecast Development Scheme traffic. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a CTMP in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. There would also be no effect upon pedestrian separation from traffic, and therefore there will be no perceptible effect upon pedestrian amenity.

6.95 Therefore, pedestrian amenity for pedestrians on the local highway network is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Fear and intimidation as a result of construction stage traffic and/or operational stage traffic [pedestrians on the highway local to the site]

6.96 The impact of this is dependent upon the volume of traffic, its HGV composition, its proximity to people, or the lack of protection caused by such factors as narrow pavement width. The change in traffic as a result of the Proposed Scheme will not significantly change the flow or composition of traffic on the surrounding highway network in the construction or operational phase. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a CTMP in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems. The change in traffic as a result of the Proposed Scheme during construction and operational phase will not affect pedestrian separation from traffic, and therefore there will be no perceptible effect upon fear and intimidation.

6.97 Therefore, fear and intimidation for pedestrians / cyclists on the local highway network is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Accidents and safety as a result of construction stage traffic and/or operational stage traffic [bus users and pedestrians / cyclists on the A665, Store Street, Ducie Street, Old Mill Street, and Laystall Street]

6.98 The IEMA Guidance suggests that professional judgement will be needed to assess the implications of local circumstances, or factors, which may elevate or lessen risks of accidents e.g. junction conflicts.

6.99 The forecast operational and construction stage traffic flows are not significant in the context of existing traffic flows on the surrounding highway network and will not

present any significant change to the safety of highway users in the area. The review of highway safety for the surrounding roads described in the Technical Baseline section of this chapter shows that there is no evidence of highway safety issues on the roads adjacent to the Site nor any accident clusters in the wider area that would cause particular concern in the context of the Proposed Scheme. The construction traffic is expected to comprise of some HGVs for limited periods during the construction period. There will be a CTMP in place for the construction period and this will provide a mechanism for managing construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems.

6.100 Therefore, accidents and safety for bus users and pedestrians / cyclists on the local highway network is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Limitations and Assumptions

6.101 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- There will be no car parking provided on-site, with the vast majority of residents assumed to live car-free, although some may choose to keep a car in an off-site car park. The existing public on-street parking bays on Ducie Street and Store Street may be reduced with the scheme by 2 as part of the Proposed Scheme. These pay and display spaces can be used by Blue Badge disabled users for free.

- Vehicle trips generated to the Site during the operational stage will therefore be limited to the activity generated by servicing / delivery vehicles and drop-off / pick-up activity and this replaces the existing trips to the furniture store.

- Operational stage traffic forecasts have been based upon a development of 758 apartments and 2712m^2 Net Internal Area of office space.

- The forecasts of daily construction traffic movements have been based on estimates from other high-rise schemes in Manchester and considered appropriate as an interim robust assessment.

Air Quality

Technical Baseline

6.102 The baseline air quality conditions in the vicinity of the Site have been established through the compilation and review of the following sources:

- Data from the National Atmospheric Emissions Inventory (NAEI)[26], Environment Agency (EA)[27] and Defra's Pollutant Release and Transfer Register (PRTR) data[28];

- Defra's modelled background concentrations of air quality standards pollutants (UK-AIR)[29]. These estimates are produced using detailed modelling tools and are available as concentrations at central 1km^2 National Grid square locations across the UK. Mapped background concentrations have been obtained based upon the 2018 base year Defra update (August 2020 publication);

- MCC's latest available air quality monitoring data, derived from the latest available air quality annual status report published in 2023[30.] 2023 data for monitoring locations has been sourced from Clean Air for Greater Manchester website[31].

6.103 The baseline air quality conditions are summarised below.

Local Air Quality Management

6.104 The Greater Manchester Air Quality Management Area (AQMA) has been declared by the Greater Manchester Combined Authority (GMCA) of which MCC is one of the included Local Authorities. The Greater Manchester AQMA has been declared for exceedances of the annual mean nitrogen dioxide (NO_2) Air Quality Assessment Level (AQAL) and covers *"An Area covering the 10 districts of Greater Manchester, including arterial routes, district centres, and airport."* The Proposed Scheme is located within the AQMA.

Clean Air Zone

6.105 The Proposed Scheme is also located within the proposed Greater Manchester Clean Air Zone which is currently 'in review'. The Greater Manchester Air Quality Administration Committee are currently deciding whether to approve the Mayor of Greater Manchester (GM) proposals for an investment-led Clean Air Plan (CAP).

6.106 In relation to the GM Clean Air Plan, a section of Great Ancoats Street in the vicinity of the Site is an 'over the legal limit' road link.

Local Emission Sources

6.107 The main source of air pollution in the surrounding Site locale comprises emissions from vehicles using the local road network, predominantly Great Ancoats Street to the north east, Ducie Street to the north west and Store Street to the south east.

6.108 A review of the NAEI[26], EA[27] and Defra's PRTR[28] data indicates that there are no major industrial pollution sources in the immediate vicinity of the Site that will influence local air quality.

Defra Background Concentrations and Roadside Concentrations

6.109 Background pollutant concentrations for 2023 (the base year), 2024 (the assessment year) and 2031 (the proposed opening year) show that annual mean background concentrations of NO_2 and particulate matter (PM_{10} and $PM_{2.5}$) at the grid squares within which the Site is located are below the relevant AQALs in all years presented. Additionally, background $PM_{2.5}$ is below the 2031 interim AMCT of 12µg/m^3.

Air Quality Monitoring Data

6.110 MCC monitor air quality at key locations across the City through a network of automatic (continuous) and non-automatic sites (passive diffusion tubes). The latest Annual Status Report[30] identifies that the monitoring network within Manchester consisted of four automatic monitors and 40 passive sites. 2023 data were obtained from Clean Air Manchester Data Hub[31].

6.111 There is one automatic monitoring location considered representative of baseline conditions. MAN3 is located within Piccadilly Garden and represents urban background concentrations.

6.112 There have been no exceedances of the NO_2 annual mean AQAL at automatic monitor MAN3. UK-AIR background concentrations for the grid square containing MAN3 is 25.5µg/m^3, which is comparable to the 2023 MAN3 monitored concentration.

6.113 There have been no exceedances of the annual mean PM_{10} or $PM_{2.5}$ AQAL at MAN3.

6.114 Passive air quality monitoring is also undertaken by MCC as part of their commitment to Local Air Quality Management (LAQM) and also as part of the Clean Air Plan (CAP).

6.115 Monitoring data and the locations of the monitoring closest to the Site are shown in Table 8 and Figure 4 of the Air Quality Technical Appendix.

6.116 There have been exceedances of the NO_2 annual mean AQAL at CAP monitoring sites close to the Site between 2018 and 2023. The highest recorded concentration of NO_2 was monitored by CAP location 0014 which is situated on Great Ancoats Street, to the north of the Site

6.117 CAP locations 012, 013 and MAN71 are all located on Great Ancoats Street which is adjacent to the Site and as such these concentrations are considered relevant to Site conditions.

6.118 There has been one recorded exceedance of an annual mean greater than 60µg/m^3. However, this was in 2019. 2022 data do not exceed 60µg/m^3 which indicates that an exceedance of the 1-hour mean objective is unlikely at these sites.

Effects not Considered to be Significant

6.119 A separate Air Quality Assessment (Document reference: 27793-HYD-XX-YY-RP-2001-P01) has been submitted for planning.

Construction stage traffic

6.120 The Institute of Air Quality Management (IAQM) guidance states that from experience of assessing exhaust emissions from Site traffic, including Non-Road Mobile Machinery (NRMM), it is unlikely that any significant adverse impacts on local air quality would be caused and in the vast majority of cases, quantitative assessment is not needed. As such, short term effects of construction traffic emissions have not been assessed, as they are also likely to be well below the EPUK & IAQM traffic criteria.

6.121 Therefore, effects as a result of construction stage traffic to existing receptors is not considered to be significant.

Construction stage dust soiling and human health risk

6.122 Construction activities have the potential to result in dust soiling impacts and adverse human health effects from on-site construction activities including demolition, earthworks, construction and trackout.

6.123 Based on the IAQM guidance residential dwellings and car parks are indicative examples of high sensitivity receptors in relation to both dust soiling and health effects of PM_{10}. Indicative examples of medium sensitivity receptors include places of work, such as offices. A construction stage assessment in line with IAQM[32] guidance has been undertaken in the Air Quality Assessment submitted for planning and the development is considered to be high risk for nuisance dust soiling and low risk for PM_{10} health effects.

6.124 To effectively reduce the risk of impacts to negligible, appropriate mitigation measures will be adopted. These include, screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate, and identifying requirements for ongoing monitoring and liaison with the local community and cumulative development within 250m, and MCC. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and would be implemented through a CEMP (to be secured by planning condition). This will reduce the risk of impacts to negligible during the construction stage.

6.125 Therefore, dust soiling and PM_{10} health effects as a result of dust from construction activities to existing receptors is not considered to be significant.

Operational stage traffic emission impacts

6.126 Existing high sensitivity receptors with regards to operational phase traffic impacts are all locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals and care homes.

6.127 The Transport Consultants for the Proposed Scheme provided trip generation and distribution data on the road links surrounding the Site. In line with Environmental Protection UK (EPUK) & IAQM Guidance[33], trips associated with the Proposed Scheme are below the threshold (100 Light Duty Vehicles (LDV) or 25 Heavy Duty Vehicles (HDV)) for detailed air quality modelling.

6.128 The Proposed Scheme is car free and no car parking spaces are proposed. Trips generated are associated with servicing, access or taxis, and last mile deliveries.

6.129 Ducie Street and Peak Street will see increases of 118 LDV Annual Average Daily Traffic (AADT) and 111 LDV AADT, respectively. All other road links will see an increase of below the threshold. It should be noted that Ducie Street is one-way and therefore trips must route from the Site along this road. Once onto Peak Street and the wider road network, trips disperse to below the threshold.

6.130 Along Ducie Street and Peak Street the majority of surrounding land uses are offices (Ducie House) and commercial (Diecast and Aldi), the annual mean AQAL does not apply at these locations and while the short-term AQALs apply, baseline evidence suggests that the risk of exceedances is low. As such, detailed modelling of impacts has not been undertaken.

6.131 While a detailed assessment of operational stage impacts has been scoped out of this ES, in line with the MCC Air Quality Planning guidance[34], a Damage Cost Calculation is recommended, otherwise known as an Emissions Mitigation Assessment.

6.132 Based on the calculation undertaken (Air Quality Assessment (Section 7)) the total emissions 'damage costs' (sum of NOx and $PM_{2.5}$) = £6,403, which is the indicative value of a package of air quality mitigation measures to offset the real-world impact of emissions from the Proposed Scheme. These measures are already included within the design of the Proposed Scheme, for example improvements to pedestrian footpaths which will link to the bus and tram network. Additionally, measures included within the associated Travel Plan would also aid improvement in air quality. These would include promotion of sustainable travel and cycle spaces.

6.133 Therefore, operational stage traffic emission impacts on existing high sensitivity receptors is not considered to be significant.

Operational stage traffic emission impacts

6.134 In order to assess the suitability of the Site for residential use, a detailed model has been undertaken using the air dispersion model ADMS-Urban v5.0.1 to establish the current and future air quality conditions in the area.

6.135 The dispersion modelling undertaken was conservative as it applied worst-case assumptions by holding background concentrations and emission factors at the 2023 base year. The results demonstrated that there are not predicted to be any exceedances of the relevant AQALs at the Proposed Scheme on any residential floor in either Building A or Building B.

6.136 Therefore, operational stage traffic emission impacts on proposed receptors are not considered to be significant.

Operational stage plant emissions

6.137 The proposed energy strategy takes a 'fabric first' approach and will be all electric in terms of fuel to take advantage of the current grid carbon intensity, with use of Air Source Heat Pumps and Photovoltaics. Mechanical Ventilation with Heat Recovery (MVHR) will be provided to all dwellings and commercial areas. Therefore, the Proposed Scheme will not use any combustion as part of its design.

6.138 Therefore, operational stage plant emission impacts on existing and proposed high sensitivity receptors is not considered to be significant and will not be considered further in the ES.

Lighting

Technical Baseline

6.139 The Site has existing lighting associated with its use as a furniture store and cars accessing the Site for parking.

6.140 In the surrounding area, there are lighting installations on the surrounding road network including Great Ancoats Street; Store Street; and Duice Street.

6.141 Given the city centre location of the Site, it is likely the Site would be classified as an E4 Environmental Zones (high ambient brightness) lighting environmental zone[35].

Effects not Considered to be Significant

Disturbance due to obtrusive light during construction

6.142 Light pollution (or obtrusive light) comprises any adverse effects of artificial lighting including glare[a], light trespass[b]/spill[c] and sky glow[d], occurring as a result of temporary construction activities associated with the Proposed Scheme. 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).

6.143 Lighting will be required during construction activities in order to provide a safe working environment, however this will be within the context of a high brightness city centre area. Nonetheless, potential adverse effects arising from temporary construction lighting will be controlled through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129[36] and BS EN 12464-2:2014[37], incorporated as part of a CEMP. In addition, the Site already experiences existing high levels of lighting due to its urban location.

6.144 Therefore, disturbance to nearby residents due to obtrusive light during construction is not considered to be significant.

Disturbance due to obtrusive light during operation

6.145 Operational lighting will be required for the Proposed Scheme to ensure a safe environment.

6.146 Lighting within the public realm will comprise amenity/ architectural lighting.

6.147 Where lighting is proposed it will be designed and installed in line with relevant industry best practice and guidance, including:

- CIE 150: 2017 – Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition[38];
- ILP GN01 - Guidance Notes for the Reduction of Obtrusive Light 2021[39];
- ILP PLG08: Guidance on the Application of Adaptive Lighting within the Public Realm[40];
- ILP Lighting Landscapes[41];

[a] The uncomfortable brightness of the light source against a dark background which results in dazzling the observer, which may cause nuisance to a specific receptor.
[b] The spilling of light beyond the boundary of a property, which may cause nuisance to others.
[c] The unwanted spillage of light onto adjacent areas which may affect sensitive receptors (particularly residential properties and ecological sites).
[d] The direct upward spill of light into the sky, which can cause a glowing effect and is often seen above cities when viewed from a dark area.

- BS 5489-1 : 2020 – Code of Practice for the Design of Road Lighting[42];
- BS EN 13201-2:2015 – Road Lighting – Part 2: Performance Requirements[43];
- BS EN 12464 – 2 2014 – Outdoor Work Spaces; SLL Guide to Limiting Obtrusive Light 2012[44];
- SLL Lighting Handbook 2009[45]; and
- LG 6 (CIBSE) – The Exterior Environment 2016[46].

6.148 The Site already experiences existing high levels of lighting due to its urban location.

6.149 Overall, when considering the city centre location and baseline lighting, disturbance to residents due to obtrusive light during operation is not considered to be significant.

Major Accidents and/or Disasters

Technical Baseline

Effects not Considered to be Significant

6.150 As detailed within Schedule 4, Paragraphs 5 and 8 of the EIA Regulations, there is the requirement to consider the risk of major accidents and/or disasters relevant to the Proposed Scheme.

6.151 Although there is the potential for a wide range of major accidents and disasters that could occur, the probability, likelihood and frequency is very low, often due to the management of a risk under established legislative requirements.

6.152 The probability, frequency and likelihood of natural disasters arising from climatic occurrences (i.e. hurricanes) are considered to be very low due to the natural climatic condition of the UK within the global climate system. Specific geological events (i.e. earthquakes, tsunami, volcanic incidents etc.) are also considered to be very low due to the general absence of required geological conditions (i.e. area of tectonic plate interaction) within or in proximity to the UK. Although earthquakes have occurred within the UK, the magnitude of such events has generally been low.

6.153 Following a qualitative appraisal of major accidents and/or disasters that were relevant to the Proposed Scheme, as set out in **Table 6.4**, the likelihood of events with a significant consequence is considered to be low/unlikely and will not be considered further in the ES.

Table 6.4: Appraisal of the Risk of Major Accidents and/or Disasters

Effect	Appraisal
A major accident caused by ground subsidence and associated structural/building collapse	All earthworks and foundation design will be in accordance with relevant industry guidance, including but not limited to CIRIA Report C572: Treated ground engineering properties and performance[47], British Research Establishment document FB75: Building on

Effect	Appraisal
	Fill - Geotechnical Aspects[48] and British Standard 6031:2009: Code of Practice for Earthworks[49], thereby negating the probability and likelihood of any significant effect.
Major flood event caused by an extreme weather event	As described in under 'Flood Risk and Hydrology', the risk of flooding is not considered to be significant due proposed site levels and the flood risk strategy.
Major accidents on the local road network	The management of the road network and the enforcement of stringent safety standards reduce the risk, both in terms of the frequency and likelihood to a low level. The risk of accidents has also been scoped out under 'Transport and Access' above given that there are limited traffic flows from the Proposed Scheme.
Accidents arising from vandalism, arson or terrorism	The risks associated with technological failures and accidents will be reduced through appropriate design of the Proposed Scheme, including the use of fire alarms. Target acts of vandalism, arson or terrorism cannot be fully mitigated, but the adoption of appropriate security measures at the construction and operational stages, such as security lighting, will help to minimise the likelihood of such events occurring. The final building management company will 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 B: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations and by law. The design of the Proposed Scheme will be informed by 'Secure by Design'[50] principles and appropriate design and site management measures (including appropriate lighting and digital entry systems at each building). The Proposed Scheme will have on-Site security staff and gates to ensure no unauthorised access. Given this, the potential risks will be very low.

Waste

Technical Baseline

6.154 There is likely to be some limited waste generated from the existing Site due to its current use as a furniture store. The exact amount is unknown and therefore is assumed to be zero to inform a worst case assessment.

Effects not Considered to be Significant

Waste generated during the demolition and construction stage

6.155 Sources of waste during the construction stage are assumed to relate to construction materials (including packaging) and surplus cut from excavation required (e.g. for the basements). If required, the remedial solution may require removal of hazardous substances[51] which will require specialist removal. All such works will be undertaken by an appointed contractor and disposed of by the contractor in line with relevant regulations and legislation requirements.

6.156 The existing building to be demolished is estimated to be approximately 2,488m^2. Based on a standard working calculation which takes the assumed building/structure area and multiples this by 0.3 to estimate the likely demolition waste, the demolition of the existing Stocktons building is estimated to give rise to approximately 746.3m^3 of waste arisings. This value does not account for any form of recycling or reuse of waste and therefore represent and reasonable worst case.

6.157 Using the maximum floorspace of the Proposed Scheme multiplied by industry benchmarks[52] for construction waste arisings[53] (10 tonnes per 100m^2 for residential uses and 13 tonnes per 100m^2 as a worst case for non-residential uses), it is anticipated that 8,122.16 tonnes of waste will be generated from the construction stage.

6.158 Any waste considered to be hazardous, arising from demolition or remedial activities, will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005, which will be controlled through the implementation of a CEMP, secured by planning condition.

6.159 It is anticipated that generic waste produced during construction would be controlled through the CEMP. The CEMP will be informed by the waste provisions of the Environmental Protection Act 1990[54] and the Environmental Protection (Duty of Care) Regulations 1991[55] 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.

6.160 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.

6.161 Therefore, waste generated during demolition and construction is not considered to be significant.

Waste generated during the operational stage

6.162 Waste generated during the operational stage is anticipated to include generic waste streams arising from the residential and office.

6.163 British Standard (BS) 5906:2005 Waste Management in Building – Code of Practice[56] suggests that the weekly waste arisings from a 'domestic' use is equal to the number of dwellings x [(70 litres x average number of bedrooms[e]) +30]. Waste arisings from 'office' use is equal to the volume arising per employee [50l] x number of employees. Waste arisings from a 'restaurant' use is equal to the volume per number of covers [75l]. The number of employees nor the number of covers in the café is not known as the office space would be used as a co-working space rather than new commercial office space and the café would be more informal than restaurant covers. Therefore the calculations of waste generation below have not considered the office or cafe use.

6.164 These benchmarks, the Proposed Scheme would be considered to generate approximately 128,860 litres (l) (circa 128.86m^3) a week, approximately 6,700,720l (circa 6,700.72m^3) per annum. It should be noted that this does not take account of any waste arising reused, recycled or diverted from landfill by another means, and is considered to be a worst case calculation.

6.165 The Proposed Scheme will be designed in order to take account of appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling. In addition, it is assumed that all waste storage/handling facilities will be designed in accordance with BS 5906:2005 Waste Management in Building – Code of Practice. A Waste Management Strategy has been submitted with the Application which sets out the principles, strategy and targets for the management and storage of waste and maximise recycling, in accordance with MCC established policy.

6.166 Therefore, effects related to operational waste are not considered to be significant.

References

[1] Oxford Archaeology (2024). Stocktons, Ancoats: Archaeological Desk-Based Assessment.
[2] Miller, I., & Wild, C. (2007). A & G Murray and the Cotton Mills of Ancoats. Lancaster: Oxford Archaeology North.
[3] Baines, E. (1835). History of Cotton Manufacture in Great Britain. London.
[4] UMAU. (2001). Ashton Canal Corridor, Manchester: An Archaeological Desk-Based Assessment. University of Manchester: Manchester.
[5] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[6] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[7] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.

[e] 2-beds has been used as the average number of bedrooms, which is informed by the proposed mix.

[8] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[9] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[10] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[11] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[12] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[13] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[14] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[15] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[16] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[17] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[18] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[19] Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
[20] The Construction (Design and Management) Regulations 2015
[21] Urban Green (2024). Preliminart Ecological Appraisal. 140 Great Ancoats Street, Manchester, M4 6DU.
[22] Department for Transport. Road traffic statistics. Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints [Accessed: 23/01/2023].
[23] Transport for Greater Manchester/ Highways Forecasting and Analytical Services. Available at: Highways Forecasting and Analytical Services - Reports (gmtu.gov.uk) [Accessed: 15/10/2024].
[24] https://www.gmtu.gov.uk/gmaccidents/#
[25] IEMA, (2023); Guidelines for the Environmental Assessment of Road Traffic (2023)
[26] National Atmospheric Emissions Inventory, UK Emissions Interactive Map (beis.gov.uk).
[27] https://data.gov.uk/dataset/cfd94301-a2f2-48a2-9915-e477ca6d8b7e/pollution-inventory
[28] UK Pollutant Release and Transfer Register (PRTR) https://prtr.defra.gov.uk/map-search
[29] UK-AIR, "Background Mapping Data for Local Authorities - 2018," n.d., https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018.
[30] Greater Manchester Combined Authority, 2023 Air Quality Annual Status Report (ASR), In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, June 2023.
[31] https://cleanairgm.com/data-hub/
32 Institute of Air Quality Management (2016). Guidance on the Assessment of Dust from Demolition and Construction. Available at: https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdff [Accessed: 18/10/2024].
[33] EPUK & IAQM, "Land-Use Planning & Development Control: Planning for Air Quality" (Institute for Air Quality Management (IAQM), January 2017), http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf.

[34] Manchester City Council, Air Quality & Planning Technical Guidance, August 2022, https://www.manchester.gov.uk/downloads/download/5199/information_for_developers.
[35] NLIPI (2007). What are lighting environmental zones? Available at: https://www.lrc.rpi.edu/programs/NLPIP/lightingAnswers/lightPollution/environmentalZones.asp
[36] CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.
[37] British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.
[38] CIE (2017). Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition. Available at: https://cie.co.at/publications/guide-limitation-effects-obtrusive-light-outdoor-lighting-installations-2nd-edition
[39] ILP (2021). Guidance Note on the Reduction of Obtrusive Light. Available at: https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/
[40] ILP (2008). Professional Lighting Guide Guidance on the Application of Adaptive Lighting within the Public Realm. Available at: https://theilp.org.uk/publication/plg08-guidance-on-the-application-of-adaptive-lighting-within-the-public-realm/
[41] ILP (2014) Lighting Landscapes. Available at: https://theilp.org.uk/publication/lighting-landscapes/
[42] BSI (2020). BS 5489-1:2020 – Design of road lighting. Lighting of roads and public amenity areas. Code of practice.
[43] BSI (2015). BS EN 13201-2:2015 – Road Lighting Part 2: Performance Requirements.
[44] BSI (2014). BS EN 12464-2:2014 – Light and Lighting. Lighting of work places. Outdoor work places.
[45] SLL (2009). Lighting Handbook.
[46] CIBSE (2016) LG6 The exterior environment.
[47] CIRIA (2002). Report C572: Treated ground engineering properties and performance.
[48] British Research Establishment (2015). FB75: Building on Fill - Geotechnical Aspects. 3rd Edition.
[49] British Standard (2009). 6031:2009: Code of Practice for Earthworks.
[50] Secured by Design - Secured by Design
[51] The Hazardous Waste (England and Wales) Regulations 2005, No. 894.
[52] BRE (2018). Home Quality Mark ONE, Technical Manual England. Available at: Home Quality Mark ONE
[53] This has been established using professional judgement and is based on good practice principles developed within the Home Quality Mark.
[54] Environmental Protection Act 1990 No. 43 Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents
[55] 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
[56] untitled

7. Townscape and Visual

Introduction

7.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Townscape and Visual Impact.

7.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.

7.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).

7.4 This Chapter, and its associated **Appendix 7.1** and **Appendix 7.2** is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

7.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

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

Table 7.1: Summary of Consultation

Body / Organisation	Date and Form of Consultation	Summary
MCC	10th October 2024 Pre-application meeting	Agreement was sought for the 16 viewpoint locations that are the basis for this assessment (no response was received from MCC).

Scope of the Assessment

Effects Not Considered to be Significant

7.7 Most townscape and visual effects are considered to be significant as the assessment on a per viewpoint basis has confirmed. In a few cases the effects are not significant.

7.8 The Zone of Theoretical Visibility (ZTV) map recorded on Figure 7.2 (**Appendix 7.1**) confirms that the Proposed Scheme will have no effect in the core city centre zones largely due to a number of factors, namely: tight urban grain, street orientation, topography and limited

scale of the Proposed Scheme. In a few instances the top of the building may be glimpsed but the predicted effect in such cases is negligible to no change and is not significant. This situation applies to the following city centre zones:

- Victoria;
- Northern Quarter;
- The Village;
- Central Business District;
- Northern Quarter;
- Retail Core;
- Chapel Street;
- Salford;
- Spinningfields;
- St Johns;
- Petersfield;
- Castlefield;
- Southern Gateway;
- The Corridor Manchester; and
- Hulme.

Effects Considered Likely to be Significant

7.9 **Table 7.2** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 7.2: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Change to townscape character	Townscape character zones which including: Piccadilly Gateway, Eastern Gateway, Ancoats, New Islington, Miles Platting and Medlock Valley	Construction / Operation
Change to the character composition and amenity of views	Visual receptors at the following viewpoints: Viewpoint 1 Old Mill Street Viewpoint 2 Old Mill Street	Construction / Operation

Likely Significant Effect	Receptors	Applicable Stage
	Viewpoint 3 New Islington Basin	
	Viewpoint 4 Rochdale Canal	
	Viewpoint 5 Great Ancoats Street	
	Viewpoint 6 Vantage Quay Bridge	
	Viewpoint 7 Rochdale Canal	
	Viewpoint 8 Store Street	
	Viewpoint 9 Great Ancoats Street	
	Viewpoint 10 Pollard Street	
	Viewpoint 11 Great Ancoats Street	
	Viewpoint 12 Old Mill Street	
	Viewpoint 13 Store Street	
	Viewpoint 14 Store Street	
	Viewpoint 15 Redhill Street	
	Viewpoint 16 Ducie Street	

Assessment Methodology

Legislative Framework, Policy and Guidance

7.10 The following legislation and policy have informed the assessment of effects within this Chapter:

National Planning Policy Framework

7.11 The National Planning Policy Framework (NPPF)[1] sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

7.12 Key aspects of the NPPF, revised in December 2024, which apply to the Townscape and Visual Impact Assessment are the paragraphs 131 and 135 below:

- (Para.131) The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process.

- (Para.135) Planning policies and decisions should ensure that developments:

  (a) Will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

(b) Are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

(c) Are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

(d) Establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

(e) Optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

(f) Create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users46; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.

Local planning policy

7.13 The following relevant policies are set out below as extracts from Manchester City Council's Core Strategy:

"The Core Strategy was adopted by Manchester City Council on 11th July 2012. It is the key document in Manchester's Local Development Framework and covers a period of 15 years from 2012 to 2027. It describes Manchester today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision.

Relevant Policies include:

Policy EN 1 - Design Principles and Strategic Character Areas

All development in Manchester will be expected to follow the seven principles of urban design, as identified in national planning guidance and listed above and have regard to the strategic character area in which the development is located. Opportunities for good design to enhance the overall image of the City should be fully realised, particularly on major radial and orbital road and rail routes. Design and Access Statements submitted with proposals for new development must clearly detail how the proposed development addresses the design principles, reinforces and enhances the local character of that part of the City and supports the achievement of the Core Strategy Strategic Objectives."

7.14 The City Centre Character Area is of relevance to the Proposed Scheme. This area has been broken down into distinct townscape character zones by Manchester City Council and the extent and nature of the impact of the Proposed Scheme on these zones is described in more detail later in this chapter. The Core Strategy also refers to tall buildings:

Policy EN2 - Tall Buildings

"Tall buildings are defined as buildings which are substantially taller than their neighbourhoods and/or which significantly change the skyline.

Proposals for tall buildings will be supported where it can be demonstrated that they

- *Are of excellent design quality,*
- *Are appropriately located,*
- *Contribute positively to sustainability,*
- *Contribute positively to place making, for example as a landmark, by terminating a view, or by signposting a facility of significance, and;*
- *Will bring significant regeneration benefits.*

A fundamental design objective will be to ensure that tall buildings complement the City's key existing building assets and make a positive contribution to the evolution of a unique, attractive and distinctive Manchester, including to its skyline and approach views.

Suitable locations will include sites within and immediately adjacent to the City Centre with particular encouragement given to non-conservation areas and sites which can easily be served by public transport nodes.

Elsewhere within Manchester tall building development will only be supported where, in addition to the requirements listed above, it can be shown to play a positive role in a coordinated place-making approach to a wider area. Suitable locations are likely to relate to existing district centres. The height of tall buildings in such locations should relate more to the local, rather than the City Centre, urban context.

By their very size tall buildings can have a significant impact on the local environment and its micro-climate. It is therefore expected that this impact be modelled and that submissions for tall buildings also include appropriate measures to create an attractive, pedestrian friendly local environment.

It will be necessary for the applicant/developer to demonstrate that proposals for tall buildings are viable and deliverable".

7.15 Significantly, the Core Strategy offers further guidance in relation to the development of tall buildings as follows:

"*Tall Buildings can provide a sense of place and distinctiveness, however as high development can have a substantial impact on an area careful consideration should be given to each proposal.*

The NPPF requires local authorities to have regard to best practice in design, such as "By Design - Urban Design in the Planning System: Towards better practice" and "By Design – Better places to live". Policies are not to be overly prescriptive but, amongst other things, should concentrate on guiding height in relation to neighbouring buildings and the local area in general. Innovation should not be stifled but local distinctiveness should be reinforced. PPS4 directs planning authorities to set flexible policies for their centres which can respond to changing economic circumstances and encourage where appropriate high density development accessible by public transport, walking and cycling.

In the context of ensuring sustainable development, the City Centre is clearly a location that requires the prudent use of scarce land resources. It is generally well served by public transport and one where a high density of development is consistent with its distinctive character. The City Centre is, in general, considered an appropriate area for tall buildings. The growth of the City Centre is still evolving, particularly in relation to the development of fringe sites, and proposals need to be considered having regard to the character of the places in which they are proposed. Therefore, whilst some parts of the City Centre are more or less likely to be suitable for tall buildings, the Council does not consider a site specific policy that identifies detailed locations for a tall building to be appropriate. The Council is aware that over the 15 year plan period there is a need to be flexible and to be able to respond to changing economic conditions. The above criteria based policy is therefore set out, which will together with other design policies, form the policy context against which all proposals for tall buildings will be considered.

Elsewhere across the City, District Centres may be appropriate locations for "tall" buildings. Being generally accessible to the local population and well served by public transport, they are natural foci for developments that attract a larger number of people. The definition of tall as being in relation to neighbouring buildings should be noted, however, as the scale of development acceptable within a District Centre is unlikely ever to match that within the City Centre.

Tall buildings by their very nature can dominate the street scene and be highly visible over long distances. They can also have an impact on the local micro-climatic conditions, for example, by creating wind tunnels. It is for these reasons that it is considered particularly important that they are designed to the highest quality, both in terms of appearance and their impact on the functioning of surrounding space."

Policy EN3 - Heritage

7.16 Throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods, including those of the City Centre.

7.17 New developments must be designed so as to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance, including scheduled ancient monuments, listed buildings, registered parks and gardens, conservation areas and archaeological remains.

7.18 Proposals which enable the re-use of heritage assets will be encouraged where they are considered consistent with the significance of the heritage asset." (Ref 8.3)

7.19 There are a number of extant Manchester City Council Unitary Development Plan (UDP) Policies, of which Policies 18 and 19 (relating to Conservation Areas and Listed Buildings) remain relevant. Heritage impacts are discussed and evaluated in more detail in this ES at **Chapter 8: Built Heritage**.

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

- Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd Edition 2013 landscape Institute and Institute of Environmental Management and Assessment[2];

- Historic England Advice Note 4: Tall Buildings[3];
- Manchester Residential Quality Guidance[4];
- History in the View prepared for English Heritage by LUC in 2011[5]; and
- Landscape Institute Technical Guidance Note 06/19 Visual Representation of Development Proposals[6].

Defining the Study Area

7.21 The study area marked on Figure 7.1 Study Area (**Appendix 7.1**) for this assessment comprises an area of approximately 1km in radius centred on the Site. In view of the scale of the Proposed Scheme, topography, urban grain and its location this was judged to be an appropriate distance. It includes Manchester City Centre and areas to the north of the inner ring road.

Assessment Process

7.22 This Townscape and Visual Impact Assessment (TVIA) has been undertaken in accordance with the methodology and approach set out in the 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) Third Edition' (2013) – produced by the Landscape Institute (LI) and IEMA:

"The GLVIA requires that a clear distinction is drawn between landscape (which includes the urban townscape) and visual effects:

Townscape effects relate to the degree of change to characteristics or physical components of an urban area, which together form the character of that townscape, e.g. topography, buildings and vegetation.

Visual effects relate to the degree of change to an individual receptor's or a receptor group's view of that townscape, e.g. local residents, users of public footpaths or motorists passing through the area."[7]

Assessment of Visual Effects

7.23 The Zone of Theoretical Visibility (ZTV) in the context of the surrounding topography and the height of the Proposed Scheme, has been established initially through 3D modelling using Lidar DSM data combined with 10K base mapping to produce a ZTV or Viewshed map, Figure 7.2 in **Appendix 7.1**, and then confirmed as part of the field work exercise. It covers the area immediately surrounding the Site to a distance of approximately 1km. The Proposed Scheme will be far from universally visible as tight urban grain, streets that are not orientated towards the Site, trees and variations in topography, combine to exclude many views from the surrounding streets and public areas. The ZTV does however, provide a quick guide as to the Proposed Scheme's visibility.

7.24 As with other TVIAs, and in accordance with guidance issued in GLVIA, the usual, and accepted, practice of selecting and assessing of a range of "Representative Viewpoints", all publicly accessible, has been adopted as being the most appropriate and practical method of assessing and understanding the visual impact of the Proposed Scheme from a range of viewpoints surrounding the Site. These viewpoint locations are marked in **Appendix 7.1** on Fig 7.1 ZTV and viewpoints and Fig. 7.2 Study Area, Character Areas and Viewpoints and illustrated by way of photographs taken from these viewpoints.

7.25 Viewpoints were selected to cover a number of different locations to reflect the experience of different types of visual receptor and viewing distance. Accordingly, viewpoints ranged from immediate proximity to the Proposed Scheme to surrounding neighbourhoods. Viewpoints included: streets, public parks and gardens, canal towpaths and footpaths and main approach roads.

7.26 During the main field assessment process which occurred in July 2024, baseline viewpoint photographs were initially taken using a Canon E500 DSLR camera, for consultation purposes, but then subsequently retaken by Virtual Planit using a Canon R5 FFS with a Canon 24 TS-E 24mm lens. Full justification for the use of this camera and lens, together with recommendations on presentation and viewing distance are contained in **Appendix 7.2**.

7.27 The effect of the Proposed Scheme is then assessed from each of the viewpoints using the information on the height of the building provided by the architects Simpson Haugh and the accurate interpretation of this information by Virtual Planit in the form of a series of Accurate Visual Representation (AVR) images which are presented as fully rendered or wireline outlines of the Proposed Scheme superimposed onto photographs from each viewpoint.

7.28 The following scenarios have been assessed against the baseline (2024) as follows

- Peak Construction – The assessment of effects for this stage has been based on the construction of the Proposed Scheme from ground level upwards.
- Fully Operational (as defined in **Chapter 4: Development Specification**) – this considers the effects associated with the completion of the Proposed Scheme

Reporting of the Environmental Effect and Significance Criteria

7.29 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

Determining Sensitivity of Receptor

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

Townscape sensitivity

7.31 The assessment of townscape sensitivity is a function about judgements made on the susceptibility of the townscape to change and the value of the townscape concerned.

7.32 Townscape Value is "*the relative value that is attached to different landscapes by society*" (GLVIA 3rd edition) . It is assessed on the following scale along with assessment of various undesignated townscape attributes:

Table 7.3: Townscape Value

Value	Description
High	Sites, features or areas of national or international importance with settings of high quality such as World Heritage Site, AONB, National

Value	Description
	Parks, Grade I and Grade II* Listed buildings or Registered Parks and Gardens.
Medium	Sites, features or areas of local or regional importance with intact character such as Grade II* and Grade II Listed Buildings or Registered Parks and Gardens, Conservation Areas, Scheduled Monuments, local nature site, long distance recreational routes. Tree Preservation Orders (TPO) and local designations that exhibit wider geographic, cultural or townscape significance.
Low	Areas or features of local importance such as Tree Preservation Orders (TPO), Public Right of Way (PROW) and locally listed buildings.

7.33 The overall sensitivity of each townscape receptor would be rated within the range of High-Medium-Low and would be informed by combining the susceptibility with the value as described above.

Townscape: Sensitivity of Receptor

7.34 The sensitivity of a townscape receptor is an expression of its ability to accommodate the Proposed Scheme. Sensitivity is a judgement based on a combination of the susceptibility of the type of change or development proposed and the value attached to the townscape, as set out below.

7.35 Susceptibility indicates the ability of a defined townscape receptor to accommodate the proposed development "without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies." (GLVIA, 3rd version, para 5.40). A description of how susceptibility would be evaluated for each receptor type is included below:

Table 7.4: Susceptibility of Townscape Receptor

Susceptibility	Criteria
High	Little ability to accommodate the proposed development without undue harm.
Medium	Some ability to accommodate the proposed development without undue harm.
Low	Substantial ability to accommodate the proposed development without undue harm.

Visual receptors: Sensitivity of Receptor

7.36 In terms of assessing the baseline visual sensitivity, key factors to consider are the type of view and the likely numbers and types of viewers (the visual receptors). The type of view and the number of viewers are described in the following terms:

- Glimpsed (i.e. in passing) / Filtered / Oblique / Framed / Open Views; and Few / Moderate / Many Viewers;

- The value attached to views has regard to a number of factors, including:
  - Recognition through planning designations or heritage assets; and
  - The popularity of the viewpoint, its appearance in guidebooks, literature or art, on tourist maps and the facilities provided for its enjoyment.

7.37 The GLVIA identifies that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and
- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

7.38 The assessment of receptor sensitivity is rated on the scale High-Medium-Low, and combines judgements on the susceptibility of the receptor to the specific type of development proposed and the value attributed to that receptor, determined from the criteria below.

Table 7.5: Visual Receptor Susceptibility

Susceptibility	Type of Receptor
High	Users of public space, including users of public rights of way, whose attention is likely to be focused on the townscape and on particular views; Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience such as the Rochdale Canal; Communities where views contribute to the townscape setting enjoyed by residents; and Travellers on scenic routes. Canal users
Medium	Travellers on road, rail or other transport routes, where the view is moderately important to the quality of the journey; and Users of public space, where the view is part of the wider experience of the place.
Low	People at their place of work, where the setting is not important to the quality of working life; Travellers on road, rail or other transport routes, where the view is fleeting and incidental to the journey; and People engaged in outdoor sport or recreation, or users of a public space, which does not involve appreciation of views.

Table 7.6: Visual Receptor value

Value	Criteria
High	Views from townscapes/viewpoints of national importance, or highly popular visitor attractions where the view forms an important part of the experience, or with important cultural associations. An example may be where the viewpoint features a nationally important designated asset as the main focus of the view.
Medium	Views from townscapes/viewpoints of regional/district importance or moderately popular visitor attractions where the view forms part of the experience, or with local cultural associations. The viewpoint may be a good location to view a designated asset of regional/ local importance, or where a nationally important designated asset is not the main focus of the view.
Low	Views from townscapes/viewpoints with limited designations, not particularly popular as a viewpoint and with minimal or no cultural associations. The viewpoint may include designated assets of regional/local importance which do not form the main focus of the view.

Determining the Magnitude of Change

7.39 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.

Townscape: Magnitude of Change

7.40 The magnitude of a townscape effect is assessed in terms of its size or scale, the geographical extent of the area influenced by that effect, and its duration and degree of reversibility and would be rated within the range of Major-Moderate-Minor-Negligible-No Change set out below:

Table 7.7: Magnitude of Townscape Effect

Category	Criteria
Large adverse townscape effect	The proposals will result in a total change in the key characteristics of townscape character; will introduce elements totally uncharacteristic to the attributes of the receiving townscape; and/or will result in a substantial or total loss, alteration or addition of key elements/features/characteristics.
Medium adverse townscape effect	The proposals will result in a partial change in the key characteristics of townscape character; will introduce elements partially uncharacteristic to the attributes of the receiving townscape; and/or will result in partial loss, alteration or addition of key elements/features/characteristics.

Category	Criteria
Minor adverse townscape effect	The proposals will result in a small change in the key characteristics of townscape character; will introduce elements that are not uncharacteristic to the attributes of the receiving townscape; and/or will result in a minor loss, alteration or addition of elements/features/characteristics.
Negligible adverse townscape effect	The proposals will result in a just discernible change to townscape character/elements/features/characteristics.
Negligible townscape benefit	The proposals will result in a just discernible improvement to the townscape character/elements/features/characteristics.
Minor townscape benefit	The proposals will achieve a degree of fit with the townscape character/elements/features/characteristics and go some way towards improving the condition or character of the townscape.
Medium townscape benefit	The proposals will achieve a good fit with the townscape character/elements/features/characteristics, or would noticeably improve the condition or character of the townscape.
Large townscape benefit	The proposals will totally accord with the townscape character/elements/features/characteristics, or would restore, recreate or permanently benefit the condition or character of the townscape.
No Change	The proposals will not cause any change to the townscape character/ elements/ features/ characteristics.

7.41 The size and/or scale of change in the townscape takes into consideration the following factors:

- The extent/proportion of townscape elements lost or added;
- The contribution of that element to townscape character and the degree to which aesthetic/perceptual aspects are altered; and
- Whether the effect is likely to change the key characteristics of the townscape, which are critical to its distinctive character.

7.42 The geographical extent of effects relates to:

- The area over which townscape effects are likely to be experienced, i.e. this could be at the site level, the immediate setting of the site, or townscape character type or area;
- The area over which visual effects are likely to be visible; and duration.

Visual: Magnitude of Effect

7.43 The magnitude of a visual effect is assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility and will be rated within the range of Major-Moderate-Minor-Negligible-No Change set out below.

Table 7.8: Magnitude of visual effect

Category	Criteria
Large adverse or beneficial visual effect	The proposals will cause a dominant or complete change or contrast to the view, resulting from the loss or addition of substantial features in the view and will substantially alter the appreciation of the view.
Medium adverse or beneficial visual effect	The proposals will cause a clearly noticeable change or contrast to the view, which would have some effect on the composition, resulting from the loss or addition of features in the view and will noticeably alter the appreciation of the view.
Small adverse or beneficial visual effect	The proposals will cause a perceptible change or contrast to the view, but which would not materially affect the composition or the appreciation of the view.
Negligible adverse or beneficial visual effect	The proposals will cause a barely perceptible change or contrast to the view, which would not affect the composition or the appreciation of the view.
No change	The proposals will cause no change to the view.

7.44 The size or scale of change in the view relates to the degree of contrast or integration likely to result from the Proposed Scheme and is influenced by the relative time over which a view is experienced and whether it is a full, partial or glimpsed view.

Determining the Level of Effect

7.45 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 7.9** has been a tool which has assisted with this process.

7.46 Whilst **Table 7.9** 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 7.9: Matrix to Support Determining the Level of Effect

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

7.47 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.

7.48 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

7.49 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. For the purposes of this TVIA, moderate effects and above are considered to be Significant.

7.50 The visual and townscape effects of the completed Proposed Scheme are summarized with respect to the effects of the Proposed Scheme on the Townscape Character through a narrative description of the nature of the effect on each of the Representative Viewpoints

which lie within each character area. The effects on both townscape and visual receptors is examined in each case. Selected key viewpoints have been subjected to the insertion of an Accurate Visual Representation (AVR) into a baseline photograph so that the extent of both townscape and visual effects can be judged more accurately. The results of this exercise can be found in **Appendix 7.1**. In each case the effect of the Proposed Scheme is compared with the baseline condition or view and an assessment made in terms of receptor susceptibility, value of townscape setting or view, receptor sensitivity and magnitude of change in accordance with the methodology set out above. A judgement is then made as to whether the effect is of major to negligible significance of effect using the Effect Significance Matrix in **Table 7.9**

7.51 The determination of whether an effect is 'Significant' or 'Not Significant' is only determined for residual effects (i.e. after the application of all mitigation measures included as primary and tertiary mitigation, are now part of the agreed design and incorporated as the proposed development progressed towards design freeze). The AVR images reflect this and therefore all the townscape and visual effects assessed below are, in fact, residual effects as embedded mitigation has been taken into account. A professional judgement is then made as to whether the effect is of an adverse or beneficial nature.

7.52 The effects below are primarily concerned with the effects on townscape character and visual receptors. The effects on heritage assets, including listed buildings and Conservation Areas is dealt with in more detail in **Chapter 8: Built Heritage** (and **Appendix 8.1**). Reference will be made however, to heritage assets that appear in any of the Representative Views as they often play an important part in determining townscape character but no judgement will be made as to the effect of the Proposed Scheme on them to avoid unnecessary duplication.

Baseline Conditions

Field Surveys

7.53 In accordance with guidance contained in GLVIA 3, field surveys were undertaken in July 2024 to explore the current baseline of Manchester City Centre Townscape Character Zones, confirm the Zone of Theoretical Visibility and identify and establish a series of Representative Viewpoints for assessment subsequently subject to Accurate Visual Representation (AVR). More precise photography and survey work was subsequently carried out by Virtual Planit, Architectural Visualization Specialists, details of which can be found in their Methodology Statement **Appendix 7.2**.

7.54 The assessment of the baseline for Townscape Character has been based on Manchester City Centre Strategic Character Areas and City Centre Zones. It includes an assessment of the elements it comprises such as built form and styles, urban grain and street pattern, soft elements such as green spaces and trees and a sense of place and effect that the Proposed Scheme is judged to have on them. The areas which could be potentially affected by the Proposed Scheme are:

Manchester City Centre Character Zones

- Piccadilly Gateway; and
- Eastern Gateway.

Outer Character Zones

- Ancoats;
- Miles Platting;
- New Islington; and
- Medlock Valley.

7.55 The outer character zones which lie outside the Manchester City Centre Zones have been surveyed and established as part of this study and mapped on the basis of shared townscape character characteristics.

7.56 A summary set out below describes the main attributes and characteristics of each of the Inner City Zones and Representative Viewpoints that may be potentially affected by the Proposed Scheme at the time this assessment was undertaken in July 2024. Each character area is referenced on Figure 7.3: Inner City Zones and Viewpoints (**Appendix 7.1**). Only those areas which have the potential to be affected by the Proposed Scheme are included.

7.57 Much of north Manchester is currently going through a major phase of new development with construction which affects many of the areas surrounding the Site. Some development, but not all, will have the capacity to alter the visual and townscape baseline more significantly than others. In terms of the baseline assessment the GLVIA advises that 'existing schemes and those under construction should be included in the baseline for both landscape (townscape in this case) and visual effects baseline 'and that 'the baseline for assessing cumulative landscape (townscape) effects should include those schemes and in addition potential schemes that are not yet present in the landscape but are at various stages in the development and consenting process.' [8]

7.58 For the purposes of this assessment therefore, the baseline conditions that prevail at the current time (2024) in terms of Townscape Character and Views are described below and include relevant schemes under construction at the present time. Those developments that are coming forwards and are likely to be operational between the years of construction, the Predicted Baseline, are described and assessed in **Chapter 15: Assessment of Cumulative Effects**.

7.59 A brief description is now made of the baseline townscape character of each of the affected zones with reference made to the baseline viewpoint photographs in **Appendix 7.1**.

Manchester City Centre Character Zones

Piccadilly Gateway

7.60 This area is one of the region's primary gateways and often forms the first impression of the city for visitors arriving by rail. In recent years it has seen improvements to Piccadilly railway station and Piccadilly Gardens and development has continued around the Piccadilly Canal Basin. The area in front of the railway station has been redeveloped to create a mixed use primarily office development with hotels and residential uses and a bridge link to the upper levels of Station Approach.

7.61 The zone contains a number of distinct character areas and areas in close proximity to Piccadilly Station have been identified by Manchester City Council as a priority for regeneration with significant potential for development. The Piccadilly Strategic Regeneration Framework envisages Piccadilly Central as a medium to high density area, commensurate with other major regeneration areas in the city centre, together with a mix of residential and commercial uses to form a sustainable pattern of development that capitalises on the accessible nature of the Site. The area to the west of Piccadilly, some distance from the Site and not likely to be affected, is a mix of civic and commercial buildings and formal open spaces. The Metrolink connecting Piccadilly station and the main interchange in Piccadilly Gardens bisects the area. The latter with its lawns, water features, tree planting and pavilion forms a significant public green space. The square is enclosed on all sides by large massed buildings including the landmark City Tower. The construction of One Piccadilly on a former part of the garden has helped to increase the sense of visual enclosure. Elsewhere, the building forms are generally large and, in some cases tall, such as 111 Piccadilly.

7.62 To the north of this zone, immediately adjacent to the Inner Ring Road and not far from the Site, a major new tall building development, Oxygen, is now complete and operational and has become an important, and prominent, feature of the baseline. The East Village Strategic Regeneration Framework was adopted by Manchester City Council in 2023 for the regeneration of the site at Stocktons Furniture and Presbar Diecasting. The framework aims to turn 30-40% of the combined area of both sites into public space in the form of green spaces, enhanced animated frontages and publicly open accessible routes through the site linking Store Street, Ducie Street, Store Street Aqueduct and the Ashton Canal Tow Path. Once again, because of the dense urban grain and mostly level topography long distance views out are non-existent. However, there are pockets of dense residential development in close proximity to the Site and one such viewpoint has been selected to illustrate the effects.

7.63 This character zone is reflected by Representative Views: 6,7,13,14,16.

Eastern Gateway

7.64 The Site is located in this zone and is situated within the East Village Framework. This character area is generally occupied by light industrial and commercial premises and is generally of low quality townscape character often incoherent, disparate and fragmentary with a lack of unifying style or structure. The land falls away in a south westerly direction towards the River Medlock which runs through the lower half resulting in views of a discontinuous horizon from the lower ground.

7.65 The East Village Strategic Regeneration Framework was adopted by Manchester City Council in 2023 for the regeneration of the site at Stocktons Furniture and Presbar Diecasting. The framework aims to turn 30-40% of the combined area of both sites into public space in the form of green spaces, enhanced animated frontages and publicly open accessible routes through the site linking Store Street, Ducie Street, Store Street Aqueduct and the Ashton Canal Tow Path.

7.66 Manchester Piccadilly station also sits within this character zone but is orientated away from the Site with rail routes flowing in a south easterly direction. The main inner ring road also forms the northern boundary of this zone.

7.67 New residential development can, however, be found on the northern boundary of this zone manifest in Piccadilly Village a 1990's development along the Ashton canal.

7.68 This character zone is reflected by Representative View: 8.

Additional Character Zones

Ancoats

7.69 This zone includes a number of different character areas north east of the main inner ring road formed by Great Ancoats Street. The main historic part of the area is centred on the narrow streets of Ancoats Urban Village. Here, a mix of significant mills and old terraces have been conserved as part of Manchester's important industrial heritage. Within this area the Rochdale Canal Corridor provides one of the few opportunities for more open views of the city centre. Elsewhere, the street pattern and dense building mass and tight urban grain confine views within the area. The Rochdale Canal borders this character area to the south east.

7.70 The quality of townscape is generally high over much of this zone reflected by the fact that is has a Conservation Area which covers much of it.

7.71 This character zone is reflected by Representative Viewpoint 11 and 15.

Miles Platting

7.72 This a predominantly low rise residential district of north Manchester. The urban grain is reasonably dense in most places and consist of streets of modern 2 storey terraced housing. Much of the street pattern is organic with no defined structure and development is largely modern in origin. There are no Conservation areas within this zone. Occasionally however, high rise residential tower blocks rise above street level. The recently landscaped green open space associated with the Rochdale canal provides a welcome contrast and allows views of Manchester City centre to the south.

7.73 This character zone is reflected by Representative Viewpoint 2.

New Islington

7.74 An area immediately adjacent to the Site has been the focus of a considerable amount of regeneration since funding was secured in 2002. It includes Will Allsop's Chips building, amongst other multi storey development. Typically, the flat or apartment blocks are 8 storeys high and combine well with areas of green space and canal basins such as Cotton Field Park. Views of Manchester City Centre to the south can be obtained from these more open areas.

7.75 This character zone is reflected by Representative Viewpoints 1,3,4,5,12

Medlock Valley

7.76 Townscape character is shaped by the river Medlock which flows in shallow valley through the centre of this zone. Much of it is heavily wooded or green open space. Development is restricted to semi-detached and terraced residential dwellings of recent post war origin

arranged in cul de sac road layouts but a block of historic Mill buildings, the Cooperative Warehouse scheme, Albion Mill, currently under residential conversion, is situated in the north west corner of this zone and forms a landmark property close to the Inner ring road adjacent to Pollard Street.

7.77 This character zone is reflected by Representative Viewpoints 9, 10.

7.78 The baseline for visual receptors is described with reference to the narrative description for each of the Representative Viewpoints.

Future Baseline

7.79 Development is proceeding in all zones above at the present time and those schemes predicted to have an effect on the baseline are described and assessed in **Chapter 15**. If the Proposed Scheme is not implemented then it is likely the buildings that are currently on site will deteriorate slowly over time as they are in poor condition at present with minimal maintenance.

Primary and Tertiary Mitigation

Construction Stage

7.80 The following primary and tertiary mitigation has been evaluated as part of the construction stage assessment:

- The erection of temporary hoardings at ground level around the Site to limit views of the construction site at ground level. However, the screening function of these hoardings will be ineffective once the Proposed Scheme rises above them.

Operational Stage

7.81 The following primary and tertiary mitigation has been evaluated as part of the operational stage assessment:

- Careful incorporation of various features of the both Buildings A and B have been an integrate part of reduction in overall mass and an improvement in composition of the tall building cluster at this point. These include: the vertical full height 'holding' piece, the intermediate volumes broken at regular intervals at levels 9,19 and 31 and a fenestration pattern that adds texture and grain to the façade. The external elevations are softened also by a collage of modern, smooth shades and tones intrinsic to the use of grey, anodized aluminium.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

7.82 The construction stage effects, as with the operational stage effects, are assessed against the current baseline. A summary table, **Table 7.10** is produced below which summarizes the effects of the demolition and construction on the viewpoints, and surrounding townscape character, for each of the selected 16 Representative Viewpoints in each of the Character Zones using the same sensitivity of receptor and magnitude of effect values derived in the assessment of operational stage effects section below (NB for an explanation of how these

values have been derived see the narrative for each viewpoint in the Operational Effects section below).

7.83 The magnitude of change and the significance of effect does differ, however, in one important respect as the construction stage is likely to produce unsightly effects in its own right and provides a series of adverse effects on views and townscape character as a result. However, it should be noted that the construction period is medium term and temporary in nature.

7.84 The effects set out below are residual in nature as primary and tertiary mitigation measures i.e. hoardings have been taken into account and no secondary mitigation is relevant.

Table 7.10: Effects of demolition and construction

Effect Construction Stage	Receptor	Residual Effect	Is the Effect Significant?
Change to Townscape character	Zone C Piccadilly see narrative description for Viewpoints 6, 7, 13, 14 and 16	Moderate Adverse to Major Adverse	YES
	Zone D Eastern Gateway see narrative description for Viewpoint 8	Moderate Adverse	YES
	Zone G Ancoats see narrative description for Viewpoints 11 and 15	Moderate Adverse to Major Adverse	YES
	Zone H New Islington see narrative description for Viewpoints 1, 3, 4, 5 and 12	Moderate Adverse to Major Adverse	YES
	Zone I Miles Platting see narrative description for Viewpoint 2	Minor Adverse	NO
	Zone J Medlock Valley see narrative description for Viewpoints 9 and 10	Minor Adverse to Moderate Adverse	NO
Change to the character composition and amenity of views	Viewpoint 1 Old Mill Street	Moderate Adverse	YES
	Viewpoint 2 Old Mill Street	Minor Adverse	NO
	Viewpoint 3 New Islington Basin	Major Adverse	YES
	Viewpoint 4 Rochdale Canal	Major Adverse	YES
	Viewpoint 5 Great Ancoats Street	Minor-Mod Adverse	YES
	Viewpoint 6 Vantage Quay Bridge	Major Adverse	YES

Effect Construction Stage	Receptor	Residual Effect	Is the Effect Significant?
	Viewpoint 7 Rochdale Canal	Major Adverse	YES
	Viewpoint 8 Store Street	Moderate Adverse	YES
	Viewpoint 9 Great Ancoats Street	Minor Adverse	NO
	Viewpoint 10 Pollard Street	Moderate Adverse	YES
	Viewpoint 11 Great Ancoats Street	Moderate Adverse	YES
	Viewpoint 12 Old Mill Street	Moderate Adverse	YES
	Viewpoint 13 Store Street	Moderate Adverse	YES
	Viewpoint 14 Store Street	Moderate Adverse	YES
	Viewpoint 15 Redhill Street	Major Adverse	YES
	Viewpoint 16 Ducie Street	Moderate Adverse	YES

Operational Stage

Change to townscape character / Change to the character composition and amenity of views

Piccadilly Gateway

Viewpoint 6 Vantage Quay Bridge over Rochdale Canal

7.85 This viewpoint is located in a quiet area in the heart of this character area but townscape character is incoherent here with many disparate elements. Residential buildings dominate in this quiet backwater dominated by the Rochdale Canal and its basin. Construction work is ongoing near reducing townscape susceptibility which is judged to be low. The canal is a significant heritage asset so townscape value is high which infers that townscape sensitivity is medium overall. Similarly visual receptor susceptibility is high as receptors will be drawn from visitors where the views of the surroundings are an important part of the experience. The same judgement applies to visual receptor value so visual receptor sensitivity is high here. In terms of magnitude of change tall buildings are already a feature of the horizon in the form of the Oxygen development. The Proposed Scheme will add significantly to the skyline rising well above its neighbour but in a relatable way that increases visual diversity. All the key components of the design of Building A that have been deployed to break the vertical form of the buildings and reduce its mass are fully visible here. This includes the vertical full height 'holding' piece, the intermediate volumes broken at regular intervals and a fenestration pattern that adds texture and grain to the façade. The external elevations are softened also by a collage of modern, smooth shades and tones intrinsic to the use of grey, anodized aluminium. As a consequence, the magnitude of change is judged to be medium beneficial which, in the context of medium and high receptor sensitivity, translates to a significance of effect value of major beneficial for townscape and visual receptors which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 7 Rochdale Canal

7.86 This location is on the Ashton Canal bridge over Store Street. New and recent construction dominates the view implying townscape susceptibility is low. Townscape value is high however, as the viewpoint is situated on an asset of significant heritage value. Townscape sensitivity is medium as a result. Similarly visual receptor susceptibility is high as receptors will be drawn from visitors where the views of the surroundings are an important part of the experience. In addition to which residential dwellings are nearby. The same judgement applies to visual receptor value so visual receptor sensitivity is high at this location. Once again due to the scale and height of the Proposed Scheme in relation to the proximity of the viewpoint the magnitude of change is judged to be large. Both components of the Proposed Scheme reflect the urban grain and orientation of the street pattern in this view and balance the opposing development, Oxygen, to good effect. The volume breaks in this elevation at levels 9,19 and 31 provide visual interest and break the profile into discrete segments and help to reduce the mass and vertical form of Building A. Building B, relates well to the existing Oxygen development in terms of scale and height and balances the cluster. With its simple fenestration pattern, constructed from a supergrid of light coloured concrete, it also provides a simple contrast to the textures and profile of Building A. Altogether the Proposed Scheme is judged to make a positive contribution, or a Large and beneficial, magnitude of change, for both receptor categories which translates into a major beneficial significance of effect which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 13 Store Street Heritage View

7.87 This a viewpoint selected for heritage assessment purposes but in townscape terms sensitivity is low and heavily influenced by the Oxygen developments at the intersection with the ring road despite proximity to the heritage asset. Visual sensitivity is low also at this busy intersection. Magnitude of change for both categories of receptor will be large and dramatic. The replacement of a low level disused, non listed, warehouse and associated carpark with a modern street frontage that balances the Oxygen development, in a consistent way, is judged to be beneficial. There will be a clear distinction between Building A and the retained brick built warehouse adjacent to it. As a result, the significance of effect is recorded as being moderate beneficial which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 14 Store Street Heritage View

7.88 A similar scenario at this location which is short distance from the intersection of Store Street with townscape and visual receptor values of low. Magnitude of change for both categories of receptor will also be large and dramatic. Both Buildings will be visible in this view as background buildings but any development above the viewer's natural eyeline is unlikely to play a significant part in this view as the Proposed Scheme is so close and only the lower levels will feature prominently. The clear distinction between Building A and B and the retained brick built warehouse adjacent will remain. As a result, the significance of effect is recorded as being moderate beneficial which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 16 Ducie Street Heritage View

7.89 A quiet street a short distance away from the Proposed Scheme has heritage assets in the view. Construction activity and the presence of commercial premises reduces the levels of both townscape and visual sensitivity to low for this viewpoint. In terms of magnitude of change the full extent of the modular construction is on view from this viewpoint. Also

manifest from this viewpoint is the contribution Building A makes to townscape character and the composition of the tall building cluster as a whole. Sandwiched between 2 lower components Oxygen, which steps up towards it, and Building B, the taller Building A makes sense of the cluster and provides a clear landmark which is judged to be large and beneficial both in townscape terms and visually also. At this oblique angle the volume breaks at levels 9,19 and 31 combine well with the vertical 'holding piece' to improve visual diversity and reduce the sense of mass. When combined with low sensitivity values the significance of effect is judged to be moderate beneficial significance, in this case, which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Eastern Gateway

Viewpoint 8 Store Street

7.90 One of the principal streets leading from the rear of Piccadilly Station this viewpoint offers a panoramic view looking towards the Proposed Scheme. Townscape character at this point is derived from a mixture of car parks, office buildings and hotel accommodation so townscape susceptibility, value and sensitivity are all low. Visual receptor sensitivity is similarly low as most receptors are at their place of work or vehicle borne. In terms of magnitude of change the orientation of both the plots of the Proposed Scheme reflects the nature of the urban grain at this point, as does the Oxygen development with the long axis of both buildings following the orientation of the street and present a slender profile. The composition of the cluster is improved with Building A rising well above its neighbour Oxygen and balanced by Building B. As a consequence Oxygen is no longer an isolated featue of the skyline. The collage of muted tones and textures of both Plots also fit well with Oxygen consolidating the cohesion of the tall building cluster. As a result, the magnitude of change, for both receptor categories, is judged to be large and beneficial. This value when combined with low receptor sensitivity translates to a significance of effect of moderate beneficial for both categories which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Ancoats

Viewpoint 11 Great Ancoats Street

7.91 This viewpoint at the most northerly extent of the inner road provides a channelled niche view down the road which is in direct alignment with the Proposed Scheme at this location. With the exception of a few buildings either side of the ring road, townscape character is derived from development which is wholly modern in origin. The recent Renaker development on Port St is also now making a contribution in this respect. Susceptibility to change is therefore judged to be low but the viewpoint is on the fringes of Ancoats Conservation area and which is of high townscape value. Townscape sensitivity is therefore judged to be medium overall. Visual receptor sensitivity is low however as this is a busy ring road with most receptors falling into traveller or at place of work category and as this is not a designated viewpoint or a viewpoint where the character of Ancoats can be readily appreciated visual receptor sensitivity is judged to be low as a result. The Proposed Scheme acts as new terminus to the view and replaces the Oxygen development in this respect. Building B will soften the impact of Building A to some extent but Building A matches the scale and form of the Port Street development and provides some visual balance as a result. It also reflects the nature and origin of much of the recent development along Ancoats street and in doing so becomes a consistent part of the townscape character. Magnitude of change, for both receptor categories, is judged to be medium beneficial which translates to a value of

moderate beneficial significance of effect for townscape receptors and minor beneficial for visual receptors which is **Significant** and **Not Significant** respectively. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 15 Redhill Street

7.92 Located on Redhill Street immediately adjacent to the Rochdale Canal and at the interface between Ancoats and New Islington townscape character areas the townscape character is strong and coherent manifest in its designation as a Conservation Area. The Oxygen development is now a major part of the baseline. Townscape sensitivity is judged to be medium therefore. In visual receptor terms this view, directed towards the Proposed Scheme and across open and empty open space remains fragmentary and without cohesion or balance and dominated by recent development on the horizon. Visual receptors fall into the traveller category along the towpath of Rochdale canal but residential also in the apartments along Redhill street. Visual receptor sensitivity is therefore judged to be medium also. The full faces of both plots will be visible here in a major and dramatic change to the baseline. The slab like appearance of Building A is broken by the level breaks and also the 'holding piece' which connects all the segments or volumes together and helping to unify the northernmost elevation. The presence of Building B with its angled facades also helps to anchor and soften the taller tower to its location and reinforce the tall building cluster. Nonetheless, despite the presence of the Oxygen development, the magnitude of change, for both receptor categories, is judged to be large and beneficial. This translates into a major beneficial significance of effect for both categories which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Miles Platting

Viewpoint 2 Old Mill Street

7.93 This is a representative view from the edge of Miles Platting which is largely a residential district. In townscape terms new development in the neighbouring New Islington character area strongly influences this axial view and also townscape character at this point. Townscape susceptibility is judged to be low as a consequence and townscape value also. Townscape sensitivity is, therefore, considered to be low. Visual receptor sensitivity is higher as it is largely a residential district but this is one of the principal access roads so visual receptor sensitivity is judged to be medium. The slenderest profile of Building A is presented here rising well above the existing Oxygen development and creates a new visual focus for this emerging tall building cluster which is symmetrically arranged in relation to the urban grain of the street in this view. The breaks at levels 9,19 and 31 will be fully visible and will demonstrably improve visual diversity, help to reduce vertical mass as a consequence and provide articulation which breaks up the profile. Collectively, the magnitude of change, for both receptor categories, is judged to be medium beneficial as the Proposed Scheme will achieve a good fit with the townscape character or would noticeably improve the condition or character of the townscape. This translates to a significance of effect value of minor beneficial for townscape receptors and moderate beneficial for visual receptors which is **Not Significant** and **Significant** respectively. These effects are judged to be direct, permanent and long term in nature.

New Islington

Viewpoint 1 Old Mill Street

7.94 This viewpoint is located in the centre of the New Islington character area. Townscape susceptibility to change in the context of new and emerging development in the area is judged to be low and townscape value and sensitivity are similarly low as this viewpoint lies outside any Conservation Area. Visual receptor sensitivity is however, medium, as this is primarily as residential area with retail premises which has been notable for its regeneration in recent years but with no value in terms of designation. The modular appearance of the slender northern elevation dominates this view and creates a major new visual focus which relates well to the street orientation and urban grain at this point. Building B balances the Oxygen development and assists the integration of Building A onto the site reinforcing the development of a cluster at this point. The muted tones of the smooth, modern, cladding reflect those of the housing units along Old Mill Street. Magnitude of change for both receptor categories, is judged to be large and beneficial and this translates to a significance of effect value of moderate beneficial significance for townscape receptors and major beneficial for visual receptors both of which are **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 3 New Islington Basin

7.95 Located in the heart of New Islington canal basin, this location is a tranquil high quality townscape setting dominated by the canal basin and recently landscaped green space. The Oxygen tall building development is a prominent feature of the baseline townscape character. The area presents a character that provides a coherent open, landscaped, space of loose urban grain in the midst of an area of dense urban development and is associated with the Rochdale canal which is a heritage asset. As a result, townscape sensitivity is judged to be high. Visual receptors fall into the medium category and with the area being of medium value and associated with a viewpoint which is locally valued and important. Sensitivity is therefore judged to be medium also. The Proposed Scheme offers an oblique view from this location with the majority of each Plot fully visible. The Proposed Scheme builds on the Oxygen development and the principal axis of Plot A clearly follows that of the Oxygen development and makes a positive contribution to the emergence of this new cluster of tall buildings on this site. The horizontal breaks and the vertical ' holding piece' break the form of Building A successfully and provide visual interest and reduce the scale of the building. The combined effects produce a magnitude of change value, for both receptor categories, of large beneficial which in the context of receptor sensitivity values of high and medium produces significance of effect values of major for both categories. This is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 4 Rochdale Canal

7.96 Located on a footbridge over the Rochdale Canal and at the interface between Ancoats and New Islington townscape character areas this location offers an elevated view across a vacant site towards the Proposed Scheme. Townscape character is weak although influenced by a feature of high townscape value, the Rochdale canal. In the context of recent and emerging tall buildings townscape susceptibility is judged to be low but with townscape value high receptor sensitivity is judged to be medium overall. Visual receptor sensitivity is also medium as the towpath is well used and a mixture of commercial and residential properties lie behind this viewpoint. The Oxygen development is now a major part of the baseline along with the emerging Heyrod Street scheme and the Proposed Scheme fits into this narrative and makes a substantial contribution to townscape character of the emerging

cluster. Notable features of the Proposed Scheme in this view are the offset volume segments, which have been designed to act as 'drawers' to provide movement to the building, accentuated by the deployment of solid metal spandrel panels, and the simple contrast provided by the supergrid fenestration pattern of Building B. the Magnitude of change for both receptor categories is judged to be large beneficial which translates to a significance of effect of major beneficial which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 5 Great Ancoats Street

7.97 The townscape character of this viewpoint on the inner ring road is strongly influenced by the large quantity of recent development on both sides of the road which includes the recently completed Oxygen development. Townscape susceptibility to change is judged to be low as a result and the very nature and character of the ring road itself infers a low townscape value. Townscape sensitivity overall is low as a result. Visual receptor sensitivity is similarly affected by the character of the ring road location with most receptors categorized as travellers in an area is without any formal townscape designation. Visual receptor value is accordingly low as a result. In terms of magnitude of change the effect from this orientation will be Large due to its height and mass. It will become the dominant feature of the tall building cluster and complete obscure the Oxygen development behind. The profile of Building A however is interrupted at irregular intervals by the breaks at levels 9, 19 and 31 with volume segments or 'drawers' which are clearly offset in this view and have been incorporated to provide movement. The canted faces of Building B also help to integrate the profile of Building A into the cluster. As a result, the effect is judged to be major beneficial. When combined with low townscape and visual receptor sensitivity, this translates to a significance of effect value of a minor to moderate beneficial which, in this case is judged to be **Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 12 Old Mill Street

7.98 The townscape character of this viewpoint at this busy junction is strongly influenced by the large quantity of recent development on both sides of the road which includes the recently completed Oxygen development. The Site is fully visible here in close up proximity and is of poor quality townscape character consisting of car parking and disused warehousing. Townscape susceptibility, value and sensitivity are all low as a result. In terms of visual receptor sensitivity most receptors will be travellers, and, with respect to susceptibility, drawn from the low category. Visual receptor value is low also inferring low visual receptor sensitivity. In terms of magnitude of change for both categories of receptor the effect will also be large and dramatic although any development above the viewer's natural eyeline is unlikely to play a significant part in this view as the Proposed Scheme is so close and only the lower levels will feature prominently. The transformation of a derelict site into a modern accommodation utility is transformative and beneficial. Magnitude of change is large which translates to a significance of effect which is moderate beneficial which is **Significant**. These effects are judged to be direct, permanent and long term in nature.

Medlock Valley

Viewpoint 9 Great Ancoats Street

7.99 A view which demonstrates the effects of the Proposed Scheme on the townscape character of the ring road in the Medlock Valley character area. Townscape character is evolving at this point as new development emerges from the northern side of the ring road with a low

susceptibility to change as a result. Townscape value is also judged to be low collectively producing a townscape sensitivity value of low. Visual receptors are dominated by travellers of one sort or another which, at a viewpoint without any special value or designation, results in a low visual receptor sensitivity value also. The Proposed Scheme would fit seamlessly into the view and, from a townscape character perspective, join the cluster of recent tall buildings in the surrounding area. Magnitude of change for both categories is judged to be small beneficial as a result which translates to significance of effect values of minor beneficial which is **Not Significant**. These effects are judged to be direct, permanent and long term in nature.

Viewpoint 10 Pollard Street

7.100 In close proximity to a significant heritage asset and uniquely orientated towards the Proposed Scheme, this viewpoint explores the relationship between old and new. Townscape sensitivity is judged to be high as a result of the influence of the Albion Mill which is now residential apartments. The viewpoint is also on the edge of New Islington zone, an area of coherent townscape character and recently the subject of a major regeneration initiative. Consequently, it is judged to be of high value and townscape sensitivity is judged to be high as a result. Visual receptor sensitivity is high also associated with the residential occupation and conversion of the Albion Mill and the fact that this building is of regional significance and value. The Proposed Scheme in terms of magnitude of change will achieve a good fit with the baseline townscape character that exists currently. From a visual perspective it will also fit well and improves the composition of the tall building cluster markedly from this perspective creating a new focal point. The 'holding piece' is very prominent in this perspective unifying the design of the southern elevation and emphasising the building's verticality. Magnitude of change values, for both receptor category, are recorded as medium beneficial which translates to significance of effect values of moderate beneficial for both categories which is **Significant.** These effects are judged to be direct, permanent and long term in nature.

Limitations and Assumptions

7.101 The principal limitation as far as the field survey work was concerned has been that photography was undertaken in the summer when the foliage is on trees. This represents a potentially a worst case scenario. However, the population of mature trees in inner city Manchester, especially in regard to the area surrounding the Site is low and this effect is noticeable in only a small number of views.

Summary

7.102 **Table 7.11** and **7.12** provide a summaries of the effects, receptors, residual effects and conclusions of significance considered within this Chapter for both Construction and Operation effects

Table 7.11: Summary of Construction Residual and Significant Effects.

Effect Construction Stage	Receptor	Residual Effect	Is the Effect Significant?
Change to Townscape character	Zone C Piccadilly	Moderate Adverse to Major Adverse	YES

Effect Construction Stage	Receptor	Residual Effect	Is the Effect Significant?
	Viewpoints 6, 7, 13, 14 and 16		
	Zone D Eastern Gateway Viewpoint 8	Moderate Adverse	YES
	Zone G Ancoats Viewpoints 11 and 15	Moderate Adverse to Major Adverse	YES
	Zone H New Islington Viewpoints 1, 3, 4, 5 and 12	Moderate Adverse to Major Adverse	YES
	Zone I Miles Platting Viewpoint 2	Minor Adverse	NO
	Zone J Medlock Valley Viewpoints 9 and 10	Minor Adverse to Moderate Adverse	NO
Change to the character composition and amenity of views	Viewpoint 1 Old Mill Street	Moderate Adverse	YES
	Viewpoint 2 Old Mill Street	Minor Adverse	NO
	Viewpoint 3 New Islington Basin	Major Adverse	YES
	Viewpoint 4 Rochdale Canal	Major Adverse	YES
	Viewpoint 5 Great Ancoats Street	Minor-Mod Adverse	YES
	Viewpoint 6 Vantage Quay Bridge	Major Adverse	YES
	Viewpoint 7 Rochdale Canal	Major Adverse	YES
	Viewpoint 8 Store Street	Moderate Adverse	YES
	Viewpoint 9 Great Ancoats Street	Minor Adverse	NO
	Viewpoint 10 Pollard Street	Moderate Adverse	YES
	Viewpoint 11 Great Ancoats Street	Moderate Adverse	YES
	Viewpoint 12 Old Mill Street	Moderate Adverse	YES
	Viewpoint 13 Store Street	Moderate Adverse	YES

Effect Construction Stage	Receptor	Residual Effect	Is the Effect Significant?
	Viewpoint 14 Store Street	Moderate Adverse	YES
	Viewpoint 15 Redhill Street	Major Adverse	YES
	Viewpoint 16 Ducie Street	Moderate Adverse	YES

Table 7.12: Summary of Operation Residual and Significant Effects

Effect Operational Stage	Receptor	Residual Effect	Is the Effect Significant?
Change to Townscape character	Zone C Piccadilly Viewpoints 6, 7, 13, 14 and 16	Moderate Beneficial to Major Beneficial	YES
	Zone D Eastern Gateway Viewpoint 8	Moderate Beneficial	YES
	Zone G Ancoats Viewpoints 11 and 15	Moderate Beneficial to Major Beneficial	YES
	Zone H New Islington Viewpoints 1, 3, 4, 5 and 12	Moderate Beneficial to Major Beneficial	YES
	Zone I Miles Platting Viewpoint 2	Minor Beneficial	NO
	Zone J Medlock Valley Viewpoints 9 and 10	Minor Beneficial to Moderate Beneficial	NO
Change to the character composition and amenity of views	Viewpoint 1 Old Mill Street	Major Beneficial	YES
	Viewpoint 2 Old Mill Street	Moderate Beneficial	YES
	Viewpoint 3 New Islington Basin	Major Beneficial	YES
	Viewpoint 4 Rochdale Canal	Major Beneficial	YES
	Viewpoint 5 Great Ancoats Street	Minor-Moderate Beneficial	YES
	Viewpoint 6 Vantage Quay Bridge	Major Beneficial	YES
	Viewpoint 7 Rochdale Canal	Major Beneficial	YES
	Viewpoint 8 Store Street	Moderate Beneficial	YES
	Viewpoint 9 Great Ancoats Street	Minor Beneficial	NO
	Viewpoint 10 Pollard Street	Moderate Beneficial	YES
	Viewpoint 11 Great Ancoats Street	Minor Beneficial	NO
	Viewpoint 12 Old Mill Street	Moderate Beneficial	YES
	Viewpoint 13 Store Street	Moderate Beneficial	YES
	Viewpoint 14 Store Street	Moderate Beneficial	YES
	Viewpoint 15 Redhill Street	Major Beneficial	YES
	Viewpoint 16 Ducie Street	Moderate Beneficial	YES

References

[1] NPPF 2024
[2] Guidelines for Landscape and Visual Impact Assessment 3rd edition Landscape Institute and Institute of Environmental Management & Assessment
[3] Historic England Advice Note 4: Tall Buildings
[4] Manchester Residential Quality Guidance
[5] History in the View prepared for English Heritage by LUC in 2011
[6] Landscape Institute Technical Guidance Note 06/19 Visual Representation of Development Proposals
[7] Op Cit 2
[8] Op Cit 2

8. Built Heritage

Introduction

8.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Built Heritage.

8.2 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.

8.3 In line with **Chapter 2: Approach to EIA**, the assessment reports 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).

8.4 This Chapter, and its associated **Appendix 8.1**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**), as well as **Chapter 7: Townscape and Visual.**

8.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

8.6 **Table 8.1** provides an overview of the consultation that has been undertaken to inform the Proposed Scheme and EIA, including the consideration of likely significant effects and the methodology for assessment.

Table 8.1: Summary of Consultation

Body / Organisation	Date and Form of Consultation	Summary
Manchester City Council, MCC	Teams meeting, 10 September, 2024.	Agreement of 'non-designated heritage asset' status of Stocktons Site.

Scope of the Assessment

Effects Not Considered to be Significant

8.7 The following effects are not considered to be significant and therefore have not been considered further within the ES. A factual evidence base has been provided below to support this (supporting Heritage Statement report, **Appendix 8.1**). **Table 8.2** summarises the effects that are not considered likely to be significant and are therefore excluded from further assessment within this Chapter.

Table 8.2: Effects Not Considered to be Significant

Receptors	Likely Effect	Reason for Likely Effect
STORE STREET AQUEDUCT (Grade II*)	Minor adverse	Existing setting is already characterised by contemporary development. Primary significance of asset derives from fabric and function.
32 AND 34 LAYSTALL STREET (Grade II) List Entry Number: 1282990	Minor adverse	Distance from the Site and existing setting is already characterised by contemporary development.
STABLE BLOCK TO SOUTH EAST OF JUNCTION WORKS AT PARADISE WHARF (Grade II) List Entry Number: 1200857	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.
FORMER JUNCTION WORKS AT PARADISE WHARF (Grade II) List Entry Number: 1217852	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.
Crusader Works (Grade II) List Entry Number: 1293172	Neutral	Distance from the Site and existing setting is already characterised by contemporary development.
ASHTON CANAL LOCK NUMBER 1 IMMEDIATELY EAST OF GREAT ANCOATS STREET (Grade II) List Entry Number: 1197829	Neutral	Distance from the Site and existing setting is already characterised by contemporary development.
BROWNSFIELD MILL (Grade II*) List Entry Number: 1207994	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
ROYAL MILL (Grade II*) List Entry Number: 1247474	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
SEDGWICK MILL (TO WEST OF JUNCTION WITH MURRAY STREET) (Grade II*) List Entry Number: 1270856	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
DECKER MILL OLD MILL (Grade II*) List Entry Number: 1270860	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.

Receptors	Likely Effect	Reason for Likely Effect
DOUBLING MILL FIREPROOF MILL (Grade II*) List Entry Number: 1270855	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
LONDON WAREHOUSE (Grade II) List Entry Number: 1217858	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development / gap sites.
Train shed and undercroft at Manchester Piccadilly Station (Grade II)	Neutral	No harm anticipated to setting.
ASHTON CANAL TOWPATH BRIDGE OVER JUNCTION WITH ISLINGTON BRANCH CANAL WEST OF LOCK NUMBER 2 (Grade II) List Entry Number: 1197830	Neutral	No harm anticipated to setting.
ASHTON CANAL LOCK KEEPERS COTTAGE BESIDE LOCK NUMBER 2 AT ISLINGTON BRANCH JUNCTION BASIN (Grade II) List Entry Number: 1279636	Neutral	No harm anticipated to setting.
COOPERATIVE WAREHOUSE (Grade II) List Entry Number: 1247018	Neutral	No harm anticipated to setting.
ARDWICK AND ANCOATS HOSPITAL (Grade II) List Entry Number: 1283019	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
DAILY EXPRESS BUILDING Grade II*	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.
DERROS BUILDING Grade II	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.
FORMER DOCTORS SURGERY Grade II	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.

Receptors	Likely Effect	Reason for Likely Effect
CROWN AND KETTLE PUBLIC HOUSE Grade II	Negligible adverse	Distance from the Site and existing setting is already characterised by contemporary development.
Ancoats Conservation Area	Minor adverse	Some adverse impact anticipated to the setting of the heritage asset (albeit minor) through dominance of the Proposed Scheme.
Stevenson Square Conservation Area	Neutral	Distance from the Site and existing setting is already characterised by contemporary development.

Effects Considered Likely to be Significant

8.8 **Table 8.3** outlines the effects that are considered likely to be significant and are reported within this Chapter.

Table 8.3: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset	Stocktons Site (non-designated heritage asset)	Construction / Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

8.9 The following legislation and policy has informed the assessment of effects within this Chapter, and is detailed further in the **Heritage Statement (Appendix 8.1).** The full Heritage Statement, from which this chapter is derived, has been undertaken in general accordance with or with reference to the following legislation and policy:

- Planning (Listed Buildings & Conservation Areas) Act 1990;[1]
- National Planning Policy Framework (NPPF) Conserving and Enhancing the Historic Environment (2024);[2] and
- Planning Practice Guidance (PPG, 2019), Historic Environment (most recent version July 2019).[3]

8.10 The following guidance has informed the assessment of effects within this Chapter and the **Heritage Statement (Appendix 8.1)**:

- Manchester City Council Unitary Development Plan (1995) and Core Strategy (2012); [4]
- Places for Everyone (March 2024);[5]

- Guidance on Heritage Impact Assessments for Cultural World Properties, published by the International Council on Monuments and Sites (ICOMOS) (Jan 2011);[6]

- Conservation Principles, Policies, and Guidance (2017);[7]

- Historic England's Good Practice Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment (2015); [8]

- Historic England's Good Practice Advice Note 3 (second edition): The Setting of Heritage Assets (2017);[9]

- Historic England's Advice Note 1: Conservation Areas (second edition) (2019);[10]

- Historic England's Advice Note 12: Statements of Heritage Significance (2019); and[11]

- Historic England's Good Practice Advice Note 4: Tall Buildings (2022).[12]

Defining the Study Area

8.11 Consideration has been given to the relevant part of Manchester City centre that surrounds the Site. A study area of 500m has been identified for the purposes of assessing impacts on the built historic environment. This is considered to be proportionate due to the dense urban environment that characterises the city centre to the north and west of the Site, which subsequently limits heritage views across the townscape. The 500m study area provides a focus for assessment but is not intended to be prescriptive.

8.12 There are 54 listed buildings within the 500m study area (Historic England National Heritage List for England NHLE search). Following on-site surveys and the information provided by the Zone of Visual Influence (ZVI) study (Chris Burnett, Townscape), it is evident there will be limited visual impact on any listed buildings located to the west of the Site.

8.13 Only 21 listed buildings and two Conservation Areas were scoped in for assessment within the Heritage Statement report as these were identified as having potential to be materially impacted by the Proposed Scheme (Table 1, Appendix 8.1).

8.14 The Site also contains an identified non-designated heritage asset (referred to as 'the Site' or 'the Stocktons Site'. This protection (at local level) warrants consideration in the Planning process under the requirements of para.216 of the NPPF (2024). The following chapter is written in this context.

Assessment Process

8.15 This Chapter assesses the potential for significant effects to heritage receptors resulting from the Proposed Scheme following primary and tertiary mitigation. The baseline assessment is undertaken using a combination of desk-based study, research, and fieldwork to identify and assess the heritage significance of the identified heritage receptors. It also establishes the way in which the settings and the Site contribute to the heritage significance of these assets (heritage receptors).

8.16 The aim of the baseline appraisal and Heritage Impact Assessment (informed by a Visual Impact Assessment) contained within the **Heritage Statement (Appendix 8.1**) and summarised in this Chapter has been:

- To establish the baseline environment and identify heritage sensitivities within the Site and the defined study area;
- To assess the significance of the receptor;
- To evaluate the magnitude of change to identified receptors; and
- To identify mitigation in the form of further surveys, investigation and recording to be undertaken in light of the identified impacts.

8.17 The baseline assessment was undertaken using a combination of desk-based review of plans, maps, records and other documents. Consideration has also been given to the historical development of the Site and surrounding area, building types and materials, key views to the notable historic buildings which contribute to the identification of the built form, and understanding of the special interest of the area.

8.18 Information was collated from a number of online and primary sources including:

- The National Heritage List (Historic England);
- MCC Website (Conservation Area Appraisals); and
- Historic Environment Record (HER).

8.19 The assessment methodology for the Historic Environment is a synthesis of established guidance, best practice and professional judgement. In accordance with an adapted form of the methodology set out in the ICOMOS Guidance on 'Heritage Impact Assessments '(Jan.2011), in which the value of heritage attributes is assessed in relation to statutory designations, and priorities or recommendations set out in national research agendas, and ascribed values. Professional judgement is then used to determine the importance of the resource.

8.20 The baseline which might be affected by the Proposed Scheme are valued and the impact on them is assessed in order to give a significance of effect.

8.21 The aims of this assessment have been:

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

8.22 The identified receptors are valued and the impact on them assessed, giving an overall significance of effect. Where the identified heritage receptors are visible in the selected viewpoints, the Visual Impact Assessment has been used to inform the assessment of potential impact on their setting.

8.23 In order to assess the magnitude and significance of heritage impacts through the views, the following elements were considered:

- The sensitivity and proximity of receptors to the Site;
- The nature of the existing views;
- The degree of change to existing views and visibility of the Proposed Scheme; and
- The availability and amenity of alternative views.

Reporting of the Environmental Effect and Significance Criteria

8.24 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stages. The following sections define the approach adopted within the assessment for the determination of significance (or value/importance), magnitude of change (or impact), the level of effect, and finally the significance of this effect.

Determining Significance of Receptor

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

8.26 Criteria have been established to appraise a heritage receptor's significance. Statutory criteria, as set out in the '*Principles of Selection for Listing Buildings*', DCMS, 2010 (revised 2018), provides a list of principles of assessing heritage significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity, and national interest. Historic England's (formerly English Heritage) criteria outlined in 'Conservation Principles, Policies and Guidance,' are also considered in this assessment.

8.27 Evaluation of significance has been informed primarily by the designation of the heritage receptors at an international, national, regional, or local level, as well as their ability to contribute to an understanding of the past. This value rating had also been applied when considering sensitivity of views containing heritage receptors. Indicative definitions for each of these ratings are outlined in **Table 8.4:**

Table 8.4: Criteria for Determining the Value of Heritage Receptors (Significance)

Significance	Definition
High	Grade I and Grade II* listed buildings. Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. Conservation Areas containing very important buildings.
Medium	Grade II listed buildings. Historic buildings that can be shown to have exceptional qualities in their fabric or historical associations. Conservation areas containing buildings that contribute significantly to its historic character.

Significance	Definition
Low	Locally listed buildings. Historic buildings of modest quality in their fabric or historical association (identified non-designated heritage assets)
Negligible	Buildings and sites that yield little to no heritage interest. i.e. recorded on the Historic Environment Record as 'Find Sites' but retain minimal or no original fabric or definable character.

Determining the Magnitude of Change

8.28 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**. Indicative definitions for each of these ratings are outlined in **Table 8.5:**

Table 8.5: Criteria for Assessing Magnitude of Change

Magnitude of Change	Criteria for Assessing Magnitude of Change
Large	Total loss, or gain, of resource and / or quality and integrity of resource; substantial damage/loss, or substantial restoration of key characteristics, historic features or historic building elements, substantially or completely loosing or improving the overall integrity. Large scale or major change of resource quality; substantial restoration.
Medium	Loss or partial loss / damage to key characteristics, historic features or historic building elements, but not completely adversely affecting the overall integrity. Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Small	Measurable change in attributes or quality; minor change of, or alteration to key characteristics, historic features or historic building elements. Minor gain/loss of key characteristics, features or elements.
Negligible	Changes which would have an imperceptible impact on the significance of the heritage receptors. It does not mean that there will be no physical or visual change, rather that the result has no demonstrable negative impact on either the identified heritage receptor's significant physical fabric, their settings or significance to any appreciable degree.

Determining the Level of Effect

8.29 The level of effect has been informed by the magnitude of change caused by the Proposed Scheme and of the identified significance and associated sensitivity of the affected receptor.

Table 8.6 provides a matrix which has guided the determination of the level of effect for each receptor.

8.30 Whilst **Table 8.6** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*', '*adverse*' or 'Negligible'.

Table 8.6: Matrix to Support Determining the Level of Effect

		Sensitivity (or value / importance)			
		High	Medium	Low	Negligible
Magnitude of Change	Large	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Small	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible
	None	Neutral	Neutral	Neutral	Neutral

8.31 The following terms have been used to define the level of the effects identified and these can be 'beneficial', 'adverse' or 'neutral' (suitably balanced):

- **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.
- **Neutral**: This does not necessarily mean that there will be no physical or visual change, rather that the resultant difference will be imperceptible or appropriately balanced.

8.32 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

8.33 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.

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

Baseline Conditions

8.35 The Site (also known as the Stocktons Site) is located on a plot of land bound by Great Ancoats Street to the north-east, Store Street to the south-east and Ducie Street to the north-west. The existing buildings contained within the site have been identified as a 'non-designated heritage asset' by the local planning authority (MCC) during pre-app discussions. The Site is also identified as an NDHA in the East Village Central Development Framework SRF (adopted 2018, updated November 2022).

8.36 The **'Local Heritage Listing, Historic England Advice Note 7'** (January 2021)[13], recommends LPAs prepare local lists of heritage assets to identify non-designated heritage assets in their area. These local lists identify structures which are not significant enough to qualify for national designation, but which the LPA believes have some local significance.

8.37 At the time of writing, MCC have not yet published a local list, nor the criteria used for deciding on what structures qualify as non-designated heritage assets. This assessment has therefore been carried out with reference to the criteria provided by Historic England's guidance for local listing, provided in the Criterion Table within Advice Note 7 (page 11).

8.38 The Site contains a largely complete formation of warehouses which were designed in 1899 by P. Sidney Stott for the firm C. C. Dunkerley & Co., with the exception of an existing warehouse building which dates between 1836-1850. The building group was designed to be open plan. Whilst there have been some lightweight additions and alterations (including suspended ceilings and partitioning), the plan form, structural components and decorative features survive throughout.

8.39 The interconnected series of warehouse buildings were constructed in the early 1900s to the design of Oldham born architect Philip Sidney Stott. Although the majority of these buildings are utilitarian in style (hoop warehouse, bar warehouse), these convey the former use of the site as a warehouse facility under the prominent iron & steel stockholder firm: C.C. Dunkerley & Co. The complex was designed to function as a cohesive and comprehensive store, with purpose built offices and stabling attached. The Site derives further historic interest from the former 'Riveting' workshop to the north of the site, which is an earlier structure (c.1836-1850) believed to have formed part of William Fairbairn's iron foundry complex, which occupied the site during the early-mid 19th century. The building was retained and adapted under Dunkerley & Co. The site yields further historic and communal significance through its long-standing use under Stockton's furniture company, which was established in 1953 in Manchester, with the Ancoats premises being occupied since 1978.

8.40 Whilst the buildings appear to be largely unaltered, the external elevations were never designed to be seen from the street, as they were historically enclosed by existing dwellings and commercial buildings. The office block was designed with some additional aesthetic interest, however, the intricate design (P. Sidney Stott) was never fully implemented, and a utilitarian central bay was constructed in place of the more opulent elevation envisioned by the architect.

8.41 The assessment has identified the existing buildings on the Site present an overall medium-low degree of significance at local level and low overall on a national scale (**Table 8.4**).

8.42 This equates to sufficient interest to warrant 'non-designated' status, with a definable degree of local interest, but are not considered to be of national significance. This is principally due to the lack of architectural interest externally, with the buildings appearing somewhat disjointed, a consequence of the existing constraints of the site when it was designed in 1899.

Future Baseline

8.43 There are no known schemes under construction (i.e. future baseline considerations) which would result in any material impact on the conclusions as set out in this chapter. Cumulative effects are considered separately.

Primary and Tertiary Mitigation

Construction and Operational Stage

8.44 The following primary mitigation which has been identified as part of the construction and operational stage assessment is outlined below.

- Heritage considerations have been integral to the design of the Proposed Scheme. Enlisting appropriate specialists and consultation with MCC has been a part of the pre-application process.
- The identification of key heritage viewpoints has been one of the principal factors in identifying where indirect heritage impact may occur, therefore allowing for an understanding of how best to minimise and mitigate harm. The identification of views has been informed by Zone of Theoretical Visibility studies which provide an objective evidence base on which informed conclusions can be made.
- Prior to any demolition, a method statement by a suitably trained contractor should be submitted to the council. This will include relevant protection measures to avoid unnecessary dust, noise and debris impacts upon the surrounding built environment.
- Recommended measures, to be included within a Construction Environmental Management Plan include:
  - Use of high quality hoardings;
  - Dust management;
  - Regular cleaning of roads and the public realm surrounding the site;

- Edge protection to be affixed whilst concreting operations are in place;
- Implementation of a traffic management plan; and
- Vibration monitoring.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset

8.45 The assessment methodology and approach to the relative impact on heritage receptors during the construction stage is based on evidence-based assumptions in relation to common issues such as demolition, dust, noise, site hoarding and scaffolding.

8.46 Due to the proximity of a number of listed buildings surrounding the Site, the potential effects of the demolition and construction stage will result in temporary, localised minor adverse impacts on the ability to understand and appreciate the settings of these buildings through effects such as dust, noise, vibrations, increase of construction traffic in their setting, and visual intrusion from construction activities and equipment.

8.47 The sensitivity of the non-designated contained within the Site is considered to be medium-to-low. The magnitude of change is considered to be large as a result of the proposed total demolition of historic buildings across the Site, and the construction of two new tall tower elements. Therefore, there is likely to be a direct and indirect (in terms of demolition of physical, historic fabric and character of the Site), temporary and permanent (in terms of construction/demolition stage and completion of Proposed Scheme), medium, adverse effect which is considered to be moderate.

Secondary Mitigation

8.48 Prior to demolition, it is recommended that a Level 1 or 2 building record of the buildings is undertaken. This will provide a record of the historic built form on the Site, which is to then be submitted to a local archive. This is to be secured by Planning Condition, but the inclusion of this is ultimately up to the decision maker.

Residual Effect

8.49 Despite the identified secondary mitigation, it is considered that the residual effect would be the same as that reported in the pre-mitigation scenario.

Significance

8.50 This effect on the Stocktons Site as a NDHA is considered to be **Significant**.

Operational Stage

Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset

8.51 The Proposed Scheme will deliver two new towers which will result in the total demolition of the existing buildings on the site, which have been identified by MCC as an NDHA.

8.52 The sensitivity of Stocktons is considered to be medium-to-low. The magnitude of change is considered to be large. Therefore, due to both physical fabric changes and change to

experience of building in its setting there is likely to be a direct and indirect, permanent, long-term, adverse effect which is considered to be moderate.

8.53 The potential effects of the Proposed Scheme are considered in full within the Visual Impact Assessment (heritage) in Section 7 of the appended **Heritage Statement** (**Appendix 8.1).**

Secondary Mitigation or Enhancement

8.54 No secondary mitigation has been identified.

Residual Effect

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

Significance

8.56 This effect on the Stocktons Site as a NDHA is considered to be **Significant**.

Limitations and Assumptions

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

- This chapter and the Heritage Statement is limited to above-ground heritage receptors only. The assessment of below-ground archaeology does not form part of this assessment and is scoped out of the EIA (see **Chapter 6**).
- Survey of the Site was undertaken in August 2024 by visual inspection and did not involve any intrusive investigation. Not all areas were accessible / visible due to existing fabric such as suspended ceilings and modern plasterboard.
- Survey of the identified heritage assets (receptors) within the study area was from publicly accessible areas. As such the study is limited to assessment from ground level.

Summary

8.58 **Table 8.7** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 8.7: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset	Stocktons Site (NDHA)	Moderate adverse	YES
Operational Stage			
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset	Stocktons Site (NDHA)	Moderate adverse	YES

References

[1] Planning (Listed Buildings & Conservation Areas) Act 1990
[2] National Planning Policy Framework (NPPF) Conserving and Enhancing the Historic Environment (2024)
[3] Planning Practice Guidance (PPG, 2019), Historic Environment (most recent version July 2019).
[4] Manchester City Council Unitary Development Plan (1995) and Core Strategy (2012).
[5] Places for Everyone (March 2024).
[6] Guidance on Heritage Impact Assessments for Cultural World Properties, published by the International Council on Monuments and Sites (ICOMOS) (Jan 2011)
[7] Conservation Principles, Policies, and Guidance (2017)
[8] Historic England's Good Practice Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment (2015)
[9] Historic England's Good Practice Advice Note 3 (second edition): The Setting of Heritage Assets (2017)
[10] Historic England's Advice Note 1: Conservation Areas (second edition) (2019)
[11] Historic England's Advice Note 12: Statements of Heritage Significance (2019); and
[12] Historic England's Good Practice Advice Note 4: Tall Buildings (2022).
[13] Local Heritage Listing, Historic England Advice Note 7' (January 2021).

9. Wind

Introduction

9.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Wind Microclimate.

9.2 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.

9.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).

9.4 This Chapter, and its associated **Appendix 9.1**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

9.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

9.6 No consultation has been undertaken in relation to wind microclimate.

Scope of the Assessment

9.7 A microclimate is defined as the distinctive climate of a small-scale area. The weather variables in a microclimate, such as wind, may be different to the conditions prevailing over the area as a whole. Wind microclimate assessments consider the wind conditions that would result upon the introduction of a new development into an existing space.

9.8 Such assessments predict the proportion of time an area will experience wind speeds in excess of threshold values associated with safe and comfortable use by pedestrians and occupants once the Proposed Scheme is introduced. It can therefore be shown within the various parts of a new proposal and neighbouring properties whether wind conditions are suitable or unsuitable, and whether design adjustment or mitigation measures are required. It is for this purpose that wind microclimate assessment for the Proposed Scheme has been undertaken.

Effects Not Considered to be Significant

9.9 The following effects are not considered to be significant and therefore will not be considered further within the ES. A factual evidence base has been provided below to support this.

Effect of wind blow as a result of demolition and construction works to pedestrian receptors

9.10 During the demolition and construction works, there would be potential for wind to blow into and across any open areas of the Site with the potential to inconvenience passers-by. However, given the dusty and untidy conditions typical of a construction site and the fact that adjacent pavements will be used for thoroughfares only and not for more sensitive recreational uses (such as outdoor cafes that may be present upon completion, pedestrians moving in the vicinity would be likely to have lowered expectations, in terms of comfort. Construction activity and construction workers / personnel is likely to be less sensitive to general wind conditions due to the nature of the Site during construction (i.e. site hoardings, restricted site access for workers) compared to when the Proposed Scheme is completed. Conditions for passers-by would predominantly be suitable for strolling and as a result would be acceptable, in terms of comfort. Conditions within the Site will also be acceptable for construction workers and other Site operatives. In terms of comfort therefore, there is generally a negligible effect during construction, and therefore not significant.

9.11 Therefore, the effect upon wind microclimate during demolition and construction works will not be considered further in the ES.

Effects Considered Likely to be Significant

9.12 **Table 9.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 9.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Exceedance of the industry standard Lawson criteria for pedestrian safety	Pedestrians at thoroughfares, entrances, waiting areas and recreational spaces within and around the Site, in the vicinity of the taller elements of the Proposed Scheme, where acceleration of wind has the potential to be most significant.	Operation
Exceedance of the industry standard Lawson criteria for pedestrian comfort	Pedestrians at thoroughfares, entrances, waiting areas and recreational spaces within and around the Site, where acceleration of wind has the potential to be most significant or where pedestrian activities are most sensitive to wind and require the most benign conditions.	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

National Planning Policy Framework (NPPF) (2024)

9.13 The latest updated National Planning Policy Framework (NPPF) published in December 2024 contains no national planning policies directly pointing towards resolving wind microclimate issues. However, the benefits of a high-quality built environment are emphasised and an example of this is presented in paragraph 135 which states:

Planning policies and decisions should ensure that developments:

'…will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development…'

'…are visually attractive as a result of good architecture, layout and appropriate and effective landscaping…'

'…establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit…'

'…optimise the potential of the Site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks…'

'…create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience…'

Manchester's Local Development Framework, Core Strategy Development Plan Document

9.14 Manchester's Local Development Framework, Core Strategy Development Plan Document, Policy EN 2 relates to Tall Buildings, Paragraph 12.4 supporting these states "Tall buildings by their very nature can dominate the street scene and be highly visible over long distances. They can also have an impact on the local micro-climatic conditions, for example, by creating wind tunnels. It is for these reasons that it is considered particularly important that they are designed to the highest quality, both in terms of appearance and their impact on the functioning of surrounding space."[1]

National Planning Practice Guidance (NPPG), 2019

9.15 The NPPG states under 'Consider form' that, "Some forms pose specific design challenges, for example how taller buildings meet the ground and how they affect local wind and sunlight patterns should be carefully considered."

9.16 The NPPG states under 'Consider scale' that, " Account should be taken of local climatic conditions, including daylight and sunlight, wind, temperature and frost pockets."

9.17 Paragraph 41 of the National Design Guidance states that a new development, "enhances positive qualities and improves negative ones. Some features are physical, including:…environment – including landscape and visual impact, microclimate, orientation, flood risk, noise, air and water quality."

9.18 Paragraph 71 of the National Design Guidance states that "Proposals for tall buildings (and other buildings with a significantly larger scale or bulk than their surroundings) require special consideration. This includes their location and siting; relationship to context; impact on local character, views and sight lines; composition - how they meet the ground and the sky; and environmental impacts, such as sunlight, daylight, overshadowing and wind. These need to be resolved satisfactorily in relation to the context and local character."[2]

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

- The Lawson criteria[4] for pedestrian comfort & safety in relation to wind microclimate.

Defining the Study Area

9.20 The study area considered within the assessment has a radius of 450 metres (m) from the approximate centre of the Site. This is in line with best industry practice and ensures a robust replication of the approaching wind properties, building effects and regions of shelter. This allows for approximately 450m of the surrounding area to be modelled, including relevant cumulative developments (Cumulative Projects).

Assessment Process

9.21 A physical model of the existing buildings within a 450m radius from the centre of the Site was constructed. The building proposals that comprise the Proposed Scheme and Cumulative Projects were also constructed, and the following scenarios were modelled in a wind tunnel:

(1) Existing site (2024), existing surrounding conditions;

(2) Proposed Scheme, existing surrounding conditions;

(3) Proposed Scheme, existing surrounding conditions with proposed mitigation measures; and

(4) Proposed Scheme, cumulative surrounding conditions (reported in **Chapter 15: Assessment of Cumulative Effects**).

9.22 Wind tunnel testing is the most well-established and robust means of assessing the pedestrian wind microclimate. It enables the wind conditions at the Site to be quantified and classified in accordance with the widely accepted Lawson Criteria for comfort and safety, which require the assessment of mean and gust wind conditions. Gust wind conditions are those driven by the turbulent environment induced by the presence of buildings.

9.23 The principal steps within the procedure are as follows:

- Undertake a wind tunnel test to identify the degree to which the Proposed Scheme increases or decreases local wind speeds, per wind direction, relative to a known reference point;

- Combine wind tunnel test data with meteorological data for the area to derive an accurate picture of the expected wind microclimate at the Site; and

- Using the Lawson Criteria, compare the expected conditions with the planned suitability of conditions, and assess the exceedance (or otherwise) of the safety criteria.

9.24 Full details describing the approach to wind tunnel testing are provided within **Appendix 9.1**.

9.25 After wind tunnel testing was completed, further mitigation measures were explored in detail via Computational Flud Dynamic (CFD) modelling to analyse the sensitivity of various mitigation options as shown in **Figure 5.1** of **Appendix 9.1**. Where employed, CFD modelling has adopted a steady-state RANS approach. This method employs turbulence models to approximate the magnitude of velocity fluctuations about the average wind speeds

predicted, in order to derive an estimation of the effect of gusts. Full details on this approach are provided within **Appendix 9.1.**

9.26 As with wind tunnel testing, the industry standard criteria for wind microclimate assessments, the Lawson criteria, have been employed to compare the expected conditions with the planned suitability of conditions, and assess the exceedance (or otherwise) of the safety criteria.

Assessment Criteria

9.27 The industry standard criteria for wind microclimate assessments are commonly referred to in the UK as the Lawson criteria after one of their main authors. As with most other leading practitioners, ArcAero use the 'LDDC' (London Docklands Development Corporation) variant of the Lawson Criteria. The LDDC variant applies a single percentage probability of exceedance of a range of wind speeds and associates different wind speeds to different types of usage. This offers a relatively simple and practical manner for the assessment of wind comfort and safety.

9.28 A wind speed of 15 m/s occurring once per year is rated as unsuitable, in terms of safety, with the potential to de-stabilise less able members of the public including the elderly, cyclists and children. The LDDC variant of the Lawson criteria prescribes that wind conditions are suitable for a given activity when the threshold is exceeded no more than 5% of the time. The value of 5% has been established as giving a reasonable allowance for extreme and relatively infrequent winds that are tolerable within each category. Where certain activities are year-round, such as walking, entrance use or for waiting areas, comfort ratings are required to be met in all seasons. For more seasonal activities, such as outdoor recreation or for sitting spaces, the assessment focuses on relevant seasons where the expectation will exist for conditions to be suitable.

Table 9.2: Lawson Comfort (LDDC)

Comfort Category	5% Exceedance Threshold	Description
Long-term sitting	4 m/s	Light breezes desired for outdoor restaurants and seating areas where one can read a paper or comfortably sit for long periods.
Short-term sitting / standing	6 m/s	Gentle breezes suitable for main building entrances, pick-up/drop-off points and bus stops.
Strolling	8 m/s	Moderate breezes that would be appropriate for strolling along a city/town centre street, plaza or park.
Fast walking	10 m/s	Higher speeds that can be tolerated if one's objective is to walk, run or cycle without lingering.
Uncomfortable	>10 m/s	Winds considered a nuisance for most activities.

Reporting of the Environmental Effect and Significance Criteria

9.29 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

9.30 The sensitivity of affected receptors has been considered on a scale of **high**, **medium**, **low** or **negligible**. It is judged that the sensitivity of receptors (people) to wind conditions is high.

Determining the Magnitude of Change

9.31 The magnitude of change has been considered as the change experienced from the current baseline conditions or relative to targeted conditions for newly introduced spaces, at the sensitive receptor, and has been considered on a scale of **large**, **medium**, **small** or **negligible**. A change that affects safety is deemed to be of **large** magnitude, while a change that affects comfort is deemed to be of either **medium** or **small** magnitude. A negligible magnitude of change describes no changes to the suitability of existing conditions in terms of comfort or safety, no introduction of safety criteria exceedances and suitable conditions in terms of comfort relative to targeted conditions for newly introduced spaces.

Determining the Level of Effect

9.32 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 9.4** has been a tool which has assisted with this process.

9.33 While **Table 9.3** provides ranges, the level of effect is typically confirmed as a single level informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*' or '*adverse*'.

Table 9.3: Matrix to Support Determining the Level of Effect

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

9.34 The following terms have been used to define the level of the effects identified:

- **Major Beneficial**: Any effect on wind conditions which is expected to improve pedestrian safety, namely an improvement in conditions from exceeding the safety criteria to meeting the safety criteria.

- **Moderate Beneficial**: Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to suitable.

- **Minor Beneficial**: Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to marginal / tolerable for planned activities, or from marginal / tolerable to suitable for planned activities.

- **Negligible**: Any effect that does not alter the suitability of wind conditions.

- **Minor Adverse**: Any effect on wind conditions which worsens pedestrian comfort from suitable to marginal / tolerable for planned activities, or from marginal / tolerable to unsuitable for planned activities.

- **Moderate Adverse**: Any effect on wind conditions that worsens pedestrian comfort from suitable to unsuitable.

- **Major Adverse**: Any effect on wind conditions adversely affecting pedestrian safety, namely a deterioration in conditions from meeting the safety criteria to exceeding the safety criteria.

9.35 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

9.36 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.

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

Baseline Conditions

9.38 The results for the existing Site conditions are presented graphically within **Figures 4.1** to **4.4** of **Appendix 9.1**. The baseline is summarised as follows:

- Wind conditions throughout the existing Site and surrounding areas satisfy the safety criteria for wind;

- Conditions within the existing Site are expected to be generally suitable for existing pedestrian activities. This includes thoroughfares which are suitable for strolling or better, car parks that are suitable for strolling or better, and entrances that are substantially suitable for standing or better. At elevated levels on the Oxygen Tower to the southeast of the Site, balconies are suitable for at least short-term sitting in summer; and

- A minor exception occurs at an entrance to Oxygen Tower (location 2) and at an entrance to an existing shop (location 77) which marginally exceed the comfort criteria, where conditions marginally exceed the criteria for standing in winter.

Future Baseline

9.39 Wind speeds are likely to increase marginally with time due to the effects of climate change. To account for changes up until this assessment, the wind climate model is updated at regular intervals (every 2 years or so). Through this process it can be shown that the marginal increases in wind speed over time are not likely to materially impact conditions across the Site with respect to the Lawson criteria and as such, no significant changes are expected to the baseline conditions.

Primary and Tertiary Mitigation

Operational Stage

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

- The primary mitigation exists principally in the massing and orientation of Building A, with its narrow façade facing the commonly occurring southwestern wind direction, and its corners oriented towards the prevailing southern and western wind sectors, which help limit the effect of downdraft. Also, its wide façade faces uncommon winds from the southeast while Building B provides some shelter to the tower for north-westerly winds; and

- The primary mitigation exists via the enclosure of the amenity spaces within Building A, which shelters these areas from exposure to the wind.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

9.41 Full details of the modelling outputs are presented within **Figure 4.1** to **Figure 4.16** of **Appendix 9.1**

Exceedance of the industry standard Lawson criteria for pedestrian safety

9.42 Upon introduction of the Proposed Scheme, the safety criteria are substantially met throughout the study area. Where so, this represents a negligible effect of the Proposed Scheme. One exception exists to the north of the Site, in Ducie Street (location 69) as shown in **Figure 4.5** of **Appendix 9.1**.

9.43 The sensitivity of the thoroughfare at Ducie Street (location 69) is considered to be high. The magnitude of change is considered to be large. Therefore, there is likely to be a direct, permanent, long-term adverse effect which is considered to be major.

Secondary Mitigation or Enhancement

9.44 The Proposed Scheme has been assessed with wind mitigation measures via wind tunnel testing as shown within **Figure 2.1** of **Appendix 9.1**. These are:

- At the southwestern façade of Building B:
  - 50% porous, 1.6m (deep) x 11.2m (tall) baffles, x 9;
  - 50% porous, 1.6m (tall) upstands, x 2; and

– 50% porous entrance canopy.

9.45 The mitigation has been developed by the architect and validated by CFD and wind tunnel testing. It is anticipated that a suitably worded planning condition will be adopted in order to ensure that the final version of this structure is (if not already) validated quantitatively by further modelling.

Residual Effect

9.46 Upon introduction of mitigation, the safety criteria will be met on the thoroughfare (location 69) in Ducie Street to the north of the Site.

9.47 The sensitivity of the thoroughfare at Ducie Street (location 69) is considered to be high. The magnitude of change is considered to be negligible. Therefore, the effect is considered to be negligible.

Significance

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

Exceedance of the industry standard Lawson criteria for pedestrian comfort

9.49 At thoroughfares in general, wind conditions within the Site are suitable for strolling or better throughout the year and are thus suitable for thoroughfare use. Where so, this represents a negligible effect of the Proposed Scheme. Exceptions to this occur at the east of Building B (location 56) as shown in **Figure 4.5** of **Appendix 9.1**, being suitable only for fast walking during winter, meeting the wind speed threshold for strolling 94% of the time. The sensitivity of thoroughfares (location 56) is considered to be high. The magnitude of change is considered to be small. This is a marginal exceedance of strolling suitability, and is likely to be a direct, permanent, long-term adverse effects which is considered to be minor.

9.50 At entrances, wind conditions within the Site are generally suitable for standing or better throughout the year. Where so, this represents a negligible effect of the Proposed Scheme. The entrances at the east of Building B (location 57) as shown in **Figure 4.5** of **Appendix 9.1** are marginally too windy in spring, meeting the wind speed threshold for standing 93% of the time. The sensitivity of entrance (location 57) is considered to be high. The magnitude of change is considered to be small. This is a marginal exceedance of standing suitability and this is likely to be a direct, permanent, long-term adverse effect which is considered to be minor.

9.51 At recreational spaces, wind conditions within the Site, at ground level (locations 52, 53, 54, 55 and 91) as shown in **Figure 4.7** of **Appendix 9.1** and on the Building B terrace (location 116, 117 and 118) as shown in **Figure 4.8** of **Appendix 9.1** are generally too windy for comfortable recreational use, meeting the wind speed threshold for short-term sitting 90% to 94% of the time. Of these spaces, conditions for those at ground level would also ideally be calmer for thoroughfare use during winter. The sensitivity of recreational spaces (locations 52, 53, 54, 55, 91, 116, 117 and 118) is considered to be high. The magnitude of change is considered to be small. This is likely to be a direct, permanent, long-term adverse effect which is considered to be minor.

9.52 At the outdoor seating area at the northwest elevation of Building A (location 50 and 92) as shown in **Figure 4.7** of **Appendix 9.1**, wind conditions are suitable only for short periods of sitting at best and would require mitigation to create conditions suitable for use, meeting the

wind speed threshold for long-term sitting 86% and 87% of the time. The sensitivity of outdoor seating (locations 50 and 92) is considered to be high. The magnitude of change is considered to be medium. This is likely to be a direct, permanent, long-term adverse effect which is considered to be moderate.

9.53 Within the wider surrounding area, wind conditions are generally suitable for existing pedestrian uses, including the use of thoroughfares, entrances, and car parks. Where so, this represents a negligible effect of the Proposed Scheme. Exceptions are predicted to exist at the following locations.

- Entrances along Ducie Street (locations 68, 72, 75 and 77) as shown in **Figure 4.5** of **Appendix 9.1** are suitable only for strolling / fast walking, meeting the wind speed threshold for standing 82% to 94% of the time. The sensitivity of entrances (locations 68, 72, 75 and 77) is considered to be high. The magnitude of change is considered to be small to medium. This is likely to be a direct, permanent, long-term adverse effect which is considered to be minor to moderate.

- A thoroughfare on Ducie Street (location 69) as shown in **Figure 4.5** of **Appendix 9.1** is generally only suitable for walking, meeting the wind speed threshold for strolling 89% of the time. The sensitivity of thoroughfares (location 69) is considered to be high. The magnitude of change is considered to be medium. This is likely to be a direct, permanent, long-term adverse effect which is considered to be moderate.

Secondary Mitigation or Enhancement

9.54 The Proposed Scheme has been assessed with wind mitigation measures via wind tunnel testing as shown within **Figure 2.1** of **Appendix 9.1**. These are:

- At the southwestern façade of Building B:
  - 50% porous, 1.6m (deep) x 11.2m (tall) baffles, x 9;
  - 50% porous, 1.6m (tall) upstands, x 2;
  - 50% porous, entrance canopy;
- On the terrace of Building B:
  - Solid, 3.6m (tall) balustrade;
  - Solid, 2m (deep) x 26.5m (length) canopy, at balustrade level;
- At ground level between Building A and Building B:
  - 4m (tall) deciduous trees, x 22; and
- At the northeast of Building A:
  - 50% porous, 1.5m (tall) x 4m (length) screens, x 2.

9.55 The mitigation has been developed by the architect and validated by CFD and wind tunnel testing.

9.56 It is anticipated that a suitably worded planning condition will be adopted in order to ensure that the final version of the south-western canopy structure is (if not already) validated quantitatively by further modelling.

Residual Effect

9.57 Wind conditions within the Site are predominantly suitable for strolling or better throughout the year and are thus suitable for thoroughfare use. Where so, this represents a negligible effect of the Proposed Scheme. A minor exception occurs to the east of Building B (location 56) as shown in **Figure 4.13** of **Appendix 9.1** and, meeting the wind speed threshold for strolling 94% of the time. This is a marginal exceedance of strolling suitability. The sensitivity of the thoroughfares is considered to be high. The magnitude of change, following secondary mitigation, is considered to be minor. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor.

9.58 Wind conditions at entrances are predominantly suitable for standing or better throughout the year. One minor exceedance occurs at the east of Building B (location 57) as shown in **Figure 4.13** of **Appendix 9.1** where 93% wind speed threshold for standing is met, and this is a marginal exceedance of short-term standing conditions. The sensitivity of the entrance (location 57) is considered to be high. The magnitude of change, following secondary mitigation, is considered to be minor. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor.

9.59 Wind conditions within the recreational spaces on Site, at ground level and on the Building B terrace are generally suitable for at least short periods of sitting /standing in summer and thus for comfortable recreational space use. With secondary mitigation in place, exceptions persist between Buildings A and B (locations 53 and 54) as shown in **Figure 4.15** of **Appendix 9.1**, which meet the threshold wind speed for short-term standing / sitting in summer for 93% to 94% of the time. This is a marginal exceedance of short-term standing / sitting suitability. The sensitivity of recreational space is considered to be high. The magnitude of change, following secondary mitigation, is considered to be minor. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor. All other locations are considered to be negligible. With secondary mitigation in place, recreational spaces (locations 52, 55, 91, 116, 117 and 118) as shown in **Figure 4.15** and **Figure 4.16** of **Appendix 9.1**, are suitable for short-term sitting or better in summer. The sensitivity of recreational space is considered to be high. The magnitude of change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor. All other locations are considered to be negligible.

9.60 With secondary mitigation in place, wind conditions at the outdoor seating at the northwest elevation of Building A as shown in **Figure 4.15** of **Appendix 9.1** are suitable for long-term sitting in summer. The sensitivity of recreational spaces is considered to be high. The magnitude of change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, beneficial residual effect which is considered to be negligible.

9.61 Within the wider surrounding area, wind conditions are generally suitable for existing pedestrian uses, including the use of thoroughfares, entrances, and car parks. Where so this represents a negligible residual effect of the Proposed Scheme. Exceptions are predicted to exist in the following areas:

- A thoroughfare on Ducie Street (location 69) as shown in **Figure 4.13** of **Appendix 9.1** is generally only suitable for walking, where the wind speed threshold for strolling is met 93% of the time during winter. The sensitivity of thoroughfare (location 69) is considered to be high. The magnitude of change, following secondary mitigation, is considered to be minor. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor.

- One entrance along Ducie Street (location 77) as shown in **Figure 4.13** of **Appendix 9.1** is suitable for strolling in winter, though this is unchanged relative to the baseline condition. The sensitivity of entrance (location 77) is considered to be high. The magnitude of change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, beneficial residual effect which is considered to be negligible.

- One entrance along Ducie Street (location 75) as shown in **Figure 4.13** of **Appendix 9.1** is suitable for standing in winter. The sensitivity of entrance (location 75) is considered to be high. The magnitude of change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, beneficial residual effect which is considered to be negligible.

- Entrances along Ducie Street (locations 68, 72) as shown in **Figure 4.13** of **Appendix 9.1** are suitable for strolling. The sensitivity of the entrances is considered to be high. The magnitude of change, following secondary mitigation, is considered to be minor-to-moderate. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be minor (location 72) and moderate (location 68).

Significance

9.62 The effect is considered to be **Not Significant**, with the exception of an entrance along Ducie Street (Location 68) where the effect is considered to be **Significant**.

Limitations and Assumptions

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

- The primary means of the current assessment is a wind tunnel-based approach. This has adopted a discrete measurement approach, where sensors are positioned in sensitive locations and those locations that are expected by veteran practitioners, and informed by preliminary CFD modelling, to experience the most significant acceleration of winds. An approach of this nature is expected to capture worst-case conditions; and

- CFD modelling has been employed as a part of assessments of the Proposed Scheme and to explore the effectiveness of wind mitigation measures. CFD modelling does not explicitly model the turbulence of the wind. Instead, numerical methods are used to estimate the gust wind speeds.

Summary

9.64 **Table 9.4** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 9.4: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Exceedance of the industry standard Lawson criteria for pedestrian safety	A thoroughfare on Ducie Street (Location 69)	Negligible	No
	All other receptors (beyond location 69)	Negligible	No
Exceedance of the industry standard Lawson criteria for pedestrian comfort	Thoroughfares at the east of Building B (Location 56)	Minor adverse	No
	An entrance at the east of Building B (Location 57)	Minor adverse	No
	Recreational spaces at ground level (Locations 52, 55 and 91)	Negligible	No
	Recreational spaces at ground level (Location 53 and 54)	Minor adverse	No
	Recreational spaces on Building B terrace (Location 116, 117 and 118)	Negligible	No
	Outdoor seating at the northwest of Building A (Locations 50, 51 and 92)	Negligible	No
	A thoroughfare on Ducie Street (Location 69)	Minor adverse	No

Effect	Receptor	Residual Effect	Is the Effect Significant?
	An entrance along Ducie Street (Location 77)	Negligible	No
	Entrances along Ducie Street (Location 72)	Minor adverse	No
	Entrances along Ducie Street (Location 68)	Moderate adverse	Yes
	An entrance along Ducie Street (Location 75)	Negligible	No
	Thoroughfares (Locations 1, 3, 5, 6, 7, 9, 10, 14, 15, 16 17, 18, 20, 21, 23, 25, 26, 27, 28, 30, 31, 32, 33, 34, 38, 39, 40, 42, 43, 45, 46, 47, 58, 59, 60, 61, 62, 63, 64, 66, 70, 71, 73, 74, 76, 78, 80, 81, 82, 83, 84, 85, 86, 87, 89, 93, 96, 97)	Negligible	No
	Entrances (Locations 2, 4, 8, 22, 36, 37, 44, 88, 94, 95)	Negligible	No
	Recreational spaces (Locations 11, 12, 13, 48, 49, 90, 102, 103)	Negligible	No
	Car parks / roads (Locations 19, 24, 29, 35, 41, 65, 67, 79)	Negligible	No
	Viewing balconies (Locations 101, 119, 120)	Negligible	No

References

[1] Manchester City Council (11th July 2012). Manchester's Local Development Framework Core Strategy Development Plan Document. Available at: https://www.manchester.gov.uk/downloads/download/5672/core_strategy [Date accessed: 6th November 2024]

[2] Ministry of Housing Communities & Local Government (2019). National Planning Practice Guidance. Available at: https://www.gov.uk/government/collections/planning-practice-guidance

[4] Lawson, T.V. The determination of the wind environment of a building complex before construction. Bristol : University of Bristol, Department of Aeronautical Engineering, 1990.

10. Daylight, Sunlight and Overshadowing

Introduction

10.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to daylight and sunlight.

10.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.

10.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).

10.4 This Chapter, and its associated **Figure 10.1** and **Appendices 10.1** and **10.2** is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

10.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

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

Scope of the Assessment

10.7 Aerial photography of the Site and surrounding context shows that there are no areas of amenity space which are located within 90° of due north of the Site and in close enough proximity to be potentially affected in overshadowing terms. No detailed overshadowing assessments have, therefore, been undertaken.

10.8 The effect of the Proposed Scheme has only been considered in the context of the currently existing sensitive receptors. The effect upon any potentially future sensitive receptors has not been considered.

10.9 Owing to the evolving and changing nature of demolition and construction activities, the assessment of potential daylight and sunlight effects during the demolition of the existing buildings and construction of the Proposed Scheme has not been modelled. This is on the basis that the effect of the completed Proposed Scheme, which is described in the Operation Stage section of this report, represents the worst-case effect assessment scenario. The demolition and construction stage will not therefore be discussed further in this report.

Effects Considered Likely to be Significant

10.10 **Table 10.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 10.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Changes to daylight amenity	Oxygen 47 Ducie Street Quantum William Jessop Court 5 Wharf Close John Smeaton Court Thomas Telford Basin Paradise Mews Laystall Street Consented Scheme Islington Wharf Phase 2 Islington Wharf Phase 3 Islington Wharf Phase 1 BLK A Islington Wharf Phase 1 BLK B Islington Wharf Phase 4 Laystall House 32-34 Laystall Street 57-59 Ducie Street Jutland House Whittle's Croft Wharf Piccadilly Village Store Street Scheme	Operation
Changes to sunlight amenity	Oxygen Quantum Paradise Mews Islington Wharf Phase 2 Islington Wharf Phase 3 Islington Wharf Phase 1 BLK A Islington Wharf Phase 4 Laystall House 32-34 Laystall Street 57-59 Ducie Street Jutland House Whittle's Croft Wharf	Operation

Assessment Methodology

10.11 There is no legislation that governs daylight and sunlight and overshadowing. The criteria for assessment relating to daylight and sunlight is covered by the following national and local policies and guidance documents:

- National Planning Policy Framework 2024[1];
- National Planning Policy Guidance - Effective Use of Land, published on 22 July 2019 and regularly updated as a 'live' resource[2];
- Manchester Core Strategy (2012 – 2027)[3];
- Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007)[4]; and
- BRE 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' 2022[5].

Defining the Study Area

10.12 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."

10.13 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.

10.14 The location of the surrounding sensitive receptors can be seen on the drawings within **Appendix 10.1**.

Assessment Process

10.15 The following approaches are undertaken to assess the daylight and sunlight 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).

Outline Approach for Daylight and Sunlight Assessments

10.16 The technical analyses carried out to inform the daylight and sunlight assessments have been undertaken by creating a digital three-dimensional (3D) model of the existing Site and Proposed Scheme, based on 3D photogrammetry.

10.17 The 3D model uses Waldram Diagrams to establish the VSC and 3D geometric calculations for daylight distribution.

10.18 In accordance with the BRE Guidance, only those surrounding properties which have windows facing towards the Site were included in the assessment. If a nearby property has no windows facing the Site, these properties would not be affected by the Proposed Scheme in terms of light.

Daylight

10.19 The assessment of changes to the availability of daylight presented within this Chapter has been informed by the below assessments:

Vertical Sky Component (VSC) Method

10.20 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[6], to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky".

10.21 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.

10.22 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'.

10.23 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.

10.24 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

10.25 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.

10.26 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.

10.27 Paragraph 2.2.10 of the BRE Guidelines states:

"Where room layouts are known…the impact on the daylighting distribution in the existing building should be found by plotting the no sky line in each of the main rooms…The no sky line divides points on the working plane which can and cannot see the sky"

10.28 Paragraph 2.2.11 of the BRE Guidelines states:

"If, following construction of a new development, the no sky line moves so that the area of the existing room, which does receive direct skylight, is reduced to less than 0.80 times its former value this will be noticeable to the occupants…"

10.29 Paragraph 2.2.11 therefore implies that an NSL of at least 80% would be considered satisfactory.

10.30 Paragraph 2.2.12 of the BRE Guidelines states:

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

Diffuse Daylight

10.31 Paragraph 2.2.23 of the BRE Guidelines states:

"…the diffuse daylighting of the existing building may be adversely affected…if either:

- *the VSC measured at the centre of an existing main window is less than 27%, and less than 0.80 times its former value*
- *the area of the working plane in a room which can receive direct skylight is reduced to less than 0.80 times its former value."*

10.32 This assessment process is summarised in Figure 20 of the BRE Guidelines, Decision Chart: diffuse daylight in existing buildings, which can be seen in **Figure 10.1**.

Sunlight

Annual Probable Sunlight Hours (APSH) Method

10.33 Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of APSH. Where no obstruction exists the total annual probable sunlight for Manchester would amount to 1392 hours, and each spot equates to 13.92 hours of the total annual probable sunlight.

10.34 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.

10.35 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. Normally loss of sunlight need not be analysed to kitchen and bedrooms except for bedrooms that also comprise a living space…".

"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".

10.36 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."

Receptor Modelling

10.37 Where a daylight and sunlight sensitive receptor has rooms with windows which face the Site, any mitigating/dual aspect windows will also be modelled.

10.38 The following daylight and sunlight sensitive receptors have been fully or partially modelled to publicly available floor plans:

- Oxygen;
- 47 & 57-59 Ducie Street;
- Quantum;
- William Jessop Court;
- 5 Wharf Close;
- John Smeaton Court;
- Thomas Telford Basin;
- Paradise Mews;
- Laystall Street Consented Scheme;
- Islington Wharf Phases 1 (Block A), 2, 3 & 4;
- Laystall House;
- 32-34 Laystall Street;
- Jutland House;
- Whittle's Croft Wharf; and
- Store Street Scheme.

10.39 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.

10.40 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 and Sunlight

10.41 **Table 10.2** provides a summary of the assessment criteria set out within the BRE Guidelines for daylight and sunlight.

Table 10.2: Summary of BRE Daylight and Sunlight Assessment Criteria

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

Reporting of the Environmental Effect and Significance Criteria

10.42 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

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

10.44 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.

10.45 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 using professional judgment based on how the receptor is able to accommodate or adapt, 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.

10.46 Furthermore, the use of the surrounding residential receptors is a material consideration in determining sensitivity, and hotel accommodation is typically viewed as having a lower sensitivity to changes in daylight.

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

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

- Oxygen;
- 47 Ducie Street;
- Quantum;
- William Jessop Court;
- 5 Wharf Close;
- John Smeaton Court;
- Thomas Telford Basin;
- Paradise Mews;
- Laystall Street Consented Scheme;
- Islington Wharf Phase 2;
- Islington Wharf Phase 3;
- Islington Wharf Phase 1 BLK A;
- Islington Wharf Phase 1 BLK B;
- Islington Wharf Phase 4;
- Laystall House;
- 32-34 Laystall Street;
- 57-59 Ducie Street;
- Jutland House;
- Whittle's Croft Wharf;
- Piccadilly Village; and

- Store Street Scheme.

Determining the Magnitude of Change

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

10.50 The initial numerical criteria for determining magnitude of change are based on percentage of baseline alterations, as follows:

Table 10.3: Summary of Daylight and Sunlight Magnitude of Change Criteria

Magnitude of Change	BRE Criteria
Negligible	0-20%
Small	20-29.9%
Medium	30-39.9%
Large	40%+

Determining the Level of Effect

10.51 The level of effect has been informed by the magnitude of change due to the Proposed Scheme and the evaluation of the sensitivity of the affected receptor. The level of effect has been determined using professional judgement and **Table 10.4** has been a tool which has assisted with this process.

10.52 Whilst **Table 10.4** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*' or '*adverse*'.

Table 10.4: Matrix to Support Determining the Level of Effect

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

Level of Effect by Reference to the BRE Guidelines

10.53 For daylight and sunlight, the BRE Guidelines outline the approach within the accompanying Appendix H, in terms of assigning criteria to assess the effects.

"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 …, 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;*
- *The affected building only has a low level of requirement for skylight or sunlight; and*
- *There are particular reasons why an alternative, less stringent, guideline should be applied…".*

Factors tending towards a major adverse impact include:

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

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 principles as adverse impacts."

10.54 The BRE Guidelines do not provide any guidance on what constitutes a moderate effect.

10.55 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 degrees i.e. a more suburban location.

10.56 18 is 67% of 27. 67% of the 80 (the BRE target value for NSL) 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 (30%) extent, the magnitude of change is still considered to be small provided that the windows either experience no change or retain 18% VSC and the rooms retain at least 53.6% NSL.

Level of Effects in Context to the Locality

10.57 The context of the Site and surrounding area is key to understanding the sensitivity of the surrounding receptors and significance of daylight and sunlight effects.

10.58 It is well established that the published targets within the BRE Guide are based on low rise, suburban development. The PPG – Making Effective Use of Land - Paragraph 007 Reference ID: 66-007-20190722 states:

"All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings."

10.59 This is a key point to consider in respect of the Proposed Scheme and its impact on surrounding properties, particularly as it is situated in Manchester City Centre.

10.60 This approach is also acknowledged in the BRE Guidelines, which state:

"…in special circumstances the developer or planning authority may wish to use different target values… in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

Determining Significance

10.61 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'.

10.62 When assigning significance criteria for daylight and sunlight effects, professional judgement has been used based upon the magnitude of change, the BRE guidance detailed above and the effects in context to the locality. This includes consideration of the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, sensitivity of the receptor, and any other relevant factors.

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

Baseline Conditions

10.64 The full Baseline daylight and sunlight results can be found in **Appendix 10.2** and are summarised in **Table 10.5** below.

10.65 A total of 2,281 Site facing windows serving 1,331 rooms within 21 buildings have been assessed for VSC and NSL for daylight, whilst 195 rooms were assessed for APSH for sunlight within the 12 buildings which are material for consideration in sunlight terms i.e. their windows are orientated to within 90^0 of due south.

10.66 Out of the 2,281 windows assessed for daylight, 1,250 (55%) meet the BRE guidelines for VSC. For NSL, 1098 (83%) of the 1,331 rooms assessed meet the BRE criteria. For sunlight, 137 (70%) of the 195 rooms assessed meet the BRE criteria for both Winter and Annual APSH.

10.67 Overall, there is a reasonable level of baseline daylight and sunlight compliance considering the city centre context of the Site, but this is likely due to the relatively undeveloped nature of the Site compared to its surroundings.

Table 10.5: Baseline Daylight and Sunlight Results to Surrounding Sensitive Receptors

Address	Windows that meet VSC Criteria		Rooms that meet NSL Criteria		Rooms that meet APSH Criteria	
	Total	Pass	Total	Pass	Total	Pass
Oxygen	858	696	497	492	14	6
47 Ducie Street	6	0	5	2	0	0
Quantum	232	76	135	111	43	13
William Jessop Court	57	9	41	21	0	0
5 Wharf Close	14	5	14	14	0	0
John Smeaton Court	88	30	42	31	0	0
Thomas Telford Basin	105	17	45	19	0	0
Paradise Mews	15	14	4	4	1	1
Laystall Street Consented Scheme	56	43	46	46	0	0
Islington Wharf Phase 2	52	31	26	24	20	20
Islington Wharf Phase 3	62	17	22	19	21	14
Islington Wharf Phase 1 BLK A	45	6	19	7	7	7
Islington Wharf Phase 1 BLK B	120	74	60	39	0	0
Islington Wharf Phase 4	44	43	15	15	15	15
Laystall House	111	43	46	41	33	25
32-34 Laystall Street	136	30	104	48	8	3
57-59 Ducie Street	69	2	61	55	21	21
Jutland House	85	44	68	66	7	7
Whittle's Croft Wharf	65	52	35	35	5	5
Piccadilly Village	43	0	37	0	0	0
Store Street Scheme	18	18	9	9	0	0
Total	**2281**	**1250**	**1331**	**1098**	**195**	**137**

Future Baseline

10.68 If the Proposed Scheme was not constructed the baseline daylight and sunlight levels would remain the same as there are no 'natural' factors that would influence baseline conditions, only human induced changes (i.e. development), which is likely in view of the allocated nature of the Site.

Primary and Tertiary Mitigation

Operational Stage

10.69 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

Change in daylight and sunlight amenity

10.70 Drawings of the Operational Scenario can be found in **Appendix 10.1**.

10.71 The outputs of the computer modelling for both daylight and sunlight are provided in full within **Appendix 10.2**, with the key metrics provided in **Tables 10.6** to **10.9** below.

10.72 The figures describe the levels of VSC, NSL & APSH change compared to the existing baseline levels.

10.73 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 10.6: 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
Oxygen	858	129	51	67	611
47 Ducie Street	6	6	0	0	0
Quantum	232	232	0	0	0
William Jessop Court	57	56	1	0	0
5 Wharf Close	14	14	0	0	0
John Smeaton Court	88	88	0	0	0
Thomas Telford Basin	105	103	2	0	0
Paradise Mews	15	15	0	0	0

Address	Total No. of windows	No. of windows that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Laystall Street Consented Scheme	56	52	4	0	0
Islington Wharf Phase 2	52	52	0	0	0
Islington Wharf Phase 3	62	55	5	2	0
Islington Wharf Phase 1 BLK A	45	14	13	17	1
Islington Wharf Phase 1 BLK B	120	120	0	0	0
Islington Wharf Phase 4	44	15	29	0	0
Laystall House	111	87	17	2	5
32-34 Laystall Street	136	136	0	0	0
57-59 Ducie Street	69	57	1	11	0
Jutland House	85	85	0	0	0
Whittle's Croft Wharf	65	65	0	0	0
Piccadilly Village	43	43	0	0	0
Store Street Scheme	18	16	2	0	0
Total	**2281**	**1440**	**125**	**99**	**617**

Table 10.7: 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
Oxygen	497	156	39	27	275
47 Ducie Street	5	5	0	0	0
Quantum	135	135	0	0	0

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
William Jessop Court	41	40	1	0	0
5 Wharf Close	14	14	0	0	0
John Smeaton Court	42	40	2	0	0
Thomas Telford Basin	45	42	3	0	0
Paradise Mews	4	4	0	0	0
Laystall Street Consented Scheme	46	46	0	0	0
Islington Wharf Phase 2	26	26	0	0	0
Islington Wharf Phase 3	22	22	0	0	0
Islington Wharf Phase 1 BLK A	19	11	1	0	7
Islington Wharf Phase 1 BLK B	60	53	7	0	0
Islington Wharf Phase 4	15	15	0	0	0
Laystall House	46	41	2	0	3
32-34 Laystall Street	104	104	0	0	0
57-59 Ducie Street	61	61	0	0	0
Jutland House	68	68	0	0	0
Whittle's Croft Wharf	35	35	0	0	0
Piccadilly Village	37	37	0	0	0
Store Street Scheme	9	9	0	0	0
Total	**1331**	**964**	**55**	**27**	**285**

Table 10.8: 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
Oxygen	14	14	0	0	0
47 Ducie Street	0	0	0	0	0
Quantum	43	43	0	0	0
Paradise Mews	1	1	0	0	0
Islington Wharf Phase 2	20	20	0	0	0
Islington Wharf Phase 3	21	18	1	0	0
Islington Wharf Phase 1 BLK A	7	7	0	0	0
Islington Wharf Phase 4	15	15	0	0	0
Laystall House	33	28	0	3	2
32-34 Laystall Street	8	7	1	0	0
57-59 Ducie Street	21	21	0	0	0
Jutland House	7	7	0	0	0
Whittle's Croft Wharf	5	5	0	0	0
Total	**195**	**186**	**2**	**3**	**2**

Table 10.9: 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
Oxygen	14	14	0	0	0
47 Ducie Street	0	0	0	0	0
Quantum	43	43	0	0	0
Paradise Mews	1	1	0	0	0
Islington Wharf Phase 2	20	20	0	0	0

Address	Total No. of rooms	No. of rooms that meet BRE Guidelines	Below BRE Guidelines Magnitude of Change		
			Small	Medium	Large
Islington Wharf Phase 3	21	19	0	2	0
Islington Wharf Phase 1 BLK A	7	7	0	0	0
Islington Wharf Phase 4	15		0	0	0
Laystall House	33	32	1	0	0
32-34 Laystall Street	8	8	0	0	0
57-59 Ducie Street	21	21	0	0	0
Jutland House	7	7	0	0	0
Whittle's Croft Wharf	5	5	0	0	0
Total	**195**	**192**	**1**	**2**	**0**

10.74 In situations where the construction of the Proposed Scheme would result in VSC, NSL and APSH alterations to the windows and rooms within a property which are all within the BRE guidelines, the effect of the Proposed Scheme upon the daylight and sunlight amenity to that property is considered to be negligible.

10.75 Of the 21 properties assessed, the effect of the Proposed Scheme upon the daylight and sunlight amenity within the 8 properties listed within **Table 10.10** would be negligible (not significant).

Table 10.10: Properties with a Negligible Daylight and Sunlight effect

Properties with a Negligible Daylight and Sunlight effect	
47 Ducie Street	Islington Wharf Phase 2
Quantum	Jutland House
5 Wharf Close	Whittle's Croft Wharf
Paradise Mews	Piccadilly Village

10.76 In accordance with the significance criteria described above, the effect upon the daylight and/or sunlight amenity within the 8 properties listed within **Table 10.11** is considered to be no greater than minor adverse (not significant).

Table 10.11: Properties with a no greater than Minor Adverse Daylight and Sunlight effect

Properties with a no greater than Minor Adverse Daylight and/or Sunlight effect	
William Jessop Court	Islington Wharf Phase 1 BLK B
John Smeaton Court	Islington Wharf Phase 4
Thomas Telford Basin	32-34 Laystall Street
Laystall Street Consented Scheme	Store Street Scheme

10.77 The remaining five properties are discussed in detail below:

Oxygen

Daylight

10.78 A total of 858 windows serving 497 rooms were assessed for daylight within this property.

Magnitude of Daylight Change

VSC

10.79 129 (15%) of the 858 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.80 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of VSC change to 51 (6%) of the 729 affected windows is small. The magnitude of VSC change to 67 (8%) of the remaining 678 affected windows is medium. The magnitude of VSC change to the remaining 611 (71%) windows is large.

10.81 The overall magnitude of VSC change to the windows in this property is considered to be large.

NSL

10.82 156 (31%) of the 497 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.83 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of NSL change to 39 (8%) of the 341 affected rooms is small. The magnitude of NSL change to 27 (5%) of the remaining 302 affected rooms is medium. The magnitude of NSL change to the remaining 275 (55%) rooms is large.

10.84 The overall magnitude of NSL change within the rooms in this property is considered to be medium.

Diffuse Daylight

10.85 Any changes in diffuse daylight (VSC & NSL) to 18 (4%) of the 497 rooms assessed will be fully BRE compliant. The magnitude of diffuse daylight change within these 18 rooms is therefore considered to be negligible.

10.86 In accordance with the significance criteria described above, the magnitude of diffuse daylight changes within 151 (30%) of the remaining 479 rooms will be small.

10.87 The magnitude of VSC change to one or more of the windows serving the remaining 328 (66%) of rooms will be medium to large. The magnitude of NSL change to the rooms served by these windows will be negligible to large.

10.88 In view of the number of rooms which will experience a medium or large overall magnitude of change to their daylight amenity, the overall magnitude of diffuse daylight change within this property is considered to be large.

Alternate Guidelines

10.89 At paragraph F5 the BRE Guidelines state:

> *"…where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light...To ensure that new development matches the height and proportions of existing buildings, the VSC, daylight distribution, and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary."*

10.90 This applies to Oxygen. The effect of the Proposed Scheme compared to a Mirror Massing Baseline has, therefore, been assessed.

10.91 Drawings of the Mirror Massing Baseline scenario can be found in **Appendix 10.1**.

10.92 Full detailed analysis of the effect of the Proposed Scheme compared to the Mirror Massing Baseline can be found in **Appendix 10.2**.

Magnitude of Daylight Change

VSC

10.93 262 (31%) of the 858 windows assessed would see VSC gains compared to the Mirror Massing Baseline and so experience a beneficial magnitude of VSC change.

10.94 103 (12%) of the remaining 596 windows would see no change compared to the Mirror Massing Baseline and so experience a negligible magnitude of VSC change.

10.95 227 (27%) of the remaining 493 windows would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.96 73 (8%) of the remaining 266 would experience a small magnitude of VSC change.

10.97 The magnitude of VSC change to the remaining 193 (22%) windows, which are all located from the 11th floor upwards, is medium to large. The windows will, however, retain reasonable in an urban context VSC values which range from 9.1% to 21% .

10.98 In view of the large number of windows which would see from VSC improvements to small changes compared to the Mirror Massing Baseline, the overall magnitude of VSC change to the windows in this property is considered to be small.

NSL

10.99 248 (50%) of the 497 rooms assessed would see NSL gains compared to the Mirror Massing Baseline and so experience a beneficial magnitude of NSL change.

10.100 40 (8%) of the remaining 249 rooms would see no change compared to the Mirror Massing Baseline and so experience a negligible magnitude of NSL change.

10.101 98 (20%) of the remaining 209 rooms would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.102 21 (4%) of the remaining 111 would experience a small magnitude of NSL change.

10.103 The magnitude of NSL change to the remaining 90 (18%) rooms, which are all located from the 9th floor upwards, is medium to large. The rooms will, however, retain reasonable in an urban context NSL values which range from 12% to 56% of the room areas.

10.104 In view of the large number of rooms which would see from NSL improvements to small changes compared to the Mirror Massing Baseline, the overall magnitude of NSL change within the rooms in this property is considered to be small.

Diffuse Daylight

10.105 Compared to the Mirror Massing Baseline, there will be diffuse daylight (VSC & NSL) improvements to 169 (34%) of the 497 rooms assessed. The magnitude of diffuse daylight change within these 169 rooms is therefore considered to be beneficial.

10.106 Any changes in diffuse daylight to 144 (29%) of the remaining 328 rooms assessed will be fully BRE compliant. The magnitude of diffuse daylight within these 144 rooms is therefore considered to be negligible.

10.107 In accordance with the significance criteria described above, the magnitude of diffuse daylight changes within 47 (10%) of the remaining 184 rooms will be small.

10.108 The magnitude of VSC change to one or more of the windows serving the remaining 137 (27%) of rooms will be negligible to large. The windows will, however, retain reasonable in an urban context VSC values which range from 8.8% to 21% . The magnitude of NSL change to the rooms served by these windows will also be negligible to large. The rooms will, however, retain reasonable in an urban context NSL values which range from 12% to 79% of the room areas.

10.109 In view of the large number of rooms which would see from Diffuse Daylight improvements to small changes compared to the Mirror Massing Baseline, the overall magnitude of diffuse daylight change within this property is considered to be small.

Daylight Effect

VSC

10.110 The overall VSC effect upon the windows in this property is considered to be major.

NSL

10.111 The overall NSL effect upon the rooms in this property is considered to be major.

Diffuse Daylight

10.112 The overall diffuse daylight effect is considered to be major.

Secondary Mitigation or Enhancement

10.113 No secondary mitigation or enhancement is required.

Residual Effect

10.114 In the absence of secondary mitigation, the residual daylight effect upon Oxygen is the same as that reported in the pre-mitigation scenario.

10.115 The sensitivity of Oxygen is considered to be medium. The overall magnitude of daylight change, following secondary mitigation, is considered to be large. Therefore, there is likely to be a direct, permanent long term adverse residual daylight effect which is considered to be major.

Significance

10.116 Whilst, compared to the existing baseline, there is a major daylight effect, this effect is considered to be **Not Significant**.

10.117 This is because the effect level has been driven by the change against the Existing Baseline. However, when evaluating whether the effect is considered to be significant or not, it has been considered appropriate to consider the Mirror Massing Baseline. As outlined above, under these scenarios, the magnitude of change was considered to be small. This consideration of the Mirror Massing Baseline is in accordance with paragraph H6 of the BRE Guidelines.

10.118 Therefore the justification for this major effect not being considered significant is associated with the locality in which the Proposed Scheme is being developed and that it is unrealistic for existing daylight levels to be retained in a city environment.

Sunlight

10.119 A total of 14 rooms were assessed for sunlight within this property.

Magnitude of Sunlight Change

10.120 Any changes in sunlight (APSH) to all 14 (100%) rooms assessed will be fully BRE compliant. The magnitude of APSH change within these 14 rooms is therefore considered to be negligible.

Sunlight Effect

10.121 The overall APSH effect upon the rooms in this property is considered to be negligible.

Secondary Mitigation or Enhancement

10.122 No secondary mitigation or enhancement is required.

Residual Effect

10.123 In the absence of secondary mitigation, the residual sunlight effects upon Oxygen are the same as that reported in the pre-mitigation scenario.

10.124 The sensitivity of Oxygen is considered to be medium. The overall magnitude of sunlight change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent long term adverse residual sunlight effect which is considered to be negligible.

Significance

10.125 The negligible sunlight effect is considered to be **Not Significant**.

Islington Wharf Phase 3

Daylight

A total of 62 windows serving 22 rooms were assessed for daylight within this property.

Magnitude of Daylight Change

VSC

10.126 55 (89%) of the 62 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.127 Based on the numerical criteria for determining the magnitude of change detailed in Table 10.3, the magnitude of VSC change to 5 (8%) of the 7 affected windows is small. The magnitude of VSC change to the remaining 2 (3%) windows is medium.

10.128 The overall magnitude of VSC change to the windows in this property is considered to be small.

NSL

10.129 22 (100%) of the 22 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.130 The overall magnitude of NSL change within the rooms in this property is considered to be negligible.

Diffuse Daylight

10.131 Any changes in diffuse daylight (VSC & NSL) to 15 (68%) of the 22 rooms assessed will be fully BRE compliant. The magnitude of diffuse daylight change within these 15 rooms is therefore considered to be negligible.

10.132 In accordance with the significance criteria described above, 5 (23%) of the remaining 7 rooms will experience magnitudes of VSC and/or NSL changes which are small. The magnitude of diffuse daylight change within these 3 rooms is therefore considered to be small.

10.133 The remaining two rooms are both LKDs served by 2 windows of which one will experience a fully BRE compliant (negligible) VSC change and the other a medium magnitude of VSC change. In view of their dual aspect, both rooms will experience no greater than a 1.1% NSL change and retained daylight distribution to between 66.3% and 99.8% of their room areas, the magnitude of diffuse daylight change within these two rooms is, therefore, also considered to be small.

10.134 The overall magnitude of diffuse daylight change within this property is considered to be small.

Daylight Effect

VSC

10.135 The overall VSC effect upon the windows in this property is considered to be minor.

NSL

10.136 The overall NSL effect upon the rooms in this property is considered to be negligible.

Diffuse Daylight

10.137 The overall diffuse daylight effect within this property is considered to be minor.

Secondary Mitigation or Enhancement

10.138 No secondary mitigation or enhancement is required.

Residual Effect

10.139 In the absence of secondary mitigation, the residual daylight effects upon Islington Wharf Phase 3 are the same as that reported in the pre-mitigation scenario.

10.140 The sensitivity of Islington Wharf Phase 3 is considered to be medium. The overall magnitude of daylight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual daylight effect which is considered to be minor.

Significance

10.141 The minor daylight effect is considered to be **Not Significant**.

Sunlight

10.142 A total of 21 rooms were assessed for sunlight within this property.

Magnitude of Sunlight Change

10.143 18 (86%) of the 21 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of APSH change.

10.144 The magnitude of total or winter APSH changes to the remaining 3 rooms range from negligible to medium. All rooms will, however, retain total APSH levels of between 24% and 35% against the BRE recommendation of 25% and winter APSH levels of between 2% and 3% against the BRE recommended 5%.

10.145 The overall magnitude of APSH change within this property is considered to be small.

Sunlight Effect

10.146 The overall APSH effect within the rooms in this property is considered to be minor.

Secondary Mitigation or Enhancement

10.147 No secondary mitigation or enhancement is required.

Residual Effect

10.148 In the absence of secondary mitigation, the residual effects upon Islington Wharf Phase 3 are the same as that reported in the pre-mitigation scenario.

10.149 The sensitivity of Islington Wharf Phase 3 is considered to be medium. The overall magnitude of sunlight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual sunlight effect which is considered to be minor.

Significance

10.150 The minor sunlight effect is considered to be **Not Significant**.

Islington Wharf Phase 1 BLK A

Daylight

10.151 A total of 45 windows serving 19 rooms were assessed for daylight within this property.

Magnitude of Daylight Change

VSC

10.152 14 (31%) of the 45 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.153 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of VSC change to 13 (29%) of the 31 affected windows is small. The magnitude of VSC change to 17 (38%) of the remaining 18 affected windows is medium. The magnitude of VSC change to the remaining window is large.

10.154 The overall magnitude of VSC change upon the windows in this property is considered to be medium.

NSL

10.155 11 (58%) of the 19 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.156 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of NSL change 1 (5%) of the remaining 8 affected rooms is small. The magnitude of NSL change to the remaining 7 (37%) rooms is large.

10.157 The overall magnitude of NSL change upon the rooms in this property is considered to be medium.

Diffuse Daylight

10.158 In accordance with the significance criteria described above, 7 (37%) of the 19 rooms will experience changes in VSC and/or NSL which are small. The magnitude of diffuse daylight change within these 7 rooms is therefore considered to be small.

10.159 The magnitude of VSC change to the windows serving the remaining 12 (63%) rooms will be small to medium. The windows will, however, retain reasonable in an urban context VSC values for a bedroom which range from 6.5% to 11.5% . The magnitude of NSL change to the

rooms served by these windows will be negligible to large. The rooms will, however, retain reasonable in an urban context NSL values for a bedroom which range from 17.5% to 45% of the room areas. In view of their usage as bedrooms, which have a lower expectation for daylight by virtue of their usage, the overall magnitude of diffuse daylight change within these 7 rooms is considered to be small.

10.160 The overall magnitude of diffuse daylight change within this property is considered to be small.

Daylight Effect

VSC

10.161 The overall VSC effect upon the windows in this property is considered to be moderate.

NSL

10.162 The overall NSL effect upon the rooms in this property is considered to be moderate.

Diffuse Daylight

10.163 The overall effect of the Proposed Scheme upon the diffuse daylight within this property is considered to be minor.

Secondary Mitigation or Enhancement

10.164 No secondary mitigation or enhancement is required.

Residual Effect

10.165 In the absence of secondary mitigation, the residual daylight effects upon Islington Wharf Phase 1 BLK A are the same as that reported in the pre-mitigation scenario.

10.166 The sensitivity of Islington Wharf Phase 1 BLK A is considered to be medium. The overall magnitude of daylight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual daylight effect which is considered to be minor.

Significance

10.167 The minor sunlight effect is considered to be **Not Significant**.

Sunlight

10.168 A total of 7 rooms were assessed for sunlight within this property.

Magnitude of Sunlight Change

10.169 Any changes in sunlight (APSH) to all 7 (100%) rooms assessed will be fully BRE compliant. The magnitude of APSH change within these 7 rooms is therefore considered to be negligible.

Sunlight Effect

10.170 The overall APSH effect upon the rooms in this property is considered to be negligible.

Secondary Mitigation or Enhancement

10.171 No secondary mitigation or enhancement is required.

Residual Effect

10.172 In the absence of secondary mitigation, the residual sunlight effects upon Islington Wharf Phase 1 BLK A are the same as that reported in the pre-mitigation scenario.

10.173 The sensitivity of Islington Wharf Phase 1 BLK A is considered to be medium. The overall magnitude of sunlight change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent long term adverse residual sunlight effect which is considered to be negligible.

Significance

10.174 The negligible sunlight effect is considered to be **Not Significant**.

Laystall House

Daylight

10.175 A total of 111 windows serving 46 rooms were assessed for daylight within this property.

Magnitude of Daylight Change

VSC

10.176 87 (78%) of the 111 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.177 Based on the numerical criteria for determining the magnitude of change detailed in Table 10.3, the magnitude of VSC change to 17 (15%) of the 24 affected windows is small. The magnitude of VSC change to the remaining 2 (2%) of the remaining 7 windows is medium. The magnitude of VSC change to the remaining 5 (5%) windows is large.

10.178 The overall magnitude of VSC change to the windows in this property is considered to be small.

NSL

10.179 41 (89%) of the 46 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.180 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of NSL change to 2 (4%) of the 5 affected rooms is small. The magnitude of NSL change to the remaining 3 (7%) rooms is large.

10.181 The overall magnitude of NSL change within the rooms in this property is considered to be small.

Diffuse Daylight

10.182 Any changes in diffuse daylight (VSC & NSL) to 28 (61%) of the 46 rooms assessed will be fully BRE compliant. The magnitude of diffuse daylight change within these 28 rooms is therefore considered to be negligible.

10.183 In accordance with the significance criteria described above, 8 (17%) of the remaining 18 rooms will experience magnitudes of VSC and/or NSL changes which are small. The

magnitude of diffuse daylight change within these 8 rooms is therefore considered to be small.

10.184 5 of the remaining 10 rooms are all served by multiple windows of which one will experience a large magnitude of VSC change. This is, however, because that window has a low (1.6% to 4.1%) baseline VSC value and so the small (1.6% to 3.3%) absolute VSC change disproportionately presents itself. All of the other windows serving these 5 rooms will be fully BRE compliant. The rooms will also be fully NSL compliant and retain daylight distribution to at least 98.9% of the room area. The magnitude of diffuse daylight change within these 5 rooms is, therefore, considered to be small.

10.185 3 (7%) of the remaining 5 rooms will experience large magnitudes of NSL change. This is again due low baseline values and the change being disproportionate. Any change to the VSC to the windows serving these rooms will be negligible to small. The magnitude of diffuse daylight change within these 3 rooms is, therefore, also considered to be small.

10.186 The windows serving the remaining 2 (4%) rooms will experience magnitudes of VSC change which are no greater than 30.5%. the rooms will be fully NSL compliant. The magnitude of diffuse daylight change within these 2 rooms is, therefore, also considered to be small.

10.187 The overall magnitude of diffuse daylight change within this property is considered to be small.

Daylight Effect

VSC

10.188 The overall VSC effect upon the windows in this property is considered to be minor.

NSL

10.189 The overall NSL effect upon the rooms in this property is considered to be minor.

Diffuse Daylight

10.190 The overall diffuse daylight effect within this property is considered to be minor.

Secondary Mitigation or Enhancement

10.191 No secondary mitigation or enhancement is required.

Residual Effect

10.192 In the absence of secondary mitigation, the residual daylight effects upon Laystall House are the same as that reported in the pre-mitigation scenario.

10.193 The sensitivity of Laystall House is considered to be medium. The overall magnitude of daylight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual daylight effect which is considered to be minor.

Significance

10.194 The minor daylight effect is considered to be **Not Significant**.

Sunlight

10.195 A total of 33 rooms were assessed for sunlight within this property.

Magnitude of Sunlight Change

10.196 28 (85%) of the 33 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of APSH change.

10.197 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of Total APSH change to 3 (9%) of the 5 affected rooms is medium. The magnitude of Total APSH change to the remaining 2 (6%) rooms is large.

10.198 In terms of Winter APSH, based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of Winter APSH change to 4 (13%) of the 5 affected rooms is negligible. The magnitude of Winter APSH change to the remaining room is small.

10.199 The overall magnitude of APSH change within this property is considered to be small.

Sunlight Effect

10.200 The overall APSH effect within the rooms in this property is considered to be minor.

Secondary Mitigation or Enhancement

10.201 No secondary mitigation or enhancement is required.

Residual Effect

10.202 In the absence of secondary mitigation, the residual effects upon Laystall House are the same as that reported in the pre-mitigation scenario.

10.203 The sensitivity of Laystall House is considered to be medium. The overall magnitude of sunlight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual sunlight effect which is considered to be minor.

Significance

10.204 The minor sunlight effect is considered to be **Not Significant**.

57-59 Ducie Street

Daylight

10.205 A total of 69 windows serving 61 rooms were assessed for daylight within this property.

Magnitude of Daylight Change

VSC

10.206 57 (83%) of the 69 windows assessed would meet the BRE's criteria and so experience a negligible magnitude of VSC change.

10.207 Based on the numerical criteria for determining the magnitude of change detailed in **Table 10.3**, the magnitude of VSC change to 1 (1%) of the 12 affected windows is small. The magnitude of VSC change to the remaining 11 (16%) windows is medium.

10.208 The overall magnitude of VSC change to the windows in this property is considered to be small.

NSL

10.209 61 (100%) of the 61 rooms assessed would meet the BRE's criteria and so experience a negligible magnitude of NSL change.

10.210 The overall magnitude of NSL change within the rooms in this property is considered to be negligible.

Diffuse Daylight

10.211 Any changes in diffuse daylight (VSC & NSL) to 49 (80%) of the 61 rooms assessed will be fully BRE compliant. The magnitude of diffuse daylight change within these 49 rooms is therefore considered to be negligible.

10.212 The windows serving the remaining 12 (20%) rooms (all bedrooms) will experience magnitudes of VSC change which range from negligible to no greater than 35.5%. The rooms will be fully NSL compliant. In view of their usage as bedrooms, which have a lower expectation for daylight by virtue of their usage, the overall magnitude of diffuse daylight change within these 12 rooms is considered to be small.

10.213 The overall magnitude of diffuse daylight change within this property is considered to be small.

Daylight Effect
VSC

10.214 The overall VSC effect upon the windows in this property is considered to be minor.

NSL

10.215 The overall NSL effect upon the rooms in this property is considered to be negligible.

Diffuse Daylight

10.216 The overall diffuse daylight effect within this property is considered to be minor.

Secondary Mitigation or Enhancement
10.217 No secondary mitigation or enhancement is required.

Residual Effect
10.218 In the absence of secondary mitigation, the residual daylight effects upon 57-59 Ducie Street are the same as that reported in the pre-mitigation scenario.

10.219 The sensitivity of 57-59 Ducie Street is considered to be medium. The overall magnitude of daylight change, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent long term adverse residual daylight effect which is considered to be minor.

Significance

10.220 The minor daylight effect is considered to be **Not Significant**.

Sunlight

10.221 A total of 21 rooms were assessed for sunlight within this property.

Magnitude of Sunlight Change

10.222 Any changes in sunlight (APSH) to all 21 (100%) rooms assessed will be fully BRE compliant. The magnitude of APSH change within these 21 rooms is therefore considered to be negligible.

Sunlight Effect

10.223 The overall APSH effect upon the rooms in this property is considered to be negligible.

Secondary Mitigation or Enhancement

10.224 No secondary mitigation or enhancement is required.

Residual Effect

10.225 In the absence of secondary mitigation, the residual sunlight effects upon 57-59 Ducie Street are the same as that reported in the pre-mitigation scenario.

10.226 The sensitivity of 57-59 Ducie Street is considered to be medium. The overall magnitude of sunlight change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent long term adverse residual sunlight effect which is considered to be negligible.

Significance

10.227 The negligible sunlight effect is considered to be **Not Significant**.

Limitations and Assumptions

10.228 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.
- All assessments have been undertaken based on the overall massing of the various buildings within the Proposed Scheme.

Summary

10.229 **Table 10.12** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 10.12: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Operational Stage			
Change in daylight amenity	Oxygen	Major Adverse	No
	47 Ducie Street	Negligible	No
	Quantum	Negligible	No
	William Jessop Court	Minor Adverse	No
	5 Wharf Close	Negligible	No
	John Smeaton Court	Minor Adverse	No
	Thomas Telford Basin	Minor Adverse	No
	Paradise Mews	Negligible	No
	Laystall Street Consented Scheme	Minor Adverse	No
	Islington Wharf Phase 2	Negligible	No
	Islington Wharf Phase 3	Minor Adverse	No
	Islington Wharf Phase 1 BLK A	Minor Adverse	No
	Islington Wharf Phase 1 BLK B	Minor Adverse	No
	Islington Wharf Phase 4	Minor Adverse	No
	Laystall House	Minor Adverse	No
	32-34 Laystall Street	Minor Adverse	No
	57-59 Ducie Street	Minor Adverse	No
	Jutland House	Negligible	No
	Whittle's Croft Wharf	Negligible	No
	Piccadilly Village	Negligible	No
	Store Street Scheme	Minor Adverse	No
Change in sunlight amenity	Oxygen	Negligible	No
	Quantum	Negligible	No
	Paradise Mews	Negligible	No
	Islington Wharf Phase 2	Negligible	No

Effect	Receptor	Residual Effect	Is the Effect Significant?
	Islington Wharf Phase 3	Minor Adverse	No
	Islington Wharf Phase 1 BLK A	Negligible	No
	Islington Wharf Phase 4	Negligible	No
	Laystall House	Minor Adverse	No
	32-34 Laystall Street	Minor Adverse	No
	57-59 Ducie Street	Negligible	No
	Jutland House	Negligible	No
	Whittle's Croft Wharf	Negligible	No

References

[1] National Planning Policy Framework 2024
[2] National Planning Policy Guidance - Effective Use of Land, published on 22 July 2019 and regularly updated as a 'live' resource
[3] Manchester Core Strategy (2012 – 2027)
[4] Guide to Development in Manchester Supplementary Planning Document and Planning Guidance (Adopted April 2007)
[5] Building Research Establishment (BRE) (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, Third Edition
[6] Commission Internationale de l'Eclairage - CIE S003 Spatial distribution of daylight - CIE standard overcast sky and clear sky

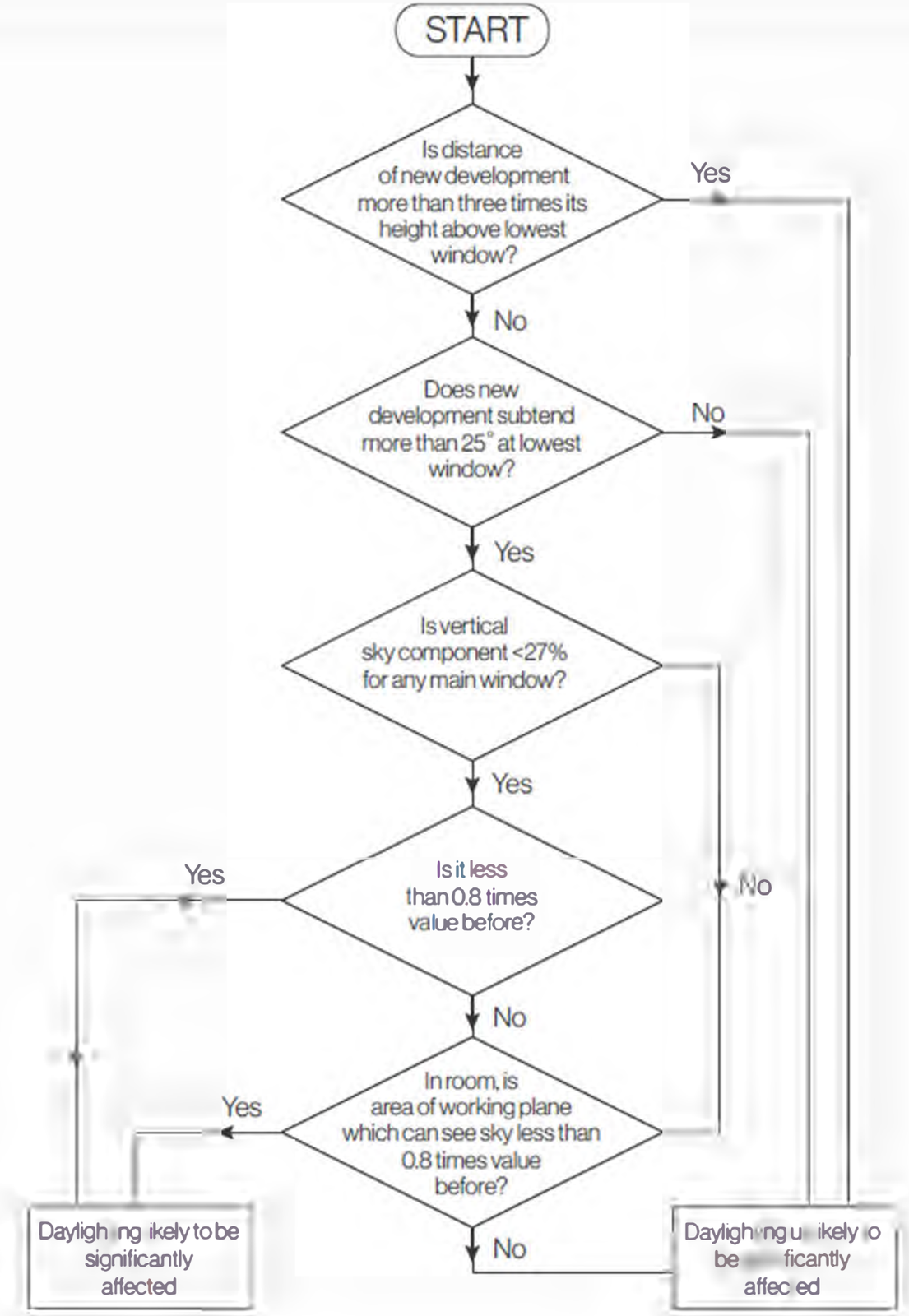


Figure 10.1 - BRE Decision Chart

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Project:
Stocktons, Manchester

Client:
Liquid Business (Manchester) Limited

Project No:
19504

Date:
November 2024

11. Solar Glare

Introduction

11.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to Solar Glare. Solar Glare, or solar dazzle, refers to visual disturbance caused by sunlight reflected from façade glazing or specular metal cladding of a building. There are two types of glare: disability glare, which can impair vision and is a potential safety issue; and discomfort glare, which causes visual discomfort but does not necessarily impair the ability to see.

11.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.

11.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).

11.4 This Chapter, and its associated **Appendices 11.1 and 11.2**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

11.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

11.6 No consultation has been undertaken relevant to solar glare.

Scope of the Assessment

Effects Not Considered to be Significant

11.7 The following effect is not considered to be significant and therefore will not be considered further within the ES. A factual evidence base has been provided below to support this.

Solar glare impact on occupiers of adjoining buildings

11.8 The Building Research Establishment (BRE) Guidelines: Site Layout Planning for Daylight and Sunlight[1] states that reflected sunlight can affect occupants of adjoining buildings. Solar glare impacting the vision of occupiers of adjoining buildings is discomfort glare which does not impair the ability to see. Whilst it can be important where work involves continuous viewing of the outdoor space from a fixed vantage point, it can generally be managed where glare is an issue by using blinds or curtains for the periods of time where such glare occurs. For these reasons, residential uses are classified as low-sensitivity receptors and do not require assessment as no significant adverse effects could occur.

11.9 Where analysis is undertaken, it would consider the total duration of time for which the sun can be reflected to the affected location per year. Durations of less than 50 hours per year are classified as being unlikely to lead to significant impacts. Some reflections from glazed buildings into surrounding buildings will inevitably occur in an urban context; however, it is highly unlikely that the Proposed Scheme would generate reflections that could impact any individual occupant in neighbouring buildings for 50 hours or more per year. Any glare that would occur would be entirely transient and short-lived as the sunpath moves past the Site and could be managed by residents using blinds or curtains for those short periods where necessary. This is considered to be typical of the Sites urban location and would potentially occur with any redevelopment proposal of the Site that includes areas of glazing.

11.10 Therefore, solar glare impacts on occupiers of adjoining buildings is not considered to be significant and will not be considered further in the ES.

Effects Considered Likely to be Significant

11.11 **Table 11.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 11.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Solar Glare	Road Users	Operation
	Tram Drivers	Operation

11.12 The worst-case scenario during the construction of the Proposed Scheme is portrayed by the complete and operational Proposed Scheme, where all reflective facade materials have been installed and any covers, films or hoarding used during the construction period have been removed.

Assessment Methodology

Legislative Framework, Policy and Guidance

11.13 There is no legislation, National or Local Planning Policy relevant to Solar Glare.

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

- Building Research Establishment (BRE) – Site Layout Planning for Daylight and Sunlight: A guide to good practice (2022); and
- Commission Internationale de L'Eclairage (CIE) 146:2002 & CIE 147:2002 Collection on glare (2002)[2].

Defining the Study Area

11.15 The façade treatment for the Proposed Scheme is understood to include areas of glazing which could reflect sunlight within a driver's field of view at sensitive locations, resulting in potential effects in terms of solar glare.

11.16 For the purpose of this assessment, sensitive receptors comprise road users and tram drivers at sensitive locations within the surrounding area. Viewpoints at road locations and on tram

tracks within 500m of the Site where the Proposed Scheme is visible within the driver's field of view have been identified and considered (where applicable). At distances greater than 500m from the Proposed Scheme, instances of solar glare would be unlikely to occur. The viewpoints assessed, and their proximity to the Site are shown in **Appendix 11.2: Figure 03**.

11.17 At each of the identified sensitive road locations, viewpoints are located at the minimum stopping distance for road users and at the driver's eye level with the focal point being a relevant traffic element, such as signals or incoming traffic. Representative viewpoints along the tram tracks have been assessed, viewpoints are located at the driver's eye level with the focal point being a signals or in the absence of signals within the stretch of track, looking straight ahead.

11.18 The identified road and tram locations assessed are considered most sensitive in relation to solar glare due to a combination of their use by vehicular traffic, direction of travel and requirement for drivers to respond to signalling and take action accordingly, as well as proximity to the Site. Therefore, consideration has been given to several road and tram locations from which the Proposed Scheme will be visible. The following 20 road locations and one tram track have been identified as sensitive receptors for solar glare:

- WS - Woodward Street junction with Weybridge Road/New Islington;
- BS - Bengal Street junction with Redhill Street;
- MS1 - Murray Street junction with Jersey Street;
- MS2 - Murray Street junction with Redhill Street;
- HS - Henry Street junction with Redhill Street;
- PfS - Pickford Street junction with Redhill Street;
- HwS1 - Houldsworth Street junction with Newton Street;
- HwS2 - Houldsworth Street junction with Dean Street;
- SS1 - Store Street pedestrian crossing;
- SS2 - Store Street junction with Great Ancoats Street;
- OM1 - Old Mill Street junction with Weybridge Street;
- OM2 - Old Mill Street pedestrian crossing;
- OM3 - Old Mill Street junction with Great Ancoats Street;
- GA2 - Great Ancoats Street junction with Adair Street;
- GA3 - Great Ancoats Street junction with Pollard Street;
- GA4 - Great Ancoats Street junction with Store Street/Old Mill;
- GA5 - Great Ancoats Street junction with Newton Street;

- GA6 - Great Ancoats Street pedestrian crossing;
- GA7 - Great Ancoats Street pedestrian crossing; and
- GA8 - Great Ancoats Street junction with Laystall Street; and
- TRAM (T1, T2 and T3) – Westbound tram tracks approaching Munday Street and New Islington Station.

Assessment Process

11.19 A detailed summary of the assessment methodology and supporting images used for the solar glare assessment are included within **Appendix 11.1**.

11.20 The technical analyses carried out to inform the assessments and identify possible solar glare effects on road users and tram drivers have been undertaken by creating a digital three-dimensional (3D) model of the surrounding area, based on photogrammetry survey data, and insertion of a 3D model of the Proposed Scheme.

11.21 The potential for reflected solar glare or dazzle to be reflected off the glazed façades of the Proposed Scheme has been assessed using specialist lighting software. The assessment shows the path of the sun for the entire year around the Proposed Scheme. From this, two computer generated angular images have been produced for each selected viewpoint, indicating the area which sees the reflection of the sun-path at any point during the year. A modified diagram portraying a standardised extent of human vision is then overlaid onto the image (**Appendix 11.1, Figure 11.1**).

11.22 The assessment considers potentially sensitive viewpoints for road users and tram drivers surrounding the Site. The viewpoints are generally located at the minimum stopping distance and at the driver's eye level. The focal point is a relevant traffic element, such as signals or incoming traffic.

11.23 The height of the viewpoint is considered to be 1.5m for cars and 2.0m for buses and trams. **Appendix 11.1, Figure 11.2** identifies the typical stopping distance range for a car travelling at different speeds. Therefore, a viewpoint for a car driving at 30 mph (i.e. speed limit for a dense urban location) would be placed at 23m from a traffic light and 1.5m above the ground.

Reporting of the Environmental Effect and Significance Criteria

11.24 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the operational stage. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

11.25 The solar glare assessment is undertaken on the worst-case scenario. Solar glare is not a comparative assessment; the fact it may occur in the baseline does not necessarily justify its occurrence as a result of the Proposed Scheme. Therefore, the assessment considers the effect of the Proposed Scheme in absolute terms.

Determining Sensitivity of Receptor

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

11.27 All road junctions and tram tracks assessed have been identified as being of high sensitivity as an action is required by a driver that is a safety concern if their visibility is impaired by solar glare.

Determining the Magnitude of Impact

11.28 The magnitude of impact at the sensitive receptor and has been considered on a scale of **large**, **medium**, **small** or **negligible**.

11.29 There are no quantitative criteria within BRE Guidelines (2022) or elsewhere regarding acceptable levels of solar glare.

11.30 The factors in **Table 11.2** have been used to ascertain the magnitude of impact.

Table 11.2: Summary of Solar Glare Magnitude of Impact Criteria

Magnitude of Impact	Overview
Negligible	No reflections are visible or if visible all occur at angles greater than 30° from the driver's line of sight and so will be of little consequence.
Small	Solar reflections are visible within 30° to 10° or between 10° to 5° of the driver's line of sight for a short period of time per day/year.
Medium	Solar reflections are visible within 10° and 5° of the driver's line of sight occurring for a long period of time per day/year.
Large	Solar reflections are visible within 5° of a driver's line of sight.

11.31 Professional judgement has, therefore, been applied to determine the magnitude of solar glare impacts anticipated to arise from the Proposed Scheme.

Determining the Level of Effect

11.32 The level of effect has been informed by the magnitude of change due to the Proposed Scheme and the evaluation of the sensitivity of the affected receptor. The level of effect has been determined using professional judgement and **Table 11.3** has been a tool which has assisted with this process.

11.33 When assessing the level of effect, the following factors could influence whether the effect is significant or not.

- Sunlight availability probability;
- Area of façade off which reflections are visible;
- Period of time when reflections are visible;
- Angle at which reflections are visible from line of sight;
- Views of the Proposed Scheme being obscured for example by trees; and/or

- The time of day at which the solar reflection will occur for example during peak traffic times.

11.34 Whilst **Table 11.3** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*' or '*adverse*'.

Table 11.3: Matrix to Support Determining the Level of Effect

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

11.35 The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- **Major effect**: where the Proposed Scheme is likely to cause a considerable impact and the receptor has limited adaptability, tolerance or recoverability;
- **Moderate effect**: where the Proposed Scheme is likely to cause a less than considerable impact at a receptor that has limited adaptability, tolerance or recoverability;
- **Minor effect**: where the Proposed Scheme is likely to cause a small, but noticeable impact on a receptor which has limited adaptability, tolerance or recoverability; and
- **Negligible**: where the Proposed Scheme is unlikely to cause a noticeable impact at a receptor, despite its level of sensitivity.

11.36 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

11.37 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.

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

Baseline Conditions

11.39 The existing Site comprises a carpark and small scale, predominantly brick construction, industrial buildings; therefore, reflections occurring from any structures within the Site towards drivers at nearby road and tram locations would be minimal. There would be no existing significant impact to driver visibility from the Site.

Future Baseline

11.40 As only minimal reflections could occur from the existing structures within the Site towards drivers at nearby road and tram locations, there would be no significant impact to driver visibility from the Site in the future baseline scenario. Therefore, there would be no change in the baseline condition without the implementation of the Proposed Scheme.

Primary and Tertiary Mitigation

11.41 No primary mitigation specific to solar glare has been incorporated within the façade design.

Assessment of Effects, Secondary Mitigation and Residual Effects

Operational Stage

Solar Glare

11.42 The full solar glare assessment is provided in **Appendix X.2**.

11.43 The assessment has been undertaken from nearby road locations and tram tracks which are considered sensitive in terms of solar glare. These include traffic junctions and pedestrian crossings.

11.44 Following a review of an extended area of investigation (approximately 500m radius from the Site), a total of 20 road locations and one tram track (as identified on **Appendix 11.2, Figure 03**) were assessed. The assessment considers the potential occurrence of solar reflections from the Proposed Scheme owing to its size and large areas of glazing on its façades at these locations. The duration of solar reflections as well as their proximity to a driver's line of sight have been considered within the assessment below.

11.45 The assessment has been undertaken in a worst-case scenario considering there is no cloud cover, so assuming the sun is shining for all days of the year for the full duration of daylight hours.

11.46 Of the total 20 road locations and tram track assessed, eight locations would see no reflections within 30° of a driver's line of sight:

- HwS1 - Houldsworth Street junction with Newton Street;
- HwS2 - Houldsworth Street junction with Dean Street;
- SS1 - Store Street pedestrian crossing;
- GA4 - Great Ancoats Street junction with Store Street/Old Mill;

- GA5 - Great Ancoats Street junction with Newton Street;
- GA6 - Great Ancoats Street pedestrian crossing;
- GA7 - Great Ancoats Street pedestrian crossing; and
- GA8 - Great Ancoats Street junction with Laystall Street.

11.47 At these eight locations, the sensitivity is considered to be high. The magnitude of impact is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be negligible.

11.48 Of the remaining 13 locations, seven have at least one viewpoint which experiences solar reflections within 30° of a drivers' line of sight but greater than 10°:

- BS - Bengal Street junction with Redhill Street;
- MS1 - Murray Street junction with Jersey Street;
- MS2 - Murray Street junction with Redhill Street;
- HS - Henry Street junction with Redhill Street;
- SS2 - Store Street junction with Great Ancoats Street;
- GA2 - Great Ancoats Street junction with Adair Street; and
- GA3 - Great Ancoats Street junction with Pollard Street.

11.49 At these seven locations, the sensitivity is considered to be high. The magnitude of impact is considered to be small. Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be minor.

Woodward Street (WS)

11.50 At this location, WS – Woodward Street, reflections occur within 10° of a road user's line of sight which require further consideration.

11.51 Viewpoint WS shows the view of drivers travelling southwest on Woodward Street approaching the uncontrolled junction with Weybridge Road and New Islington.

11.52 **Table 11.4** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

Table 11.4: Summary of Potential Reflections at the Woodward Street (WS) Junction

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building A: North-West	17:00-18:00 GMT	Mid-March to mid-April and mid-August to mid-September	Small and broken-up patches visible from 7°, above the visor cut-off line[1].	Medium
Building B: North-West	16:00-18:00 GMT	Mid-February to mid-April and mid-August to mid-October	Small and fairly broken-up patches visible from 5°, predominantly above the visor cut-off line.	Medium
All other reflections occur outside 10° so are considered as a small magnitude.				

11.53 The sensitivity of drivers at the Woodward Street (WS) location is considered to be high. The magnitude of impact is considered to be medium.

11.54 At this location, for the viewpoint assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- There are no signals where visibility can be affected by reflections from the Proposed Scheme;
- Reflections occur from small patches of glazing, broken up by non-reflective elements of the façade. Any reflections that do occur would be for very short durations and are unlikely to result in a significant instance of solar glare that would impact driver visibility at this location;
- Potential reflections occur predominantly above the driver's visor line, which would mitigate most impacts when deployed;
- The reflections would occur at the end of the day, during the mid-seasons when the sun's intensity is lower;
- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the afternoons. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the winter months. A large portion of the sun's path would remain

[1] A visor cut-off line is included within the field of vision overlay, which represents the area of vision that would be shielded by a driver deploying their visor. All reflections above this line could be eliminated by deployment of a visor. The visor shields reflections above 5° from the direct line of sight.

visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and

- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 40% or less.

11.55 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be minor to moderate.

Pickford Street (PfS)

11.56 At this location, PfS – Pickford Street, reflections occur within 10° of a road user's line of sight which require further consideration.

11.57 Viewpoint PS shows the view of drivers travelling south on Pickford Street approaching the uncontrolled junction with Redhill Street.

11.58 **Table 11.5** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

Table 11.5: Summary of Potential Reflections at the Pickford Street (PfS) Junction

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building B: North-East	06:00-07:00 GMT	Mid-February to mid-April and mid-August to mid-October	Small and fairly broken-up patches visible from 5°, predominantly above the visor cut-off line.	Medium
All other reflections occur outside 10° so are considered as a small magnitude.				

11.59 The sensitivity of drivers at the Pickford Street (PfS) location is considered to be high. The magnitude of impact is considered to be medium.

11.60 At this location, for the viewpoint assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- There are no signals where visibility can be affected by reflections from the Proposed Scheme;

- Reflections occur from small patches of glazing, broken up by non-reflective elements of the façade. Any reflections that do occur would be for very short durations and are unlikely to result in a significant instance of solar glare that would impact driver visibility at this location;

- Potential reflections occur predominantly above the driver's visor line, which would mitigate most impacts when deployed;
- The reflections would occur at the beginning of the day, during the mid-seasons when the sun's intensity is lower;
- The reflections occur outside of peak traffic times;
- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the mornings. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the winter months and mid-seasons. A large portion of the sun's path would remain visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and
- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 30% or less.

11.61 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be minor to moderate.

Old Mill 1 (OM1)

11.62 At this location, OM1 – Old Mill 1, reflections occur within 10° of a road user's line of sight which require further consideration.

11.63 Viewpoint OM1 – Old Mill 1 shows the view of drivers travelling southwest on Old Mill approaching the uncontrolled junction with Weybridge Road.

11.64 **Table 11.6** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

Table 11.6: Summary of Potential Reflections at the Old Mill 1 (OM1) Junction

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building A: North-East	05:00-06:00 GMT	Mid-April to mid-August	Fairly broken-up patches visible from 3°, partly above the visor cut-off line.	Large
All other reflections occur outside 10° so are considered as a small magnitude.				

11.65 The sensitivity of drivers at the Old Mill 1 (OM1) location is considered to be high. The magnitude of impact is considered to be large.

11.66 At this location, for the viewpoint assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- There are no signals where visibility can be affected by reflections from the Proposed Scheme;
- Reflections are somewhat broken up by non-reflective elements of the façade. The reflections that do occur would be for reasonably short durations from each glazed panel;
- Potential reflections occur predominantly above the driver's visor line, which would mitigate most impacts when deployed;
- The reflections would occur at the beginning of the day, during the summer when the sun's intensity is lower;
- The reflections occur outside of peak traffic times;
- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the afternoons. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the mid-seasons. A large portion of the sun's path would remain visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and
- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 30% or less.

11.67 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be moderate.

Old Mill 2 (OM2)

11.68 At this location, OM2 – Old Mill 2, reflections occur within 10° of a road user's line of sight which require further consideration.

11.69 Viewpoint OM2 – Old Mill 2 shows the view of drivers travelling southwest on Old Mill approaching the uncontrolled pedestrian crossing continuing from New Islington Marina Promenade.

11.70 **Table 11.7** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

Table 11.7: Summary of Potential Reflections at the Old Mill 2 (OM2) Junction

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building A: North-East	05:00-06:00 GMT	Mid-April to mid-August	Fairly broken-up patches visible from 5°, partly above the visor cut-off line.	Medium
All other reflections occur outside 10° so are considered as a small magnitude.				

11.71 The sensitivity of drivers at the Old Mill 2 (OM2) location is considered to be high. The magnitude of impact is considered to be medium.

11.72 At this location, for the viewpoint assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- There are no signals where visibility can be affected by reflections from the Proposed Scheme;
- Reflections are somewhat broken up by non-reflective elements of the façade. The reflections that do occur would be for reasonably short durations from each glazed panel;
- Potential reflections occur predominantly above the driver's visor line, which would mitigate most impacts when deployed;
- The reflections would occur at the beginning of the day, during the summer when the sun's intensity is lower;
- The reflections occur outside of peak traffic times;
- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the afternoons. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the mid-seasons. A large portion of the sun's path would remain visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and
- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 30% or less.

11.73 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be moderate.

Old Mill 3 (OM3)

11.74 At this location, OM3 – Old Mill 3, reflections occur within 10° of a road user's line of sight which require further consideration.

11.75 Location OM3 – Old Mill 3 shows the view of drivers travelling southwest on Old Mill approaching the junction with Great Ancoats Street. At this location, two viewpoints have been assessed, both viewpoints show the view of drivers in the right lane, viewpoint OM3c shows the view of drivers looking straight ahead as they approach the junction whilst viewpoint OM3d shows the view of drivers looking at the right-side traffic lights. There is an alternative traffic lights on the left side of the road that may be relied upon by drivers and another on the other side of the junction which is primarily for use by stationary vehicles.

11.76 **Table 11.8** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight at viewpoint OM3d, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

11.77 Reflections at viewpoint OM3c are outside 10° of a drivers' line of sight and so this viewpoint has a magnitude of impact of small.

Table 11.8: Summary of Potential Reflections at the Old Mill 3 (OM3) Junction

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building A: North-East Lobby	Sunrise-05:00 GMT	Mid-May to mid-July	A small area between 0° and 5°	Large
All other reflections occur outside 10° so are considered as a small magnitude.				

11.78 The sensitivity of drivers on the Old Mill 3 (OM3) is considered to be high. The magnitude of impact is considered to be large.

11.79 At this location, for the viewpoints assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- Reflections occurring at one of the viewpoints (OM3c), where drivers are looking forward approaching the junction, are outside the direct line of sight and so would not markedly impact driver visibility;
- When reflections are seen behind the right side traffic lights (viewpoint OM3d), drivers can rely on the alterative traffic lights on the other side of the junction and on the left side of the road to respond safely at this junction;
- The area of reflection visible from lobby high-level glazing is small within the field of view and as a result, any reflections that occur would be for a short period of time;

- The reflections would occur at the beginning of the day, during the summer when the sun's intensity is lower;

- The reflections occur outside of peak traffic times;

- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the afternoons. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the mid-seasons. A large portion of the sun's path would remain visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and

- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 10% or less.

11.80 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be moderate to major.

Westbound Tram Track (TRAM)

11.81 Along this tram track, TRAM – Westbound, reflections occur within 10° of a tram driver's line of sight which require further consideration.

11.82 Viewpoint T1 shows the view of drivers travelling westbound approaching the uncontrolled junction with Munday Street, viewpoint T2 about to cross Munday Street, approaching New Islington Station and viewpoint T3 shows the view of drivers about to enter New Islington Station.

11.83 **Table 11.9** provides a summary of the duration potential reflections could occur for any reflections occurring within 10° of a driver's direct line of sight at viewpoint T1, where they would occur within the field of view of drivers, from which element of the Proposed Scheme the reflections could occur and finally, the magnitude of impact is given for each instance of reflection.

11.84 Reflections at viewpoint T2 and T3 are outside 10° of a drivers' line of sight and so these viewpoints have a magnitude of impact of small.

Table 11.9: Summary of Potential Reflections at the Westbound trams (TRAM)

Elevation	Times of the day that reflections occur	Times of the year that reflections occur	Location of reflections within 10° of driver's line of sight	Magnitude of Impact
Building A: South-East	14:00-15:00 GMT	Early-November to late-January	Small and fairly broken-up patches visible from 7°, above the visor cut-off line.	Medium
All other reflections occur outside 10° so are considered as a small magnitude.				

11.85 The sensitivity of tram drivers travelling westbound (TRAM) is considered to be high. The magnitude of impact is considered to be medium.

11.86 Along this track, for the viewpoints assessed, the following factors have been considered along with professional judgement to determine the level of effect:

- There are no signals where visibility can be affected by reflections from the Proposed Scheme;
- Reflections occur from small patches of glazing, broken up by non-reflective elements of the façade. Any reflections that do occur would be for very short durations and are unlikely to result in a significant instance of solar glare that would impact driver visibility at this location;
- Potential reflections occur above the driver's visor line, which would mitigate all impacts when deployed;
- The reflections would occur at the end of the day, during winter when the sun's intensity is lower;
- The reflections occur outside of peak traffic times;
- The sun path sits within the field of view of a driver at this location. Once implemented the Proposed Scheme will partially obscure the direct view of the sun in the afternoons. Any reflections visible from the Proposed Scheme would be significantly less intense than a direct view of the sun, as is currently experienced at this location during the mid-seasons. A large portion of the sun's path would remain visible at this junction with a greater intensity than the reflections that would be generated from the Proposed Scheme; and
- At the times of the day and year when reflections could occur, the likelihood of the sun shining is 20%.

11.87 Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

11.88 Low Visible Light Reflectance (VLR) glazing will be specified for the following elevations to reduce the intensity of any reflections that occur within 10° of a driver's direct line of sight. The exact glazing to be specified will be subject to further, more detailed analysis undertaken at the later detailed design stages to ensure safety concerns do not arise and will be secured via a condition.

Table 11.10: Summary of Facades where Low VLR Glazing is Required

Location	Elevations where mitigation is required
Woodward Street (WS)	North-west elevations of Building A and Building B
Pickford Street (PfS)	North-east elevation of Building B
Old Mill 1 (OM1)	Lower half of north-east elevation of Building A
Old Mill 2 (OM2)	Lower half of north-east elevation of Building A

11.89 In relation to reflections at Old Mill 3 (OM3), owing to the location of the reflections sitting within the most sensitive 3° field of view, fixed shading elements are to be applied to the area of facade capable of generating reflections towards this junction. The shading may comprise of fins, louvres or a Bres Soliel and would need to shield reflections from the upper section of the double height lobby glazing on the north-east elevation. The exact screening to be specified would be subject to further, more detailed analysis undertaken at the later detailed design stages to ensure safety concerns do not arise and could be secured via a condition.

Residual Effect

11.90 The sensitivity of all locations is considered to be high.

11.91 In the absence of secondary mitigation being necessary at the following locations, the residual effects are the same as those reported in the pre-mitigation scenario:

- BS - Bengal Street junction with Redhill Street (**minor**);
- MS1 - Murray Street junction with Jersey Street (**minor**);
- MS2 - Murray Street junction with Redhill Street (**minor**);
- HS - Henry Street junction with Redhill Street (**minor**);
- HwS1 - Houldsworth Street junction with Newton Street (**negligible**);
- HwS2 - Houldsworth Street junction with Dean Street (**negligible**);
- SS1 - Store Street pedestrian crossing (**negligible**);
- SS2 - Store Street junction with Great Ancoats Street (**minor**);
- GA2 - Great Ancoats Street junction with Adair Street (**minor**);
- GA3 - Great Ancoats Street junction with Pollard Street (**minor**);
- GA4 - Great Ancoats Street junction with Store Street/Old Mill (**negligible**);
- GA5 - Great Ancoats Street junction with Newton Street (**negligible**);
- GA6 - Great Ancoats Street pedestrian crossing (**negligible**);

- GA7 - Great Ancoats Street pedestrian crossing (**negligible**); and
- GA8 - Great Ancoats Street junction with Laystall Street (**negligible**); and
- TRAM (T1, T2 and T3) – Westbound tram tracks approaching Munday Street and New Islington Station (**minor**).

Woodward Street (WS)

11.92 The magnitude of impact, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be **minor**.

Pickford Street (PfS)

11.93 The magnitude of impact, following secondary mitigation, is considered to be small. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be **minor**.

Old Mill 1 (OM1)

11.94 The magnitude of impact, following secondary mitigation, is considered to be medium. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be **moderate**.

Old Mill 2 (OM2)

11.95 The magnitude of impact, following secondary mitigation, is considered to be low to medium. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be **minor to moderate**.

Old Mill 3 (OM3)

11.96 The magnitude of impact, following secondary mitigation, is considered to be medium. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be **moderate**.

Significance

11.97 The effect at the following locations is considered to be **Not Significant:**

- WS - Woodward Street junction with Weybridge Road/New Islington;
- BS - Bengal Street junction with Redhill Street;
- MS1 - Murray Street junction with Jersey Street;
- MS2 - Murray Street junction with Redhill Street;
- HS - Henry Street junction with Redhill Street;
- PfS - Pickford Street junction with Redhill Street;
- HwS1 - Houldsworth Street junction with Newton Street;
- HwS2 - Houldsworth Street junction with Dean Street;
- SS1 - Store Street pedestrian crossing;

- SS2 - Store Street junction with Great Ancoats Street;
- GA2 - Great Ancoats Street junction with Adair Street;
- GA3 - Great Ancoats Street junction with Pollard Street;
- GA4 - Great Ancoats Street junction with Store Street/Old Mill;
- GA5 - Great Ancoats Street junction with Newton Street;
- GA6 - Great Ancoats Street pedestrian crossing;
- GA7 - Great Ancoats Street pedestrian crossing; and
- GA8 - Great Ancoats Street junction with Laystall Street; and
- TRAM (T1, T2 and T3) – Westbound tram tracks approaching Munday Street and New Islington Station.

11.98 The effect at the following locations is considered to be **Significant:**

- OM1 - Old Mill Street junction with Weybridge Street;
- OM2 - Old Mill Street pedestrian crossing; and
- OM3 - Old Mill Street junction with Great Ancoats Street.

Limitations and Assumptions

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

- For solar glare, although great care has been taken in identifying typical viewpoints, this does not guarantee that there are no additional sensitive locations where reflected solar glare could present a particular risk. For practical reasons, the area of the assessment has been limited to the study area which extends to a distance of approximately 500m from the Site, in accordance with standard practice. At greater distances, the likelihood of solar reflections causing significant glare effects is reduced as the time that buildings will reflect is reduced and the area of façade visible constitutes a reduced angle, so reducing the possibility of the whole sun disk being reflected. This approach to solar glare assessment within EIA has been adopted using professional judgement and by reference to the CIE; and
- The methodology for solar glare is not aimed at addressing the intensity of an instance of reflected solar glare, but rather its occurrence, duration throughout the year and the location of this occurrence in respect of an individual's line of sight. It must also be noted that the hours presented reflect solar time and therefore do not take Daylight Saving Hours into account. This approach to solar glare assessment within EIA has been adopted using professional judgement and by reference to CIE's Collection on Glare 2002.

Summary

11.100 **Table 11.11** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 11.11: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Operational Stage			
Solar Glare	Road users at the following locations: HwS1 HwS2 SS1 GA4 GA5 GA6 GA7 GA8	Negligible adverse	NO
	Road users at the following locations: WS BS MS1 MS2 HS PfS SS2 GA2 GA3	Minor adverse	NO
	Tram driver's on the Westbound tram tracks	Minor adverse	NO
	Road users at OM2	Minor to moderate adverse	YES
	Road users at the following locations: OM1	Moderate adverse	YES

Effect	Receptor	Residual Effect	Is the Effect Significant?
	OM3		

References

[1] Building Research Establishment (BRE), 2022; Site layout planning for daylight and sunlight: a guide to good practice (BR 209)

[2] Commission Internationale De L'Eclairage (CIE), CIE 146:2002 & CIE 147:2002 - Collection on Glare, CIE, 2002

12. Socio-economics and Human Health

Introduction

12.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to socio-economics and human health.

12.2 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.

12.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).

12.4 This Chapter, and its associated **Figure 12.1**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

12.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

12.6 No consultation was required.

Scope of the Assessment

Effects Not Considered to be Significant

12.7 The following effects are not considered to be significant and therefore will not be considered further within the ES. A factual evidence base has been provided below to support this.

Access to education facilities [Early years, primary and secondary education facilities and their pupils in the local impact area]

12.8 Strong, vibrant, sustainable and cohesive communities require good quality, accessible public services and infrastructure. Access to education facilities has a direct positive effect on human health and is vital towards ensuring employment prospects, personal and social development and strong communities.

12.9 As a high-density, apartment-led development the resident profile for the homes delivered as part of the Proposed Scheme is expected to be orientated towards young professionals rather than families with children. Furthermore, a notable proportion (35%) are likely to have one bedroom, and are therefore not anticipated to generate any demand from families with children. The housing mix of the Proposed Scheme is therefore anticipated to generate low demand for education facilities.

12.10 The Department for Education's (DfE) Pupil Yield Data Dashboard[1] provides pupil yield multipliers. These can be used to estimate the additional pupil demand generated by a proposed development by house type, house size and by specific local authority area.

12.11 Based on applying pupil yields provided by the DfE Pupil Yield Data Dashboard for flats in Manchester by number of bedrooms to the estimated scheme mix[a], it is anticipated that the Proposed Scheme's new residential units would generate demand for approximately:

- 6 early years pupil places;
- 15 primary pupil places; and
- 5 secondary pupil places.

12.12 Given the range of early years[b] provision locally (within both privately-operated nurseries and at local primary schools), including Little Learning Ladder and Tiddlywinks Nursery (both located nearby in Ancoats, with further provision available slightly further afield closer to the city centre or in neighbouring areas such as Miles Platting) it is considered that the limited additional demand generated by the Proposed Scheme for early years education (6 places) is likely to be able to be absorbed within existing provision.

12.13 Given the existing supply of places at the local primary schools (a combined 156 places at Co-op Academy New Islington, St Patrick's RC Primary School, Abbott Community Primary School and Co-op Academy Medlock), it is considered that the limited additional demand for 15 primary school places generated by the Proposed Scheme can be met.

12.14 Given the existing supply of places at the local secondary schools (a combined 421 places at The East Manchester Academy, Eden Boys' Leadership Academy and Eden Girls' Leadership Academy), it is considered that the limited additional demand for 5 secondary school places generated by the Proposed Scheme can be met.

12.15 Some of the additional demand generated for primary and secondary school places may also be from pupils already living in the local area, however in adopting a worst-case approach it has been assumed that all pupils will be over and above the current baseline.

12.16 Therefore, the pupil demand generated by the Proposed Scheme for early years, primary and secondary education could be accommodated within existing provision with reported capacity. Whilst likely resulting in a slightly lower availability of places locally against the current baseline, effects related to access to early years, primary and secondary education facilities are anticipated to be negligible and therefore not expected to be significant, and will not be considered further in the ES.

[a] Pupil yields calculated based on an indicative mix for 758 apartments of 2-bed (486 no.;64% of the total) and 3-bed (10 no.; 1%). 1-bed flats (262 no.; 35%) are discounted from the education yield analysis as unlikely to accommodate dependent children. The DfE pupil yield for 2-bed flats in Manchester equates to 0.01 pupils per dwelling for early years and secondary education and 0.03 for primary education. The DfE pupil yield for 3-bed flats in Manchester equates to 0.1 pupils per dwelling for early years, 0.05 pupils per dwelling for primary education and 0.03 pupils per dwelling for secondary education.

[b] Early years provision comprises both private, voluntary and independent providers and those co-located with primary schools.

Access to primary healthcare facilities [Primary healthcare facilities and their patients in the local impact area]

12.17 Access to primary healthcare facilities (e.g. GP services) has a direct beneficial effect on human health and is vital towards ensuring that health outcomes and priorities are achieved.

12.18 Based on average household numbers by residence size and tenure in Manchester[2] and the Proposed Scheme's accommodation mix, it is estimated that the provision of up to 758 new homes could accommodate c. 1,320 residents. As outlined within HUDU guidance[3], the Royal College of GPs recommend a ratio of one GP per 1,800 registered patients; this, therefore, suggests that the Proposed Scheme could generate demand for just under one (0.7) FTE GP.

12.19 Given its location in central Manchester, there are a number of primary healthcare facilities accessible from the Site. Whilst some GP practices appear to be operating over their recommended capacity (to varying degrees), data indicate that a number of surgeries do currently have capacity to accommodate new patients, and therefore meet the demand generated by the Proposed Scheme. For example, this includes the closest practice to the Site – Ancoats Village Urban Medical Centre, 0.1 miles away – which data indicate has capacity to accommodate an additional c. 6,000 patients based on guideline benchmarks.

12.20 Therefore, the demand generated by the Proposed Scheme for healthcare facilities is likely to be accommodated within existing provision. Whilst resulting in increased patient rolls locally against the current baseline, effects related to access to healthcare facilities are anticipated to be small in magnitude and therefore not expected to be significant, and will not be considered further in the ES.

Social cohesion and inclusive design [Residents and workers at the Proposed Scheme and all others accessing the Site]

12.21 Developments should connect with existing communities (e.g. through layouts and access points which avoid physical barriers and severance) and land-uses and spaces should encourage social interaction, taking into account principles of inclusive and age-friendly design[4].

12.22 The Proposed Scheme involves the demolition of the Stockton's furniture store in central Manchester and redevelopment to provide a 46 storey and 24 storey mixed use office and build to rent residential buildings. Therefore, no existing residential communities are expected to be displaced as a result of the Proposed Scheme.

12.23 The Site's location in central Manchester will enable coherent integration with existing residential and commercial areas and transport links (including Piccadilly Rail/Metrolink station and New Islington Metrolink station within a 10-minute walk from the Site) and will therefore be accessible for a wide range of people (i.e. residents, workers and visitors).

12.24 Public realm at the Proposed Scheme will also be implemented with a strong consideration of principles related to inclusive design, taking account of Planning Practice Guidance (PPG) which outlines best practice for ensuring that developments can be accessed and used by all in a way that effectively fosters social connections, recognising and accommodating differences in the way people use the built environment as a result of factors such as age and disability[5]. This new and enhanced public realm will further support local social cohesion and accessibility.

12.25 Whilst anticipated to be beneficial, the Proposed Scheme's effects in terms of social cohesion and inclusive design are likely to impact only a relatively small number of the people living in the local impact area and will represent only a small change in terms of the existing baseline provision of community services in the locality.

12.26 Therefore, effects related to social cohesion and inclusive design are not expected to be significant and will not be considered further in the ES.

Crime reduction and community safety [Residents and workers at the Proposed Scheme and all others accessing the Site]

12.27 Sites should be kept secure during construction to ensure that potential for crime and anti-social behaviour is minimised. Once operational, developments should incorporate design elements and site management measures to help 'design out' crime, to help people feel secure, again minimising the potential for crime and anti-social behaviour.

12.28 Site security arrangements, such as temporary secure access gates, during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015[6]. The design of the Proposed Scheme will be informed by 'Secured by Design' principles[7] and appropriate design and Site management measures will be informed by consultation with the relevant consultees (e.g. MCC planning officers and/or Greater Manchester Police's Secure by Design officer) to ensure that the potential for crime and anti-social behaviour is minimised.

12.29 Therefore, effects related to crime reduction and community safety are not expected to be significant and will not be considered further in the ES.

Access to healthy food [Residents and workers at the Proposed Scheme and all others accessing the Site]

12.30 Access to healthy and nutritious food can improve diet and prevent chronic diseases related to obesity. Healthy food options should be available and easily accessible to those using and working at new developments to enable and promote healthy lifestyles.

12.31 Numerous existing healthy food options will also be accessible from the Proposed Scheme; a wide range of options in terms of supermarkets and foodstores are located in the vicinity of the Site and surrounds. This includes a large Aldi supermarket on Great Ancoats Street, which is accessible within a 5-minute walk from the Site.

12.32 Therefore, effects related to access to healthy food are not expected to be significant and will not be considered further in the ES.

Access to active travel and sustainable transport options [Residents and workers at the Proposed Scheme and all others accessing the Site]

12.33 Active travel and sustainable travel options should be accessible to those living and working at, and otherwise using, new developments to enable and promote healthy and sustainable lifestyles, through facilitating physical activity and zero / low emissions transport, such as walking, cycling and public transport options.

12.34 The Proposed Scheme will incorporate internal footways linking to the existing external active travel networks and will be well served by the existing public transport network, with Picadilly and Victoria train stations being located 0.4 and 0.9 miles from the Site respectively. Bus and tram services are also accessible from across the city centre, the closest Metrolink

stations being located with a 10-minute walk (Piccadilly and New Islington). Both active travel routes and public transport will therefore provide convenient access to residential areas and commercial and social infrastructure and services in the rest of the city centre, in adjacent neighbourhoods, and beyond.

12.35 Approximately 397 secure cycle spaces and 188 folding bike lockers will be provided within the Site[8].

12.36 Measures such as these and the Site's accessible location will contribute to maximising the local residential population's access to active travel, and sustainable travel options will be beneficial and facilitate enhancement of the health and wellbeing of future Site users (i.e. residents, visitors and workers), albeit it is acknowledged that the number of people affected is likely to be relatively low at the scale of the total population in the local[c] and wider[d] impact areas. Indeed, it is noted that the topic of transport has not been considered to be significant (see **Chapter 6**).

12.37 Therefore, effects related to access to active travel and sustainable transport options are not expected to be significant and will not be considered further in the ES.

Access to open space and sports and recreation facilities [Residents and workers at the Proposed Scheme and all others accessing the Site]

12.38 Providing secure, convenient and attractive open / green space, public amenity space and facilities for sports and leisure activities can lead to increased levels of physical activity and reduce levels of heart disease, strokes and other ill-health problems that are associated with both sedentary occupations and stressful lifestyles. There is also a growing body of evidence that access to open spaces and facilities for exercise is important in helping to maintain and/or improve mental health[9].

12.39 No existing green spaces or sports facilities will be lost due to the Proposed Scheme. Whilst the specifics in terms of type and quantum of provision to be delivered on-Site are yet to be confirmed, the Proposed Scheme will include a mixture of new high quality public realm and other public space.

12.40 Existing local sports facilities and open spaces include Pure Gym (0.3 miles from site), BLOK Manchester gym (0.4 miles), Cotton Field Park (0.2 miles), Mayfield Park (0.6 miles) and the wider city centre, which will provide a range of facilities for sport, health, leisure and relaxation for future Site users (including residents, visitors and workers). The nearest Council maintained leisure centre is Manchester Aquatics Centre located 1.3 miles from the Site.

12.41 Additional cultural recreation facilities include Hope Mill Theatre (a 0.5 mile walking distance from the site), Palace Theatre (0.9 mile) Manchester Art Gallery (0.9 mile) and the Printworks (0.9 mile).

12.42 Whilst the redevelopment of the Site will create new public space and is anticipated to prove beneficial, this is likely to impact only a relatively small number of people in the context of

[c] Local impact area defined as Manchester local authority area. See the 'Assessment Methodology for Likely Significant Effects' for further details.
[d] Wider impact area defined as Greater Manchester. See the 'Assessment Methodology for Likely Significant Effects' for further details.

the population of the local impact area and have a small impact on the existing baseline provision of open space and facilities for sports and leisure activities in the locality.

12.43 Therefore, effects related to access to open space and sports and recreation facilities are not expected to be significant and will not be considered further in the ES.

Employment generated during operation [Labour force]

12.44 Employment and income are key determinants of personal and societal socio-economic and physical and mental health and wellbeing, whilst unemployment is known to be a significant contributor to poverty, illness and a reduction in personal and social esteem[10].

12.45 It is understood that c. 14 full-time equivalent (FTE) workers are employed by the Applicant at the Site under its current operations as a retail unit. It is also understood that c. 50% of the existing workforce will continue to work for the Applicant from a new location in Manchester following the store's closure. The Proposed Scheme will therefore result in a reduction in the number of jobs (c. 7 FTE) associated with the activities of the Applicant. However, it is considered that a c. 10 FTE roles will be created on-site at the Proposed Scheme following its completion; for example, within ground-floor food & beverage floorspace and through building management activities (e.g. concierge, cleaning and maintenance).

12.46 It is also understood that on-site provision of use-class E office floorspace at the Proposed Scheme will primarily be used by local people (potentially both residents of the Proposed Scheme and those living elsewhere) as a co-working space that serves as an alternative to working from home, rather than new commercial floorspace seeking to attract new office occupiers and generate new economic activity. Therefore, this element of the Proposed Scheme is considered not to generate a net change in employment opportunities. This is considered to be a worst-case (i.e. lowest employment) scenario, given that the use-class E floorspace applied for as part of the Proposed Scheme could theoretically accommodate commercial occupiers.

12.47 As such, the quantitative change in provision of on-site employment opportunities is considered to be negligible as a result of the Proposed Scheme. Therefore, effects related to employment generated during operation are not expected to be significant and will not be considered further in the ES.

Access to training opportunities during construction and operation stages [Labour force]

12.48 New development can improve people's access to training opportunities; for example, through delivering apprenticeships and other employment and training programmes during the construction stage and on-site once operational.

12.49 Whilst the Proposed Scheme could deliver opportunities for people to access training (such as apprenticeships and/or placements during construction and at on-Site employment uses, which will be dependent on construction contractors and the Proposed Scheme's future occupiers) it is considered that these are likely to comprise only a limited proportion of the total jobs supported during the construction and operational stages. Whilst a beneficial effect which could help meet local needs for apprenticeship opportunities, their delivery is anticipated to be of a scale which is not expected to be significant.

12.50 Therefore, effects related to access to training opportunities are not expected to be significant and will not be considered further in the EIA or reported in the ES.

Effects Considered Likely to be Significant

12.51 **Table 12.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 12.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Employment generated during construction (including demolition)	Labour force in the local and wider impact areas	Construction
Provision of new housing	People requiring housing in the local impact area	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

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

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

- Homes and Communities Agency (HCA) (2014) Additionality Guide (4th edition)[11];
- NHS Healthy Urban Development Unit (HUDU) (2019) Rapid Health Impact Assessment Toolkit (4th edition)[12]
- Institute of Environmental Management and Assessment (IEMA) (2022) Effective Scoping of Human Health in Environmental Impact Assessment[13]; and
- IEMA (2022) Determining Significance for Human Health in Environmental Impact Assessment[14].

Defining the Study Area

12.54 In the absence of guidance or policy available to inform the definition of appropriate study areas for the assessment of socio-economic and human health effects, study areas are defined based on an understanding or relevant socio-economic geographies and the extent to which socio-economic and human health effects are likely to be contained within these geographies. A socio-economic and human health study area plan is included in **Figure 12.1** and shows:

- A **local impact area** defined as the local authority of Manchester. The 2021 Census[15] indicates that 40% people working in Manchester also live within the authority. All effects assessed within the Chapter are relevant to analyse at the scale of the local impact area;
- A **wider impact area**, defined as the region of Greater Manchester. The 2021 Census found that the vast majority (90%) of people working in Manchester lived within the wider impact area, suggesting a high level of socio-economic containment within this

geography. The consideration of wider impact area enables the full extent of employment related effects assessed within this Chapter to be captured.

Assessment Process

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

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

- **Employment generated during construction:** Gross full-time equivalent (FTE) construction jobs have been estimated by dividing construction costs (provided by the Applicant) by the average annual turnover for construction sector employees in the North West region[16]. This has then been divided by the duration of the construction stage (i.e. number of years) to estimate the average gross FTE jobs supported throughout the construction stage. Allowances are then made for leakage[e] and displacement[f], respectively, taking into account commuting patterns[17] and standards set out in recognised guidance[18] in order to calculate net FTE jobs. Multipliers[g] have also been applied to estimate indirect and induced employment, drawing on guidance. The extent to which employment supported by the Proposed Scheme's construction stage impacts upon baseline levels and growth of local employment in the context of wider economic trends informs its level of effect/significance against this indicator.

- **Provision of new housing:** The impact of the provision of housing is established by comparing the quantum of new housing proposed against established annual need in Manchester. The extent to which the Proposed Scheme can help to meet housing need over the delivery period informs the level of effect against this indicator. The impact on physical and mental health is also considered on a qualitative basis and informs the sensitivity of the receptor for this effect, with reference to research published by the Government's Office for Health Improvement and Disparities (OHID, formerly Public Health England, PHE)[19] and Shelter[20].

Reporting of the Environmental Effect and Significance Criteria

12.57 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

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

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

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

Determining Sensitivity of Receptor

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

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

12.60 In the absence of industry wide guidance on assessing the significance of socio-economic and human health effects, **Table 12.2** provides a general overview of the sensitivity criteria which have been applied in the assessment. Given the broad range of effects assessed within the Chapter, it is not possible to define specific criteria that would be applicable across all receptors. The sensitivity of each specific receptor is therefore discussed and justified in turn within the 'Assessment of Effects, Secondary Mitigation and Residual Effects' section of this Chapter, based on these general principles.

Table 12.2: Definition of sensitivity of receptors

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

Determining the Magnitude of Change

12.61 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**.

12.62 In the absence of industry-wide guidance on assessing the magnitude of change with respect to socio-economic and human health effects, **Table 12.3** provides a general overview of the criteria applied in the assessment.

12.63 To determine magnitude, the absolute impact attributable to the Proposed Scheme is benchmarked (where relevant) against the average annual rate of change in the corresponding socio-economic and human health characteristics or baseline.

Table 12.3: Definition of magnitude of change

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

Determining the Level of Effect

12.64 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 12.4** has been a tool which has assisted with this process.

12.65 Whilst **Table 12.4** 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 12.4: Matrix to Support Determining the Level of Effect

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

12.66 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.

12.67 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

12.68 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.

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

Baseline Conditions

Economic Activity and Employment

12.70 Gaining fulfilling employment can have notable economic and wellbeing benefits for both individuals and society. This is exemplified by the fact that health expenditure on an unemployed person is reported to be double the average expenditure per person, given that an individual's overall health and wellbeing, in terms of physical and mental health, is strongly associated with being in fulfilling and stable employment[21].

12.71 OHID research[22] (originally published as PHE) highlights the following benefits of having necessary skills to obtain employment:

- Employment is generally the key means to obtaining adequate economic resources, which are essential for material wellbeing and full participation in society; and

- Work also meets important psychological needs in societies where employment is the norm and is central to individual identity, social roles and social status, with employment and socio-economic status being among the main drivers of health outcomes.

12.72 Whilst conversely, research indicates that a lack of skills and unemployment:

- Causes the loss of regular income, the material and psychological impacts of which contributes to the link between unemployment and poor health;

- Causes additional psychological stressors related to status and self-esteem, identity and the loss of a core role in life, which impact on health;

- Is also associated with unhealthy behaviours, including increased smoking and alcohol consumption and decreased physical exercise; and

- Can have effects beyond the individual directly affected, with evidence suggesting that financial difficulties or associated stress can increase the risk of poor mental health among families of those who are unemployed.

12.73 The ONS regularly monitors national wellbeing, and its research[23] highlights a correlation between unemployment and people's experiences of feelings of loneliness. Higher unemployment rates in an area are linked to higher loneliness rates and poses a threat to people's economic means as well as their health and wellbeing.

12.74 As such, NHS HUDU guidance[24] identifies income and employment and access to work and training as key determinants of human health. Similarly, IEMA guidance[25] highlights 'employment and income' as a relevant human health-related effect for consideration within EIA.

12.75 Analysis of economic activity, employment and unemployment rates provides an indication of the latent labour force either currently unemployed or available to start work immediately. Over the year July 2023 – June 2024, the ONS's Annual Population Survey (APS)[26] indicates that economic activity rates amongst the resident working-age population of the local and wider impact areas of Manchester and Greater Manchester (71% and 75% respectively) are lower than in England as a whole (79%). Similarly, the employment rate was lower in the local and wider impact areas (66% and 71% respectively) than in England as a whole (76%)[27].

12.76 The latest Claimant Count data published by the ONS[28] provides an up-to-date record of the number of people currently claiming benefits principally for the reason of being unemployed. This indicates that as of October 2024, there were c. 27,440 people in Manchester claiming out-of-work benefits, accounting for 7.2% of the resident working-age population. The number of claimants extends to circa 103,000 across Greater Manchester (5.6% of the working-age population)[29].

12.77 Analysis of ONS data regarding Jobseeker's Allowance (JSA) claimants (a sub-set of the above, which also captures the majority now claiming Universal Credit) highlights that 290 people in Manchester were recorded as specifically seeking employment in construction-related trades in October 2024, rising to c. 1,320 across Greater Manchester. This indicates that there is an available construction workforce both locally and in the wider area[30].

12.78 The new Labour Government has expressed its intention to deliver a "*new growth-focused approach"*[31] to planning and the economy. As such, the delivery of new employment opportunities is considered a local and national policy priority as an essential component of economic recovery, and is intended to "*kickstart economic growth*" and deliver the infrastructure that the country needs.

12.79 The need for new jobs and a boost to pay and living standards also remain of vital importance in the current context of inflationary pressures and the ongoing cost-of-living crisis; whilst the proportion of adults reporting an increase in their cost of living has fallen since peaking in October 2022, a September 2024 ONS survey indicates that 52% of adults nationally reported that their cost of living had increased compared to the previous month, with the most commonly reported reason remaining the price of their food shop (92%)[32].

12.80 Further to this, the ONS reports[33] that wage increases have slowed in recent months; over the year to September 2024 annual average wage growth was 4.8%, the lowest rate of annual increase recorded since June 2022, when it was 4.7%. Additionally, the growth in 'real wages' (i.e. adjusted for inflation) during the same period was markedly lower, at 1.9%.

Labour Market and Industry

12.81 The latest (2023) ONS Business Register and Employment Survey (BRES)[34] recorded that the local impact area of Manchester accommodates a total of c. 457,600 workforce jobs. The wider Greater Manchester region supports a total of circa 1.48 million jobs.

12.82 As of 2018, Manchester accommodated c. 398,500 jobs, indicating growth of 59,100 jobs during the 5-year period to 2023, equating to total growth of 15% and an average increase of c. 11,800 jobs per annum. Employment in the wider impact area of Greater Manchester grew by 115,000 jobs during this time (8.4% growth overall), equating to average creation of an additional c. 23,000 jobs per annum.

12.83 BRES data indicate that Manchester supported employment for 9,000 people in the construction sector as of 2023. This equates to 2.0% of total employment in the area, which is lower than the sector's 4.7% contribution to the total workforce across Greater Manchester (circa 70,000 construction jobs).

12.84 As of 2018, Manchester supported 9,000 construction jobs. Therefore, there has been no net change in construction employment over the 5-year period to 2023, albeit with a degree of fluctuation between individual years. For example, it is noted that 2,000 fewer construction jobs are supported in the city as of 2023 in comparison to the peak of 11,000 reported in 2021. Construction employment in Greater Manchester grew by 9,000 jobs during the same period, equating to an additional 1,800 per annum (15% growth).

Housing

12.85 A person's ability or otherwise to access housing which is of good quality, is affordable and which meets their needs can have a significant impact on their physical and mental health. As outlined in OHID guidance[35] (originally published as PHE), there are risks to an individual's health associated with living in:

- A cold, damp, or otherwise hazardous home (an unhealthy home);
- A home that does not meet the household's needs due to risks such as being overcrowded or inaccessible to a disabled or older person (an unsuitable home); and
- A home that does not provide a sense of safety and security, including precarious living circumstances and/or homelessness (an unstable home).

12.86 Poor housing conditions have all been shown to be associated with physical illnesses including eczema, hypothermia and heart disease, with respiratory health also having been

shown to be particularly affected. Poor physical conditions can also negatively impact on mental health, due to the stress caused by living in insecure, overcrowded, cold, polluted or damp conditions[36]. Research commissioned by Shelter[37] reported 20% of English adults surveyed stated that a housing issue had negatively impacted upon their mental health in the last 5 years.

12.87 As such, 'Housing Quality and Design' is included as a key determinant of health by the NHS HUDU Rapid HIA Tool[38]. Similarly, IEMA guidance[39] highlights 'housing' as a relevant human health-related effect for consideration when scoping EIA.

12.88 Policy JP-H1 ('Scale, Distribution and Phasing of New Housing Development') of Greater Manchester' adopted Places for Everyone (PfE) Joint Development Plan[40] sets an overall requirement of minimum 175,185 dwellings over the plan period (2022-2039), averaging 10,305 per annum across the nine boroughs of Greater Manchester included in the plan. Over 34% of the total dwellings are expected to be delivered in Manchester (60,061 over the plan period, averaging 3,533 per annum). The trajectory for delivery in Manchester stays level during the whole plan period.

12.89 Whilst PfE requirements have superseded previous local requirements, it is noted for illustrative purposes that, Manchester Core Strategy[41] Policy H 1 ('Overall Housing Provision') sets out a target of 60,000 new dwellings to be provided over the years from 2009 – 2027, equating to an average of 3,333 homes per year. It is also noted that Policy H1's set out stepped targets; for the period 2011/12 – 2021/22, the Core Strategy targeted delivery of 34,700 homes, an annual average of 3,470 (i.e. slightly higher than the average of 3,333 across the whole Core Strategy period).

12.90 Ministry of Housing, Communities & Local Government (MHCLG) data[42] indicates that over the ten years between 2011/2012 and 2021/2022, a total of c. 23,134 net additional homes were delivered in Manchester, equivalent to an average of 2,313 dwellings per annum.

12.91 Therefore, comparing annual average targets against actual net delivery since 2011 indicates that past housing delivery in Manchester has fallen below previously-adopted Core Strategy requirements, and was also below the current annual requirements set by PfE.

Future Baseline

Employment

12.92 It is anticipated that the Proposed Scheme will be delivered over a c. 5-year period between 2025/26 (the estimated commencement of construction in Q4 2025) and 2030/31 (the completion of all works on-Site and the Proposed Scheme becoming fully operational).

12.93 The below therefore summarises (where possible) Experian's latest employment forecasts[43] (at time of writing) for the future baseline at the commencement of the construction stage and the anticipated date of full completion/operation.

12.94 Between 2024 (baseline) and 2025 (commencement of construction):

- Total FTE employment is forecast to increase in Manchester and across Greater Manchester (both by 0.3%); and

- Construction FTE employment is forecast to remain unchanged in Manchester and across Greater Manchester.

12.95 Between 2025 (commencement of construction) and 2031 (completion and full operation):

- Total FTE employment is forecast to increase by 0.8% in Manchester and by 1.0% across Greater Manchester; and

- Construction FTE employment is forecast to decrease by 4.8% in Manchester and to decrease by 1.6% across Greater Manchester.

12.96 Without development in this location, there is not expected to be any impact on employment in the local and wider impact areas.

Primary and Tertiary Mitigation

Construction Stage

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

Operational Stage

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

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Employment generated during construction

12.99 Based on estimated construction costs (provided by the Applicant), and the average turnover per employee per annum in the construction sector in the North West[44], it is estimated that the Proposed Scheme has the capacity to support circa 1,150 'person-years' of direct employment within the construction sector. Over the course of a 5-year build period, this equates to an average of 230 FTE on- and off-Site construction jobs during the construction stage.

12.100 Of the new construction jobs created, not all will be additional to the local and wider impact area. A proportion of jobs will be taken by those living across the UK, outside of the respective local and wider impact areas of Manchester and Greater Manchester (referred to as 'leakage'), and a proportion of jobs will be taken by those who, in the absence of the Proposed Scheme, could otherwise be working on alternative construction projects locally (referred to as 'displacement').

12.101 Following the application of appropriate assumptions for leakage[45] and displacement[46] (respectively in line with guidance and published data[47]), it is estimated that 150 FTE jobs will be directly supported across Greater Manchester, of which 70 FTE jobs are likely to be taken by those living in the local impact area of Manchester.

12.102 The beneficial economic impacts will extend beyond construction employment to include the generation of indirect benefits for the local economy. Investment will generate considerable expenditure on construction materials, goods and other services which will be purchased

from a wide range of suppliers. This expenditure has far-ranging benefits both locally and further afield as it filters down the supply chain, and via the induced impacts of employment, through onward expenditure.

12.103 The result is that the initial investment is amplified in an economic 'multiplier' effect with linked benefits in terms of generated expenditure spent locally on goods and services. This will bring indirect employment and financial benefits for local individuals and firms involved in the skilled construction trades and associated professions. It could also help to sustain employment within this sector across the local and wider economy. Based on the application of appropriate multipliers[48], based on published guidance[49], it is estimated that construction could support a further 80 FTE jobs across Greater Manchester via indirect and induced effects, including contracts within the supply chain, salaries and onward expenditure, inclusive of 20 FTE jobs in the local impact area.

12.104 The total net additional employment impact describes the sum of direct and indirect / induced employment effects. Therefore, the assessment finds that a total of 230 net additional FTE positions could be generated each year across Greater Manchester, inclusive of 90 jobs in Manchester.

12.105 Construction stage employment impacts are summarised in **Table 12.5**.

Table 12.5: Construction Stage Employment

	Local Impact Area	Wider Impact Area
Person-years of employment	1,150	
Construction period (years)	5	
Gross FTE employment	230	
Direct net additional FTE employment	70	150
Indirect / induced net additional FTE employment	20	80
Total net additional FTE employment	**90**	**230**

Source: Turley Economics, 2024

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

12.107 As of 2023, Manchester's construction sector supported around 9,000 jobs, this being in line with the total supported in 2018 (i.e. no net change in this 5-year period), albeit 2,000 fewer than the total supported in 2021 (11,000). The 230 gross direct construction jobs (150 of which will be net additional to residents of the wider impact area, including 70 supported locally) generated by the Proposed Scheme will therefore make an important contribution

towards sustaining employment in the sector going forwards, albeit over a medium-term, temporary period. On this basis, the magnitude of change is considered to be small, relative to baseline indicators relating to the construction labour force , which has sustained stable employment levels over recent years (with a degree of fluctuation) and, as noted in the baseline, accounts for a relatively small proportion (2.0%) of employment in the city.

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

Secondary Mitigation or Enhancement

12.109 No secondary mitigation or enhancement is required.

Residual Effect

12.110 In the absence of secondary mitigation the residual effect for the labour force in the local and wider impact areas is the same as that reported in the pre-mitigation scenario.

Significance

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

Operational Stage

Provision of housing

12.112 The Proposed Scheme will deliver 758 new homes. This will include apartments of a mix of configurations and sizes to cater to a range of accommodation needs. Based on average household numbers by residence size and tenure in Manchester established by the 2021 Census, (which have been applied to the number of homes of each size at the Proposed Scheme), it is estimated that the Proposed Scheme could accommodate a total of c. 1,320 residents once completed and fully occupied.

12.113 PfE Policy JP-H1[50] sets an overall requirement for Manchester of c. 60,061 new homes over the period 2022-2039, averaging c. 3,533 per annum. This annual requirement is higher than the average of 3,333 homes per year for the period 2009-2027 set out by Manchester's Core Strategy (Policy H 1), which has now been superseded by PfE.

12.114 Net completions in Manchester between 2011/12 –2021/22 equated to 23,134 homes (an annual average of 2,313), thus falling notably below the Core Strategy's target (of 33,333 homes) for this period by 10,199 homes. Past rates of completions are therefore also lower than currently-adopted PfE requirements.

12.115 The additional 758 homes delivered by the Proposed Scheme will contribute towards PfE targets; measured against the annual target of 3,530 additional homes per year in Manchester, the Proposed Scheme will contribute 21% of one year's worth of local requirements.

12.116 The sensitivity of people requiring housing in the local impact area is considered to be high, given the scale of the annual housing requirement at its peak, the impact access to suitable housing can have on physical and mental health and the fact that the delivery of new homes is considered a local and, indeed, national policy priority.

12.117 The Proposed Scheme's delivery of 758 homes, accommodating c. 1,320 people, has the potential to account for 21% of one year's of Manchester's housing requirement over the

period to 2039 (3,530 per annum), thus increasing local housing supply permanently over the long term. On this basis, the magnitude of change is considered to be medium.

12.118 Therefore, there is likely to be a direct, permanent, long-term, beneficial effect which is considered to be major.

Secondary Mitigation or Enhancement

12.119 No secondary mitigation or enhancement is required.

Residual Effect

12.120 In the absence of secondary mitigation the residual effect for people requiring housing in the local impact area is the same as that reported in the pre-mitigation scenario.

Significance

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

Limitations and Assumptions

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

- In the absence of specific policy or guidance relating to the consideration of socio-economic and human health effects (e.g. regarding the definition of the study area, sensitivity of receptors, magnitude of change, level of effect and significance), the assessment has been informed by professional judgement.

- The assessment relies on secondary survey data such as the 2021 Census[51] and BRES[52]. Each data source has methodological limitations related to data collection and surveys only represent the socio-economic context at a specific point in time. In particular with regard to the 2021 Census, it should be noted that responses were collected during the Covid-19 pandemic, during which time rates of home-working increased substantially. Whilst the ONS therefore advises exercising caution in the use of 2021 Census travel-to-work data, it should be noted that the rate of labour force containment for Manchester reported by the 2011 Census was 38%[53], and therefore only slightly lower than the 40% subsequently recorded in the 2021 Census. It is therefore considered that 2021 Census data represents a robust basis for the purposes of establishing suitable worst-case (i.e. greatest leakage) economic impact areas; and

- The future baseline and assessment of future effects relies on population and employment forecast data drawn from Experian[54]. There are known uncertainties related to using trend-based analysis (especially in the current context of economic uncertainty caused by factors such as global inflationary pressures and the cost-of-living crisis); however, the use of such forecasts is considered appropriate for drawing conclusions about how the economy and labour market might change in the future.

Summary

12.123 **Table 12.6** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

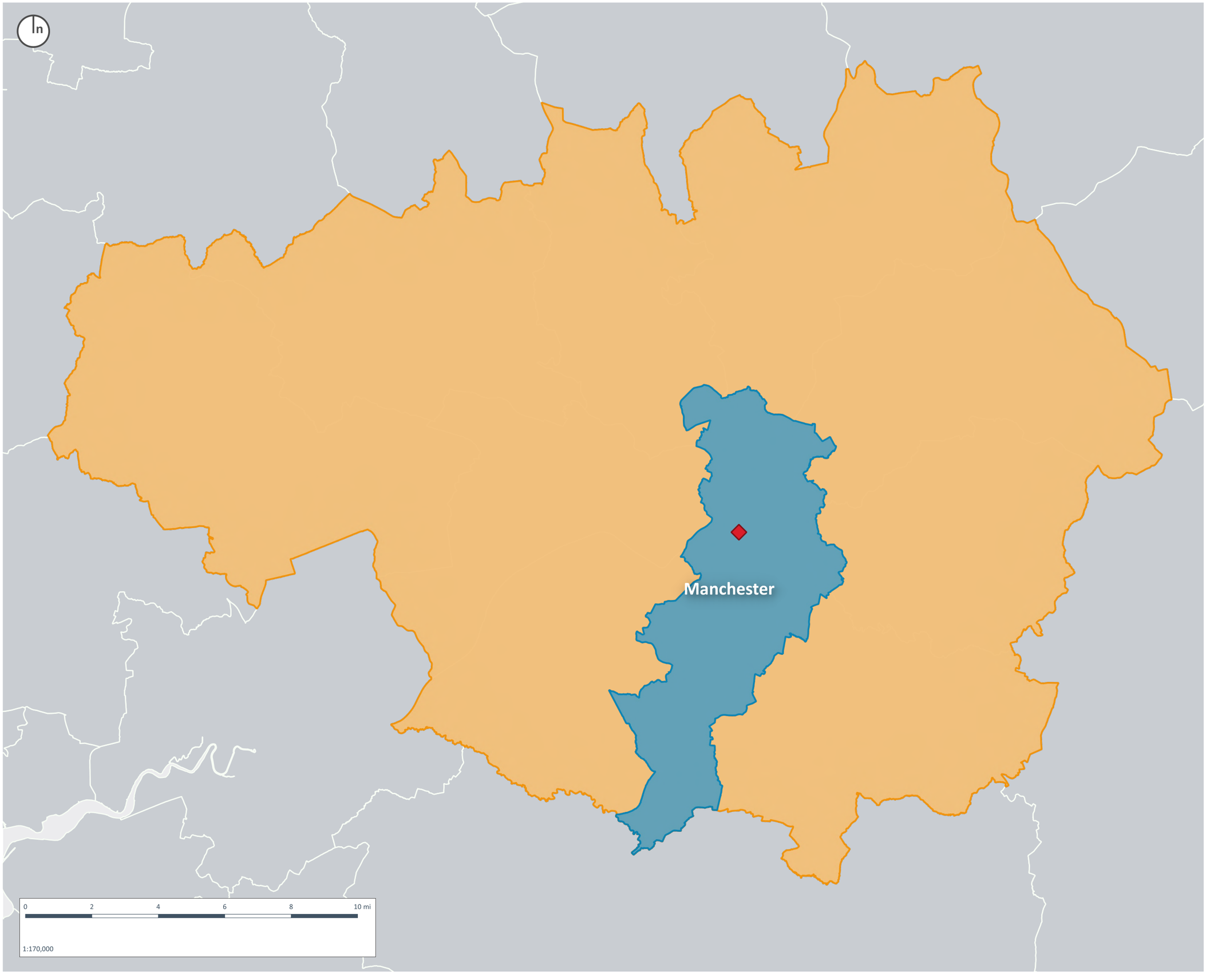
Table 12.6: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Employment generated during construction	Labour force in the local and wider impact areas	Minor beneficial	No
Operational Stage			
Provision of housing	People requiring housing in the local impact area	Major beneficial	Yes

References

[1] Department for Education (2024) Estimating Pupil Yield from Housing Development in Manchester [Online]. Available at: https://department-for-education.shinyapps.io/pupil-yields-dashboard/
[2] ONS via Nomis (2024) Census 2021
[3] Healthy Urban Development Unit (2009) HUDU Planning Contribution Model: Guidance Notes
[4] NHS Healthy Urban Development Unit (HUDU) (2019). Rapid Health Impact Assessment Toolkit (4th Edition)
[5] Ministry of Housing, Communities and Local Government (2019) Planning Practice Guidance: Housing for older and disabled people – Inclusive Design (para 017)
[6] Secretary of State (2015) Construction (Design and Management) Regulations 2015.
[7] Central Digital and Data Office, Cabinet Office. Secured by Design Principles. Available at: https://www.security.gov.uk/policy-and-guidance/secure-by-design/principles/
[8] Simpson Haugh (2024) Stocktons Manchester: Design and Access Statement
[9] NHS Healthy Urban Development Unit (2019). Rapid Health Impact Assessment Tool (4th Edition)
[10] Ibid.
[11] Homes & Communities Agency (2014). Additionality Guide (4th Edition)
[12] NHS Healthy Urban Development Unit (HUDU) (2019). Rapid Health Impact Assessment Toolkit (4th Edition)
[13] IEMA (2022). Effective Scoping of Human Health in Environmental Impact Assessment
[14] IEMA (2023). Determining Significance of Human Health in Environmental Impact Assessment
[15] ONS via Nomis (2024) Census 2021
[16] Department for Business, Energy & Industrial Strategy (2024). Business Population Estimates 2024: North West
[17] ONS (2024). 2021 Census, Origin-destination data
[18] Homes & Communities Agency (2014). Additionality Guide (4th Edition)
[19] Public Health England (2017). Guidance: Improving Health Through the Home
[20] Shelter (2013). People Living in Bad Housing: Numbers and Health Impacts.
[21] Department for Work & Pensions (2010). The Department for Work and Pensions Social Cost-Benefit Analysis framework
[22] Public Health England (2015). Local Action on Health Inequalities: Increasing Employment Opportunities and Improving Workplace Health
[23] ONS (2021). Opinions and Lifestyle Survey
[24] NHS Healthy Urban Development Unit (2019). Rapid Health Impact Assessment Toolkit (4th Edition).

[25] IEMA (2022). Effective Scoping of Human Health in Environmental Impact Assessment.
[26] ONS via Nomis (2024). Annual Population Survey: July 2023 – June 2024
[27] Ibid.
[28] ONS via Nomis (2024). Claimant Count: October 2024
[29] Ibid.
[30] ONS via Nomis (2024). Jobseeker's Allowance by Occupation: October 2024
[31] Speech by the Chancellor, The Rt Hon Rachel Reeves MP, on 8 July 2024
[32] ONS (2024). 'Public opinions and social trends, Great Britain: July 2024' [Online]. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/publicopinionsandsocialtrendsgreatbritain/september2024
[33] ONS (2024). 'Average weekly earnings in Great Britain: September 2024' [Online]. Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/november2024
[34] ONS via Nomis (2024). Business Register and Employment Survey: 2023
[35] Public Health England (2017). Guidance: Improving health through the home
[36] Shelter (2013). People Living in Bad Housing: Numbers and Health Impacts.
[37] Shelter (2017). The Impact of Housing Problems on Mental Health.
[38] NHS Healthy Urban Development Unit (2019). Rapid Health Impact Assessment Toolkit (4th Edition)
[39] IEMA (2022). Effective Scoping of Human Health in Environmental Impact Assessment
[40] Greater Manchester Combined Authority (2024) Places for Everyone Joint Development Plan
Manchester City Council (2012) Core Strategy Development Plan Document[41] S
[42] Ministry of Housing, Communities and Local Government (2023). Table 122: Housing Supply; Net Additional Dwellings, by Local Authority District, England
[43] Experian (2024) Local Market Forecasts Quarterly: September 2024
[44] Department for Business, Energy & Industrial Strategy (2024) Business Population Estimates 2024: North West.
[45] In line with 2021 Census data, leakage rates of 60% and 10% are applied at the respective scales of the local (Manchester) and wider (Greater Manchester) impact areas.
[46] In line with HCA guidance, a 'low' (25%) rate of displacement is applied at the scale of all impact areas.
[47] ONS (2024) 2021 Census: Origin-destination data.
[48] Drawing on HCA guidance, multipliers of 1.25 and 1.50 applied at the respective scales of the local and wider impact areas.
[49] Homes and Communities Agency (2014) Additionality Guide (4th Edition).
[50] Greater Manchester Combined Authority (2024) Places for Everyone Joint Development Plan
[51] ONS via Nomis (2024) Census 2021.
[52] ONS via Nomis (2024) Business Register and Employment Survey: 2023.
[53] ONS via Nomis (2024) Census 2011: WU01UK - Location of usual residence and place of work by sex
[54] Experian (2024) Local Market Forecasts Quarterly: June 2024.



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Site Location

Local Impact Area (Manchester)

Wider Impact Area (Greater Manchester)

UK

CLIENT:
Liquid Business (Manchester) Limited

PROJECT:
Stocktons

DRAWING:
Figure 12.1: Socio-Economics and Human Health - Study Area Plan

PROJECT NUMBER:
CLIM3002

DRAWING NUMBER:
GIS_000

CHECKED BY:
TE/CP

REVISION:
1.0

STATUS:
Final

DATE:
November 2024

SCALE:
1:170,000 @ A3

Turley Economics

13. Climate Change

Introduction

13.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to climate change.

13.2 The UK Climate Change Projections (UKCP18)[1] set out that climate change is projected to lead to increasing annual temperatures, decreasing summer rainfall and increasing winter rainfall as a result of increasing global Greenhouse Gas (GHG) emissions. This applies to the UK, including the Site. In this context the EIA Regulations[2] require the consideration of Climate Change, including how resilient the Proposed Scheme is to the effects of climate change, and how the Proposed Scheme will impact climate change through GHG emissions.

13.3 IEMA has prepared guidance for EIA practitioners for both Climate Change Adaptation (Climate Change Resilience)[3] and Mitigation (GHG Emissions)[4] which has been used in the Climate Change assessment for the Proposed Scheme.

13.4 The Chapter describes the scope of the assessment and assessment methodology, and a summary of the baseline information that has informed the assessment.

13.5 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).

13.6 This Chapter is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**). In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

13.7 Please note, the terms “carbon”, carbon dioxide (CO_2)” and “greenhouse gas (GHG)” are used interchangeably in this statement depending on the terminology of referenced documents.

Summary of Consultation

13.8 No statutory consultee exists for climate change in England. At this stage no formal consultation has been undertaken.

Scope of the Assessment

13.9 As part of the preparation of this Climate Change chapter, consideration has been given to the scope of the chapter to provide a proportionate assessment.

13.10 Potential effects have been drawn from the UKCP18 climate projections and the UK Climate Change Risk Assessment (UKCCRA)[5] which identifies potential risks and impacts of climate change across a number of areas including Infrastructure, Health, Communities and the Built

Environment. Key risks from the UKCCRA which are related to the Proposed Scheme are summarised below.

- N1 – Risks to species and habitats from climate change;
- I2 – Risks for infrastructure from flooding;
- I7 – Risks to infrastructure from subsidence;
- H1 – Risks to health and wellbeing form high temperatures;
- H3 – Risks to people, communities and buildings from flooding;
- H5 – Risks to building fabric;
- H10 – Risks to water quality and household water supplies;
- B1 – Risks to businesses from flooding;
- B3 – Risks to business from water scarcity; and
- B5 – Risks to business operations due to high temperatures.

13.11 Based on the Climate Projections and risks from the UKCCRA, key likely receptors, which are related to the Proposed Scheme, to be impacted by climate change include:

- The **Global Climatic System** from additional GHG emissions;
- **Construction Employees** and **Future Occupants** may be impacted due to overheating from increasing temperatures;
- **Site Infrastructure** may be impacted due to changing ground conditions and as a result of increased rainfall and flood risk;
- **Construction Operations** may be impacted by changing weather patterns leading to risks of flooding, pollution and impacts on **Air Quality;**
- **Site Habitats and Species** may be impacted by changing climate space; and
- **Site Operations, Infrastructure** and **Future Occupants** may be impacted by decreasing summer rainfall and water availability, as well as increased risks of flooding due to increasing winter rainfall.

Effects Not Considered to be Significant

13.12 The following effects are not considered to be significant and therefore have not been assessed within the ES. A factual evidence base has been provided below to support this.

Increasing summer mean and daily maximum temperatures and influence on human heath during construction [construction employees]

13.13 Increasing summer temperatures may lead to health and safety risks for construction employees.

13.14 A Construction Environmental Management Plan (CEMP) (to be secured by planning condition) will be prepared to support the demolition and construction of the Proposed Scheme, which will set out climate change adaptation measures to reduce risks to human health from overheating such as provision of shaded refuges and potable water supplies during construction.

13.15 Therefore, the effect of an increasing summer mean and daily maximum temperatures on construction employees and their health is not considered to be significant and have not been considered further in the EIA or reported in the ES.

Changing annual temperatures / rainfall patterns and changes to water supply, flood risk and air quality during construction and operation [site operations, infrastructure, construction employees and future occupants]

13.16 Changing annual temperatures and rainfall patterns may lead to a reduction of water supply, an increased risk of flooding (and damage), and an impact on air quality.

13.17 The CEMP will include measures to protect receptors from potential climate change effects through demolition and construction, including the provision of appropriate drainage and pollution prevention systems. The CEMP will also include measures to monitor and reduce potable water use.

13.18 The Proposed Scheme will lead to an increased demand on potable water supplies from future Site users. The operational development will include water saving measures built into the design of the Proposed Scheme, such as water saving fixtures and fittings, and buildings will target as a minimum 2 Wat01 Water Efficiency BREEAM Credits to reduce water consumption for commercial elements and 110 l/p/d in line with the Building Regulations higher water efficiency standard for the residential element of the Proposed Scheme.

13.19 The Site lies within Flood Zone 1, meaning that is has a 0.1% annual probability of flooding from rivers and sea, sewer, groundwater and reservoir in any given year. The Site will be developed in accordance with the Lead Local Flood Authority requirements for reducing peak surface water flow off Site. This includes the use of Sustainable Urban Drainage System (SuDS) features such as rain gardens and permeable paving with appropriately sized surface water storage to allow the surface water flow rate off site to be restricted to acceptable levels. The post development discharge rates will include for an increase in the rainfall intensity of 40% and 45% for the 1 in 30-year and 1 in 100-year storm events respectively to allow for climate change.

13.20 The design of the Proposed Scheme will ensure Finished Floor Levels (FFL) are set above external levels with falls provided away from the building plots. The design also includes a dedicated surface water drainage network that will actively drain the Site, whilst providing attenuation and flow reductions to the surrounding sewerage infrastructure.

13.21 It is anticipated that dust and particulate matter emissions produced during demolition and construction activities would be controlled through the implementation of a CEMP. This CEMP will be informed by the Institute of Air Quality Management (IAQM) guidance and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring. This would include any enhanced dust suppression measures to reduce the risk of dust from increased summer temperatures.

13.22 All of these tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the CEMP. Therefore, changing annual temperatures / and rainfall patterns and changes to water supply, flood risk and air quality is not considered to be significant and have not been considered further in the EIA or reported in the ES.

Changes to future climate including temperature and rainfall and risk to building infrastructure and future occupants during operation [building infrastructure and future occupants]

13.23 Changes to future climate including temperature and rainfall may cause ground conditions to change which may lead to impacts on building foundations and structures and the future occupants.

13.24 The Building Regulations[6] require new developments to consider the impact of ground movement in foundation design. The buildings will be constructed off piled rafts/ piles and the ground movement will be a key consideration of the design of the sub and superstructure. A specialist basement impact assessment will be completed to inform the impact of the basement excavation works on neighbouring properties and boundaries with the design / construction principles informed to limit ground movement to mitigate risks of damage to properties / infrastructure beyond the boundary of the Site.

13.25 The piled foundations will be socketed into the underlying bedrock, subject to detailed site investigations and specialist pile design, which will limit the extent of any ground movement to normal levels considered in the development of a design of this nature. In this context, climate changes are not expected to influence foundation or ground movements due to the piled nature of the development.

13.26 Therefore, the effect of changes to future climate including temperature and rainfall upon site infrastructure and future occupants is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Changes to future climate and resilience of site habitats and species during operation [habitats and species]

13.27 Changes to future climate including temperature and rainfall, could impact upon site habitats and species.

13.28 The Site comprises built development and hardstanding, and is located within the densely urban zone of Manchester City Centre bound by busy dual carriageways. The Site is subject to high levels of anthropogenic disturbance and light pollution at all hours, featuring little connectivity to suitable habitat in the wider environment. Habitats on site are limited to young planted trees providing negligible habitat for local wildlife.

13.29 Bat surveys undertaken on the Site found no evidence to suggest the presence of a roost onsite, with the overall bat activity onsite and adjacent assessed to be limited.

13.30 The Proposed Scheme necessitates the removal of three tree groups within the Site boundary. However, it is noted that all the trees are of low value. The Proposed Scheme will mitigate this tree loss through onsite replacement tree planting and the production of a robust soft landscaping scheme.

13.31 Therefore, changes to future climate and resilience upon site habitats and species is not considered to be significant and has not been considered further in the EIA or reported in the ES.

Higher average summer temperatures and risk of building overheating during operation [future occupants]

13.32 Higher average summer mean and daily maximum temperatures may lead to building overheating, adversely affecting the health and well-being of occupants.

13.33 The residential development within both Blocks A and B have undergone overheating assessment in line with the requirements of Part O of the Buildings Regulations[7] using CIBSE TM59 methodology in order to assess and reduce the risk of summer overheating by taking into account future climate scenarios.

13.34 All apartments will have access to natural ventilation via perimeter purge panels within the unitised facade. Auxiliary ventilation will be provided with MVHR's. The results from the final overheating simulation showed that all of the assessed bedrooms and Kitchen/Living/Dining Areas comply with the TM59 overheating criteria. Additionally, residential corridors will be assessed from an overheating perspective during the stage 3 design process.

13.35 Commercial units will be comfort cooled, as such any impacts from increasing temperatures and overheating will be accommodated.

13.36 Therefore, higher average summer temperatures and risk of building overheating to occupants is not considered to be significant, and has not been considered further in the EIA or reported in the ES.

Effects Considered Likely to be Significant

13.37 **Table 13.1** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 13.1: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
GHG emissions	Global Climatic System	Construction / Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

13.38 The following legislation and policy have informed the assessment of effects within this Chapter:

- The Climate Change Act 2008[8] was revised in 2019 to set a 100% carbon reduction target (net zero) for the UK by 2050;
- National Planning Policy Framework (NPPF) (updated in December 2024)[9] paragraph 8(c) recognises the key role planning has to play in mitigating climate change and supporting the transition to a low carbon economy;

- Government's Net Zero Strategy (October 2021)[10] recognises the importance of the planning system to combating climate change and supporting sustainable growth;

- The UK's Sixth Carbon Budget[11] was implemented in April 2021, enshrining in law a new target to reduce GHG emissions by at least 78% by 2035;

- On 15th June 2022, the Building Regulations were updated as an interim step towards part of the roadmap to the 'full' Future Homes and Buildings Standard, which comes into effect in 2025. The regulations aim to deliver buildings that are of a higher quality, with lower energy bills and reduce GHG emissions by around 30% for new homes and 27% for non-domestic buildings;

- The 2025 Future Homes Standard (FHS) and Future Buildings Standard (FBS) consultation[12] was published in December 2023 which requires homes to achieve a 75% carbon reduction beyond Part L 2013, removing the use of fossil fuel and requiring increased fabric efficiency and use of low carbon renewable energy generation. It is anticipated that from 2025 new non-residential buildings will be required to achieve a similar carbon reduction as proposed for the 2025 FHS;

- Places for Everyone (March 2024) is a long-term plan of nine Greater Manchester (GM) districts, including Manchester, which sets out how the nine boroughs should develop up until 2039. Key sustainability policies include:

  – *Policy JP-S2 Carbon and Energy*, which sets out Best Practice Thresholds for Reducing Energy Demand and Onsite Renewable Energy Generation within residential developments.

  – *Policy JP-S3 Heat and Energy Networks* requires new developments to connect to an existing or planned heat/energy network or install a site wide or communal heat/energy network solution.

  – *Policy JP-S6 Resource Efficiency*, which requires using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.

- Manchester's Core Strategy (2012)[13] is the key document in the Manchester Local Plan, which sets out the long-term strategic policies for Manchester's future development, including the following key policies:

  – *Policy EN4 – Reducing CO_2 emissions by enabling low and zero Carbon Development*, which requires developments to be designed in accordance with the energy hierarchy to reduce energy demand through active and passive design measures meeting residual requirements through the use of zero carbon, renewable energy technologies.

  – *Policy EN6 – Target framework for CO_2 reductions from low or zero carbon energy supplies* sets out target CO_2 reduction targets for three development categories.

– *Policy EN8 – Adaptation to Climate Change* requires all new developments to be adaptable to climate change and have consideration of a range of adaptation measures.

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

- IEMA's EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022)[14] (IEMA's GHG Assessment Guidance) – provides guidance on the assessment of GHG emissions;

- RIBA 2030 Climate Challenge[15] – provides good and best practice guidance on reducing energy demand and embodied carbon for residential and non-residential development; and

- LETI Climate Emergency Design Guide (2020)[16] and LETI's Embodied Carbon Target Alignment (2021)[17] – provides good and best practice upfront embodied carbon and operational energy for residential and non-residential buildings.

Defining the Study Area

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

Assessment Process

13.41 There is at present no single accepted methodology for the assessment of GHG emissions within EIA. The proposed assessment methodology outlined below is therefore based on application of IEMA's 'EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance' ('IEMA guidance'), together with professional judgement.

13.42 Determining the magnitude, level of effect and significance of climate change (GHG emissions or savings) from new development remains an emerging practice and is complex given the local scale at which GHG emissions typically occur in contrast to the global and transboundary nature of climate change.

13.43 In line with IEMA's guidance the approach taken in this assessment is to estimate GHG emissions resulting from the construction and operation stages of the Proposed Scheme and to evaluate these emissions in the context of baseline GHG emissions from the Site, local authority's (i.e. Manchester City Council (MCC)) administrative area), and UK region (i.e. North West of England), as well as the future carbon budgets proposed for Manchester and set for the UK.

13.44 Furthermore, and in accordance with IEMA guidance, consideration is also given to the contribution of the Proposed Scheme to a science-based net zero trajectory in line with the 2015 Paris Agreement's 1.5°C pathway. The IEMA guidance states, *'The crux of significance therefore is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050'.*

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

13.46 The applied methodology therefore comprises the following components:

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

13.47 The timescales used to assess the construction and operation stages of the Project are set out in **Table 13.2**.

Table 13.2: Assessed Project Timescales

Development Stage	First Year	Completion / Assessment period	Summary
Demolition and Construction	2026	2030	Site preparation and construction of the Proposed Scheme is anticipated to commence (at the earliest) in Q4 2025, with the demolition completed over approximately 3 months and construction completed over approximately 5 years.

Development Stage	First Year	Completion / Assessment period	Summary
			The 5 years construction period, representing the worst case scenario, is assumed for this assessment.
Operation	2031	2037	The Proposed Scheme is anticipated to be fully operational from 2031. Operational GHG emissions are assessed from 2031 up to the end of 2037 to enable comparison with the UK carbon budgets ending 2037.

Reporting of the Environmental Effect and Significance Criteria

13.48 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

Determining Sensitivity of Receptor

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

13.50 GHG emissions affect the global climate system which, in accordance with IEMA guidance, is considered potentially sensitive to any additional GHG emissions. This sensitivity may, however, vary depending on the future global response to climate change, for example should a significant global reduction in GHG emissions (compared with the currently increasing emissions) be achieved over time. IEMA's latest EIA guide to climate change adaptation and resilience[18] recommends the use of the Met Office UKCP18 high emissions scenarios (known as RCP8.5), unless the case can be made for using a different, lower emissions scenario. The RCP 8.5 scenario is considered most appropriate for this assessment and as a result the sensitivity of the global climate system is considered to be high.

Determining the Magnitude of Change

13.51 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**.

13.52 There are currently no published or agreed significance criteria for evaluating GHG emissions in EIA. Therefore, the magnitude of change of GHG emissions estimated from the Proposed Scheme is determined by establishing their scale relative to recent GHG emissions from the local area (MCC administrative area) and North West, and also to future Manchester and UK carbon budgets as presented in **Table 13.3**, together with professional judgement.

Table 13.3: Determining the Magnitude of Change

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

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

Determining the Level of Effect

13.54 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 13.4** has been a tool which has assisted with this process.

13.55 Whilst **Table 13.4** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*' or '*adverse*'.

Table 13.4: Matrix to Support Determining the Level of Effect

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

13.56 The following terms (adapted from IEMA guidance) have been used to define the level of the effects:

- **Major effect**: GHG mitigation measures are not in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a large increase (e.g. ≥10%) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with major adverse effects is locking in GHG emissions and does not make a meaningful contribution to the national trajectory to net zero;

- **Moderate effect**: GHG mitigation measures are partly in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a medium increase (e.g. >5%) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with moderate adverse effects complies with some up-to-date policy and good practice but is locking in some emissions and makes only a partial contribution to the national trajectory to net zero;

- **Minor effect**: GHG mitigation measures are in line with a science-based 1.5°C aligned transition to net zero for that project type, and net GHG emissions equate to a small increase (e.g. <5%) relative to baseline local/regional/national emissions and/or future local carbon budgets. A project with minor adverse effects complies with up-to-date and emerging policy and good practice reduction measures and makes a contribution to the national trajectory to net zero;

- **Negligible**: GHG mitigation measures are in line with a science-based 1.5°C aligned transition to net zero for that project type, with minimal residual emissions. A project with negligible effects complies with up-to-date and emerging policy and best practice and plays a part in achieving the rate of transition required by nationally set policy e.g. net zero; and

- **Beneficial**: net GHG impacts are below zero and the project results in a reduction in atmospheric GHG concentrations, whether directly or indirectly, compared to the without-project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact. It should be noted that the latest IEMA guidance on GHGs in EIA does not seek to differentiate between different levels of beneficial effect (minor, moderate, major) or whether they would be 'Significant/Not Significant'.

13.57 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.

13.58 Carbon dioxide equivalency (CO_2e) is a quantity that describes, for a given mixture and amount of GHG, the amount of CO_2 that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). In view of this timescale and the findings of the Intergovernmental Panel on Climate Change (IPCC) 1.5°C Report[19] that some effects from climate change may be long-lasting or irreversible, the duration of effect of the built elements of the Proposed Scheme is assumed to be **long-term.**

Determining Significance

13.59 For each effect, a statement has been made as to whether the level of effect is '**Significant**' or '**Not Significant**'. This determination has been based on professional judgement and/or relevant guidance/legislation where applicable.

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

Baseline Conditions

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

Local and Regional GHG Emissions

13.62 **Table 13.5** presents the most recent (2022) data on baseline GHG emissions for the MCC administrative area and North West of England as sourced from Government's UK Local Authority & Regional CO_2 Emissions Statistics[20]. Assumed baseline GHG emissions from the Site are also presented. This baseline data is used to contextualise GHG emissions from the Proposed Scheme and determine the magnitude of change.

Table 13.5: Baseline Site, Local & Regional GHG Emissions

Geographical Area	2022 GHG Emissions (tonnes CO_2)
The Site	0
MCC	2,141,357
North West	40,592,978

Future Baseline

UK Carbon Budgets

13.63 The UK carbon budgets are effectively a future baseline of national GHG emissions necessary to achieve net zero. The Climate Change Act 2008 sets a 100% carbon reduction target (net zero) by 2050. It is the duty of the Secretary of State to set for each succeeding period of five years (beginning with the period 2008 − 2012) an amount for the net UK carbon account (the 'carbon budget') and to ensure the net quantity of emissions does not exceed the carbon budget. For this reason, it is reasonable to use these targets as an indicator of likely future baseline GHG emissions.

13.64 The UK's Sixth Carbon Budget was implemented in April 2021, enshrining in law a new target to reduce GHG emissions by at least 78% by 2035 and for the first time incorporating the UK's share of international aviation and shipping emissions.

Manchester Carbon Budgets

13.65 The Tyndall Centre has worked with MCC to set future carbon budgets for their administrative area. The 'Setting Climate Commitments for Manchester' (October 2024)[21] report sets out proposed carbon budgets for Manchester up to the year 2100. It should be noted that these carbon budgets relate to emissions from the energy system only.

13.66 **Table 13.6** presents the future carbon budgets set for the UK and Manchester to date which, together with current baseline GHG emissions reported above, are used to help determine the context and magnitude of future GHG emissions resulting from the Proposed Scheme.

Table 13.6: UK and Manchester Carbon Budgets (Tonnes CO_2e)

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

Contribution to UK Net Zero Trajectory

13.67 In order to determine whether the Proposed Scheme is aligned with and makes an appropriate contribution to the UK's net zero trajectory, it is necessary to provide context for the magnitude of GHG emissions.

13.68 The RIBA 2030 Climate Challenge, LETI Climate Emergency Design Guide (2020) and LETI's Embodied Carbon Target Alignment (2021) provide benchmarks and targets for a range of good and best practice embodied carbon and operational energy use intensity (EUI) for buildings to ensure the construction industry delivers the significant reductions necessary to have a realistic prospect of achieving net zero by 2050.

13.69 Embodied carbon is the total GHG emissions and removals associated with materials and construction processes throughout the whole lifecycle of a building (RICS lifecycle modules A1-A5, B1-B5 and C1-C4). As such, embodied carbon comprises construction (or upfront) carbon (typically accounting for the large majority of embodied carbon), together with emissions during building use and end of life.

13.70 Upfront embodied carbon is the GHG emissions associated with materials and construction processes up to practical completion (RICS lifecycle modules A1-A5), excluding any biogenic carbon sequestered in construction products and materials (e.g. timber). As such upfront embodied carbon relates to emissions occurring during a buildings' construction stage and is the focus of this Chapter (alongside operational emissions).

13.71 **Table 13.7** sets out the RIBA 2030 and LETI 2020 Design targets for embodied carbon and operational EUI for new residential and non-residential buildings.

Table 13.7: RIBA 2030 and LETI 2020 embodied carbon and operational carbon targets

	Non-residential (Offices)	Residential
Embodied Carbon Target (kg CO_2e/m^2)		
LETI – Current practice (A1-A5)	<950	<850
LETI 2020 - Upfront Embodied Carbon (A1-A5)	<600	<500
RIBA 2030 Climate Challenge (A1-C4)	<970	<800
Operational Energy use Intensity (EUI) targets (kWh/m^2/yr)		
LETI 2020	55	35
RIBA 2030 Climate Challenge	<75	<60

Primary and Tertiary Mitigation

Demolition and Construction Stage

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

- Prior to demolition, a demolition audit will be carried out to review opportunities for the reuse and recycling of materials from the existing buildings. It is anticipated that where possible materials will be reused or recycled which can help reduce GHG emissions.
- A Whole Life Carbon Assessment (WLCA) of the buildings A and B is currently being undertaken to assess and where possible reduce construction carbon through consideration of scheme design (e.g. slab thickness), construction materials, specifications and suppliers, and with a particular focus on typical carbon 'hot spot' materials such as concrete and steel.
- Buildings will be designed and built aiming to exceed current practice as defined in LETI's current practice Targets as set out in **Table 13.7,** achieving an upfront embodied target of <800kgCO_2/m^2**.** Performance at this level is in line with good practice and exceeds current performance and the requirements of the Building Regulations which does not currently assess embodied carbon.

Operational Stage

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

- Both buildings will be constructed to a high standard of fabric insulation and airtightness and will utilise a range of renewable energy technologies such as roof mounted solar PV and Air Source Heat Pumps. The development will be all-electric, with no gas boilers, meaning that the carbon intensity of each building will reduce over time, ultimately reaching net zero in line with the decarbonisation of the grid.

- An Energy Strategy has been prepared for the Proposed Scheme demonstrating how dwellings will comply with the requirements of the current Building Regulations Part L 2021 and the requirements of PfE policies JP-S1, JP-S2 and JP-S3, through incorporation of energy hierarchy principles. Further energy modelling will be undertaken prior to construction, with the development aiming to achieve RIBA 2025 operational energy target for domestic buildings of 60 kWh/m^2/y.

Assessment of Effects, Secondary Mitigation and Residual Effects

Demolition and Construction Stage

GHG Emissions

13.74 The construction stage of the Proposed Scheme will result in GHG emissions both on- and off-site, from a range of activities including the manufacture of construction materials and products, the transport of materials and waste on- and off-site, the consumption of fossil fuels and electricity by site plant and vehicles, and the treatment of residual construction waste.

13.75 Demolition stage GHG emissions are anticipated as a result of the demolition of the buildings and transport of materials offsite for processing. Prior to demolition, a demolition audit will be carried out to review opportunities for the reuse and recycling of materials from the existing buildings. It is anticipated that where possible materials will be reused or recycled which can help reduce GHG emissions. The direct GHG emissions associated with demolition stage are anticipated to be limited and are therefore excluded from the assessment.

13.76 As part of the current design stage a WLCA is being prepared. In order to estimate construction stage GHG emissions initial results from the WLCA have informed the assessment. In this context performance which exceeds LETI's current practice upfront carbon benchmark, achieving <800 kgCO_2e/m^2 for residential development is applied to the gross internal areas (GIA sqm) of the proposed buildings. Please note that although there are other proposed uses within the buildings such as office, amenity and commercial space, as the residential use will be the predominant use of the Proposed Scheme, it has been assumed that the buildings will be constructed to comply with the residential use benchmark.

13.77 **Table 13.8** presents annual and total construction phase GHG emissions calculated for the Proposed Scheme.

Table 13.8: Construction GHG emissions (A1-A5)

	Total GIA (m^2)	Total GHG Emissions (tCO_2e)	Annual GHG Emissions (tCO_2e)
Construction Stage (A1-A5)	78,379	62,703	12,541

13.78 The construction stage of the Proposed Scheme is estimated to result in total emissions of 62,703 tCO_2e, equating to annual construction emissions of circa 12,541tCO_2e across the 5 year construction period.

13.79 **Table 13.9** presents construction emissions as a proportion of baseline emissions from MCC, North West, and also future Manchester and UK carbon budgets. In order to assess the worst-case scenario, annual average construction emissions are used for comparison with baseline MCC and North West emissions (given these are also annual emissions), whilst total construction emissions are compared with UK carbon budgets for that period.

Table 13.9: Contextualised Construction Stage GHG Emissions

Context	Construction Stage GHG Emissions (as a %)
Baseline emissions	
MCC	0.59%
North West	0.03%
Carbon Budgets	
UK 4th Carbon Budget (2023 – 2027)	<0.01%
UK 5th Carbon Budget (2028 – 2032)	<0.01%

13.80 Annual construction emissions of 12,541 tCO_2e equate to circa 0.59% of Manchester, and 0.03% of North West of England baseline emissions. Total construction emissions of 62,703 tCO_2e equate to less than 0.01% of the UK carbon budget for each carbon budget period.

13.81 It should be noted that Manchester carbon budgets proposed by Tyndall Centre relate to emissions from the energy system only, whereas construction emissions from the Proposed Scheme will largely comprise those from the manufacture and transport of construction products and materials. Construction GHG emissions are therefore not readily comparable given a significant proportion of these emissions are likely to occur outside the geographical and/or temporal boundary of Manchester carbon budget.

13.82 Performance beyond current practice and beyond the requirements of the Building Regulations targeting is considered to represent good practice regarding construction carbon and, therefore, the Proposed Scheme is considered to make an appropriate contribution to the UK net zero trajectory for this issue.

13.83 The sensitivity of the global climate system is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, temporary, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

13.84 No secondary mitigation or enhancement is required.

Residual Effect

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

Significance

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

Operational Stage

GHG Emissions

13.87 The operation stage of the Proposed Scheme will result in GHG emissions from the generation of energy consumed by the proposed dwellings, commercial and amenity space. For the purposes of the GHG emissions assessment, baseline operational GHG emissions from the Site are assumed to be zero, an approach that helps ensure a reasonable 'worst-case' approach regarding the GHG effect of the Proposed Scheme.

13.88 Turley Sustainability calculated CO_2 emissions from the Proposed Scheme based on the RIBA 2025 operational energy target for domestic buildings of 60 kWh/m^2/y as well as UK electricity grid factors published by the Department for Energy Security and Net Zero (DESNZ, November 2023)[22] (commercial, consumption-based) which reflect the continued decarbonisation of the UK electricity grid from the ongoing uptake of renewables (especially offshore wind) and closure of coal-fired power stations. Please note that although there are other proposed uses within the buildings such as office, amenity and commercial space, as the residential use will be the predominant use of the Proposed Scheme, it has been assumed that the buildings will be constructed to comply with the residential use benchmark.

13.89 **Table 13.10** presents estimated operational GHG emissions for the first year of assumed operation (2031), for the last year of the assessed period (2037) as well as emissions over the assessed operational period (2031 – 2037). As the assessment uses UK electricity grid factors which reflect the continued decarbonisation of the UK electricity grid, operational GHG emissions are anticipated to reduce over time, with emissions in year 1 of operations representing the peak/worst-case.

Table 13.10: Operational Stage GHG Emissions

	GHG Emissions (tCO_2e)
Year 1 GHG emissions (2031)	193
Year 7 GHG emissions (2037)	85
Total (2031-2037)	823

13.90 The Proposed Scheme is estimated to result in GHG emissions of 193 tCO_2e during the first year of operation (2031), dropping to 85 tCO_2e in 2037, and accumulating to 823 tCO_2e across the assessed operational stage (2031 – 2037).

13.91 **Table 13.11** reports the above operational stage emissions as a proportion of baseline (2022) emissions from MCC and North West, and also future Manchester and UK carbon budgets. Peak annual operational GHG emissions are compared with baseline emissions (given these are also annual data), whilst total operational GHG emissions are compared with Manchester and UK carbon budgets for the same 2031 − 2037 period.

Table 13.11: Contextualised Operational Stage GHG Emissions

Context	Contextualisation (as a %)
Baseline emissions	
MCC	0.009%
North West	<0.001%
Carbon Budgets	
UK 5th Carbon Budget (2028 – 2032)	<0.001%
UK 6th Carbon Budget (2033 – 2037)	<0.001%
Manchester carbon budget (2028 – 2032)	0.036%
Manchester carbon budget (2033 – 2037)	0.040%

13.92 Peak annual operational emissions of 193 tCO_2e equate to circa 0.009% of MCC and less than 0.001% of the North West baseline emissions. Total operational emissions for the assessed period (2031 – 2037) of 823 tCO_2e equate to a maximum of 0.040% of Manchester carbon budgets (for 2033 – 2037) and less than 0.001% of UK carbon budgets.

13.93 Performance in line with RIBA 2030 Climate Challenge targets for 2025 is considered to represent good practice regarding operational carbon and therefore the Proposed Scheme is considered to make an appropriate contribution to the UK net zero trajectory for this issue.

13.94 The sensitivity of global climate system is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, temporary, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

13.95 No secondary mitigation or enhancement is required.

Residual Effect

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

Significance

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

Limitations and Assumptions

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

- The assessment of the level of effect and whether the effect is 'significant' or not is based, in part, on professional judgement.
- It is expected that the majority of trips to and from the Site will be made by modes other than the private car. The Site is located within the city centre, in an accessible

location for walking, cycling and public transport use. No parking spaces are proposed to be provided for the Proposed Scheme.

- The future UK electricity grid factors sourced from DESNZ are projections which may not reflect the actual emissions associated with grid electricity consumption in future. However, DESNZ projections have slightly underestimated the rate of grid decarbonisation in recent years, so any inaccuracy in these projections may serve to over-estimate as well as under-estimate GHG emissions associated with the Proposed Scheme's future electricity demand.

Summary

13.99 **Table 13.12** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 13.12: Summary of Residual and Significant Effects

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

References

[1] https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index
[2] UK Government (2017) – EIA Regulations. Available at: https://www.legislation.gov.uk/uksi/2017/571/contents
[3] IEMA (2020). EIA Guide to: Climate Change Resilience and Adaptation
[4] IEMA (2022). EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance
[5] UK Climate Change Risk Assessment (2021). Available at: Summary for England (CCRA3-IA) - UK Climate Risk
[6] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf
[7] https://www.gov.uk/government/publications/overheating-approved-document-o
[8] Climate Change Act 2008 (2050 Target Amendment) Order 2019. Available at: https://www.legislation.gov.uk/ukdsi/2019/9780111187654

[9] MHCLG (2024). National Planning Policy Framework (NPPF). Available at: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf

[10] BEIS (2021). Net Zero Strategy: Build Back Greener. Available at: https://www.gov.uk/government/publications/net-zero-strategy

[11] BEIS (2021). Press Release: UK enshrines new target in law to slash emissions by 78% by 2035. Available at: https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035

[12] Department for Levelling Up, Housing and Communities (2023). Available at: https://www.gov.uk/government/consultations/the-future-homes-and-buildings-standards-2023-consultation

[13] Manchester's Core Strategy (2012)

[14] EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022). Available at: https://www.iema.net/preview-document/assessing-greenhouse-gas-emissions-and-evaluating-their-significance

[15] RIBA 2030 Climate Challenge. Available at: https://www.architecture.com/about/policy/climate-action/2030-climate-challenge

[16] LETI Climate Emergency Design Guide. Available at: https://www.leti.london/_files/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

[17] LETI (2021). Embodied Carbon Alignment Target. Available at: https://www.leti.uk/_files/ugd/252d09_25fc266f7fe44a24b55cce95a92a3878.pdf

[18] IEMA (2020). EIA guide to: Climate Change Resilience & Adaptation. Available at: https://www.iema.net/resources/reading-room/2020/06/26/iema-eia-guide-to-climate-change-resilience-and-adaptation-2020

[19] IPCC (2019). Global warming of 1.5°C. Available at: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf

[20] BEIS (2024). UK Local Authority and Regional Carbon Dioxide Emissions National Statistics: 2005 to 2022. Available at: https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics.

[21] Tyndall Centre (2024). Setting Climate Commitments for Manchester. Available at: https://carbonbudget.manchester.ac.uk/reports/E08000003/

[22] Electricity emissions factors to 2100 kgCO_2e/kWh, DESNZ (2023) Available at: https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjjxuCjisr9AhXTFsAKHfvzCCsQFnoECA8QAQ&url=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F1129255%2Fdata-tables-1-19.xlsx&usg=AOvVaw20O8FpOwsZ__38RiDyW0w7 .

14. Noise and Vibration

Introduction

14.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Scheme in relation to noise and vibration.

14.2 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.

14.3 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).

14.4 This Chapter, and its associated **Figures 14.1** and **Appendices 14.1** to **14.4**, is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**).

14.5 In addition, this Chapter should be read in conjunction with **Chapter 15: Assessment of Cumulative Effects**.

Summary of Consultation

14.6 **Table 14.1** provides an overview of the consultation that has been undertaken to inform the Proposed Scheme and EIA.

Table 14.1: Summary of Consultation

Body / Organisation	Date and Form of Consultation	Summary
MCC	Email, 2 October 2024	Agreement sought of survey and assessment methodologies. However, no response was provided.

Scope of the Assessment

Effects Not Considered to be Significant

14.7 The following effects are not considered to be significant and therefore have not been considered further within the ES. A factual evidence base has been provided below to support this.

Changes in flows on the local road network during operation

14.8 An increase in traffic movements and, in turn, traffic noise on the local road network is expected to be limited. This is due to the Proposed Scheme not containing any significant parking for the residents and therefore traffic movements are unlikely to increase

significantly. Additionally, based on traffic data provided by the traffic consultant, deliveries will either be similar or fewer than operations from the existing site and therefore, noise levels from deliveries are not expected to increase.

14.9 Noise from road traffic is expected to be negligible and not significant to all nearby existing receptors. Therefore this will not be considered further in the ES.

Vibration at proposed receptors during operation

14.10 Vibration levels have been measured on Site to be low and not intrusive. Therefore, vibration to the proposed receptors is expected to be negligible and not significant and will not be considered further in the ES. Further details are provided in **Appendix 14.4**.

Existing plant noise to proposed receptors

14.11 An assessment of site suitability has been undertaken by considering noise intrusion to the proposed units included as part of the Proposed Scheme, taking into account the expected levels of plant noise from the Oxygen Building to the south of the Site.

14.12 Noise calculations have been undertaken to assess noise levels to the south façade of the south building. The results of the assessment is detailed further in **Appendix 14.1** but calculated noise levels are comfortably below the internal noise level targets, prior to considering the enhanced glazing and ventilation requirements necessary to control noise from road traffic.

14.13 Therefore existing plant noise to proposed receptors is not considered to be significant and will not be considered further in the ES.

Effects Considered Likely to be Significant

14.14 **Table 14.2** outlines the effects that were considered likely to be significant and are reported within this Chapter.

Table 14.2: Effects Considered Likely to be Significant

Likely Significant Effect	Receptors	Applicable Stage
Construction noise	AP1 & AP2 (see 'Defining the Study Area' below)	Construction
Construction vibration	AP1 & AP2	Construction
Road traffic noise to proposed Receptors	Proposed residential receptors	Operation
Plant noise from Proposed Scheme	AP1 & AP2	Operation

Assessment Methodology

Legislative Framework, Policy and Guidance

14.15 The following legislation and policy has informed the assessment of effects within this Chapter, and is detailed further in **Appendix 14.2**:

- National Planning Policy Framework (NPPF)[1];
- Noise Policy Statement for England (NPSE)[2];
- Planning Practice Guidance (PPG)[3];
- Building Regulations Approved Document O: Overheating (ADO)[4];
- Control of Pollution Act (1974) (CPA)[5]; and
- MCC Planning and Noise Technical Guidance[6].

14.16 The following guidance has informed the assessment of effects within this Chapter and is detailed further in **Appendix 14.2**:

- Professional Practice Guidance on Planning & Noise (ProPG)[7];
- British Standard 8233:2014 – Guidance on sound insulation and noise reduction for buildings (BS 8233)[8];
- British Standard 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound (BS 4142)[9];
- British Standard 5228:2009+A1:2014 Parts 1 and 2 – Code of practice for noise and vibration control on construction and open sites (BS 5228)[10];
- Guide to Demonstrating Compliance with the Noise Requirements of Approved Document O, July 2022 (Draft for Consultation);
- Design Manual for Roads and Bridges (DMRB), LA111, Noise and vibration (2020)[11];
- Calculation of Road Traffic Noise (CRTN) (1988)[12];
- ISO 9613-2:1996 – Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation (1996)[13];
- World Health Organisation (WHO) – Guidelines for Community Noise (2000)[14]; and
- WHO – Environmental Noise Guidelines for the European Region (2018)[15].

Defining the Study Area

14.17 Two assessment positions have been selected for the assessment of construction noise and vibration as well for mechanical services plant. These each represent groups of residential premises as described below and indicated on **Figure 14.1**. The assessment positions can be considered a worst-case proxy position for other receptors and so by meeting the noise vibration targets at the assessment positions, noise and vibration targets at all other receptors are also therefore expected to be achieved.

- AP1 – Residential apartment building to the north-west on Ducie Street; and

- AP2 – Residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street.

Assessment Process

Construction and Demolition

14.18 Construction and demolition noise and vibration is inherently temporary in nature and so any impacts will be in the short term only.

14.19 Guidance has been taken from BS 5228-1; which covers noise control recommendations relating to open construction site. It provides guidance concerning methods of predicting and measuring noise and assessing its impact on those exposed to it; it is therefore relevant to consider on this site.

14.20 Example method 1 in Annex E of BS 5228-1 sets out details of how to set threshold noise levels of potential significant effects at dwellings. Ambient noise levels on site without construction noise are rounded to the nearest 5 dB and compared against the site level. If the site noise level exceeds the category value shown in the table below, then a potential significant impact is indicated.

Table 14.3: Noise criteria for construction activity

Assessment category and threshold value period	Threshold value, in dB ($L_{Aeq,T}$)		
	Category A[(A)]	Category B[(B)]	Category C[(C)]
Night-time (23:00 – 07:00)	45	50	55
Evenings and weekend[(D)]	55	60	65
Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)	65	70	75

NOTE 1 – A potential significant effect is indicated if the $L_{Aeq,T}$ noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level.

NOTE 2 – If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values) then a potential significant effect is indicated if the total $L_{Aeq,T}$ noise level for the period increases by more than 3 dB due to site noise.

NOTE 3 – Applied for residential receptors only.

(A) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.

(B) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as Category A values.

(C) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than Category A values.

(D) 19:00 – 23:00 weekdays, 13:00 – 23:00 Saturdays and 07:00 – 23:00 Sundays

14.21 Further to the above, **Appendix 14.3**, also sets out guidance on Section 61 agreements and an example Code of Construction Practice. This includes advice that contractors should be expected to follow, without prejudice of the contractor's obligations. As no detailed scheme of construction or demolition is to be produced at this stage, an example calculation of construction and demolition noise has been undertaken based on typical noise levels for sample items of plant that can be expected to be used, as outlined in **Table 14.4**, as specified in BS 5228-1. The typical on-times for each activity have been assigned.

Table 14.4: Typical construction noise levels

Equipment item	Noise level, dB L_{Aeq} at 10 m	Typical on-time
CFA piling rigs	79	50%
Breakers	74-85	25%
Mobile craneage	67-82	15%
Concrete mixer lorries	71-80	20%
Concrete pumps	67-82	25%
Angle grinders	80-85	10%

14.22 The assessment has considered a worst-case scenario, assuming all of the above activities are occurring within the same period at the nearest locations to the nearest noise sensitive receptors. In practice this is unlikely to occur with only one of the listed activities expected to take place within a given period at a similar location. However, by assessing all activities collectively, this provides a worst-case yet robust assessment.

14.23 Vibration from construction and demolition activity should not exceed a Peak Particle Velocity (PPV) of 1 mm/s within any residential building, as presented in BS 5228-2.

14.24 Vibration during the construction and demolition stage at nearby existing receptors is usually controlled by piling operations. Vibration levels during piling are typically in the order of 0.3 to 1.0 mm/s at 10 m, when using rotated bored methods. The assessment has considered a worst-case scenario, assuming that piling is being undertaken at the nearest locations to the nearest sensitivities.

14.25 For the purpose of this assessment, the highest peak daily demolition and construction traffic flows have been used as a worst-case scenario for the purposes of assessing traffic noise. It has been confirmed from the traffic consultants there would be a peak one-way movement of 25 (50 two-way trips) per day. These figures have been used to carry out the demolition and construction traffic noise assessment.

Operation – Road Traffic to Proposed Receptors

14.26 Full details of the assessment methodology adopted for considering noise from road traffic to the proposed receptors across the Site can be found in **Appendix 14.1**.

14.27 Noise survey works have been undertaken at the Site to quantify the baseline noise conditions and a noise modelling exercise has been undertaken. With the noise climate

across the Site quantified, a review against appropriate assessment criteria has been undertaken.

14.28 The assessment criteria have been drawn from BS 8233, and are summarised below:

- Daytime internal noise levels within all habitable rooms no greater than $L_{Aeq,16h}$ 35 dB.
- Night-time internal noise levels in all bedrooms no greater than $L_{Aeq,8h}$ 30 dB and not normally exceeding $L_{Amax,F}$ 45 dB more than 10 times per night.

14.29 Calculation of noise to receptors within the proposed apartments has been undertaken. Where the above criteria are found to be exceeded, mitigation measures are proposed to ensure the criteria can be met at the proposed receptors within the development.

Operation – Existing Plant Noise to Proposed Receptors

14.30 Noise from plant on the neighbouring tower block to the south to the proposed residential properties has been undertaken with reference to BS 4142.

14.31 It is typically not appropriate to consider the rated noise emissions from existing plant areas against background noise conditions to the proposed properties as the plant will form a part of the existing noise climate.

14.32 In section 11 of BS 4142, it states that where the initial estimate of the impact needs to be modified due to the context, all relevant factors should be taken into consideration, including the following:

"...the sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions, such as:

(i) Façade treatment;"

14.33 Where a given impact affects internal noise conditions it may be appropriate to install mitigation in the form of façade insulation treatment and alternative ventilation. In order to establish the required performance of this mitigation, it is necessary to consider the absolute internal noise contributions from the neighbouring plant.

14.34 BS 8233 directly states that BS 4142 can be used to establish the rating level from a commercial noise source. Through BS 4142, the character of the noise can be taken into account when considering noise from industrial sources to new noise sensitivity and it is not necessary to alter the numerical limits set out within BS 8233. The only change needed is to use a suitable assessment period, taken to be 1 hour during the daytime and 15 minutes at night, as referenced in both BS 8233 and BS 4142.

14.35 The following assessment criteria apply when considering noise from existing plant sources to habitable spaces within new noise sensitivities:

- Daytime internal noise levels within all habitable rooms no greater than $L_{Ar,1h}$ 35 dB.
- Night-time internal noise levels in all bedrooms no greater than $L_{Ar,15min}$ 30 dB.

14.36 Where the above criteria are found to be exceeded, mitigation measures are proposed to ensure the criteria can be met at the proposed receptors within the development.

Operation – Plant Noise from Site

14.37 For noise from fixed plant, limits will be set to 5 dB below the measured background level during the day and night-time periods, with a further penalty applied if the plant exhibits attention attracting characteristics likely to be audible at the receptors, in accordance with BS 4142.

Reporting of the Environmental Effect and Significance Criteria

14.38 The assessment of likely significant environmental effects as a result of the Proposed Scheme has taken into account the construction and operational stage. The following sections define the approach adopted within the assessment for the determination of sensitivity (or value/importance), magnitude of change (or impact), the level of effect and significance.

Determining Sensitivity of Receptor

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

14.40 As all receptors are residential properties and typically occupants within dwellings are sensitive to noise, the sensitivity of the receptors can be considered **high**.

Determining the Magnitude of Change

14.41 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**.

Construction and Demolition Noise

14.42 For construction and demolition noise, the criteria in **Table 14.5** include thresholds for noise levels at which impacts are expected to arise. It is assumed construction and demolition activity will only take place during the daytime period.

Table 14.5: Construction and demolition noise magnitude of change

Noise level, dB(A)	Magnitude of Change
≤ 65	Negligible
65 < X ≤ 70	Small
70 < X ≤ 75	Medium
> 75	Large

Construction and Demolition Vibration

14.43 Where vibration is concerned, BS 5228-2 provides guidance on effects of vibration levels in terms of human perception and disturbance. The figures are presented in **Table 14.6** with respective magnitude of change.

Table 14.6: Construction vibration magnitude of change

Vibration level, mm/s	Description	Magnitude of Change
< 0.3	No effect expected	Negligible
0.3 ≤ X < 1.0	Vibration might just be perceptible in residential environments	Small
≥ 1.0	It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents	Medium
10.0	Vibration is likely to be intolerable for any more than a very brief exposure to this level	Large

Operation – Plant Noise from Site

14.44 For noise from proposed plant selections, the criteria in **Table 14.7** include thresholds for noise levels at which impacts are expected to arise.

Table 14.7: Plant noise magnitude of change

Plant Noise Rating Level, $L_{Ar,Tr}$, dB		Magnitude of Change
Daytime (07:00 – 23:00)	Night-time (23:00 – 07:00)	
35	30	Negligible
49	37	Small
54	42	Medium
59	47	Large

Existing Noise Sources to Proposed Receptors

14.45 Concerning noise from existing sources to proposed receptors, it is not possible to determine the Magnitude of Change, as no change in noise climate is occurring to the Proposed Receptors. However, the level of effect and significance can still be derived, as discussed in the subsequent sections.

Determining the Level of Effect

14.46 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 14.7** has been a tool which has assisted with this process.

14.47 Whilst **Table 14.8** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is '*beneficial*' or '*adverse*'.

Table 14.8: Matrix to Support Determining the Level of Effect

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

14.48 The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- **Major effect**: where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
- **Moderate effect**: where the Proposed Scheme is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- **Minor effect**: where the Proposed Scheme is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Proposed Scheme is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change or/and can recover from the change; and
- **Negligible**: where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.

14.49 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Operation – Road Traffic to Proposed Receptors

14.50 Based on BS 8233, **Table 14.9** shows the level of effect corresponding to noise within proposed units inside habitable rooms from existing traffic.

Table 14.9: Level of Effect for Road Traffic Noise Within Proposed Units

Level of Effect	Internal Noise Levels
Low	Day $L_{Aeq,16hour}$ ≤ 35 dB Night $L_{Aeq,8hour}$ ≤ 30 dB Night L_{AFmax} ≤ 45 dB
Medium	Day $L_{Aeq,16hour}$ > 35 to 50 dB Night $L_{Aeq,8hour}$ > 30 to 42 dB Night L_{AFmax} > 45 to 65 dB
High	Day $L_{Aeq,16hour}$ ≥ 50 dB Night $L_{Aeq,8hour}$ ≥ 42 dB Night L_{AFmax} ≥ 65 dB

Determining Significance

14.51 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.

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

Baseline Conditions

14.53 Baseline noise levels were quantified across the Site in October / November 2024. Full details of the noise survey are provided within **Appendix 14.1**, with the relevant information reproduced below for ease of reference.

14.54 Two unattended noise survey positions were utilised to quantify noise from the local road network and are described as follows:

- MP1 – Microphone at approximately 7m above local ground level, to the front of the development, at a horizontal distance of 23m from the nearest kerb of Great Ancoats Street; and
- MP2 – Microphone at approximately 7m above local ground level, along the south-eastern boundary, at a horizontal distance of 3m from the nearest kerb of Store Street.

14.55 A summary of the measured baseline noise levels at the above positions is presented in **Table 14.10**.

Table 14.10: Noise survey results

Location	Daytime (07:00 – 23:00)	Night-time (23:00 – 07:00)	
	dB $L_{Aeq,16h}$	dB $L_{Aeq,8h}$	dB L_{Amax}
MP1	66	63	88
MP2	64	61	84

14.56 The noise climate is controlled by road traffic on the local road network. The Site itself can be considered to be relatively noisy.

Future Baseline

14.57 In the absence of the Proposed Scheme and with all other surrounding developments / committed developments constructed, the baseline noise levels would be expected to increase, albeit not significantly, due to the increase in traffic flow numbers.

14.58 The increase is expected to be minor and to generally affect the L_{Aeq} figures, rather than the L_{Amax}. For the Site, the L_{Amax} figures are the controlling factor for determining noise mitigation to the proposed residences, therefore control of L_{Amax} levels is expected to aid in controlling any increase in L_{Aeq} levels.

Primary and Tertiary Mitigation

Construction Stage

14.59 Account has been taken of the best practice measures that would be adopted and implemented for the Site, including the implementation of best practicable means (BPM) construction / demolition methods and a Construction and Environment Management Plan (CEMP). Further detail is provided in **Appendix 14.3** but also summarised below.

14.60 Site hoarding will be installed around the site perimeter. It is noteworthy that BS 5228 suggests that a screen can provide 5 dB attenuation for partial line of sight from source to receiver, and up to 10 dB attenuation where there is no line of sight between source and receiver. The effects of such screening would however be limited at the Site due to the proximity of the receptors and their height relative to the activities expected on the site and the height of the hoarding. The achievable noise attenuation would therefore be limited to the lower levels. As the core is constructed, shuttering would be erected that would offer some noise mitigation against works being undertaken within the core.

14.61 A CEMP will be prepared in advance of construction to be secured through planning conditions attached to the permission and will define all mitigation measures to be adopted to minimise noise and vibration emissions at surrounding sensitive receptors. This will incorporate specific measures within all phases of the works where noise and vibration may give rise to disturbance. It is expected that the CEMP will be secured by means of an appropriately worded planning condition.

14.62 BPM as defined by the Control of Pollution Act 1974, will be implemented as part of the working methodology. This will serve to minimise the noise and vibration effects at receptors in the vicinity of the construction works. The reduction in noise levels provided through the

implementation of BPM would vary depending on the nature of the works. It is however not possible to quantify the exact reduction that would be achieved due to the high number of variables that are present when considering BPM and the wide range of activities that would occur on the Site.

14.63 Community liaison and communication regarding construction works will be undertaken throughout the demolition and construction stage to provide information to people residing in properties located in the vicinity of the construction works and reduce the likelihood of adverse effects on the local community which could result in potential noise complaints. This will be undertaken through the considerate contractors scheme, which will form part of the CEMP. The level of engagement required would vary during the construction period, depending upon the expected effects experienced by individual receptors due to the construction works.

14.64 Details relating to liaison with the local community would be managed by the principal contractor. It is envisaged that community liaison would provide local residents with the following information in relation to the construction works:

- The nature of the works being undertaken;
- The expected duration of the works;
- The contractor's working hours;
- Mitigation measures that have been adopted to minimise noise and vibration, as detailed in the CEMP; and
- Contact details in the event of a noise disturbance.

14.65 If work is required to extend into periods beyond daytime hours, separate authorisation would be secured with MCC via the CEMP process and/or the Control of Pollution Act 1974.

14.66 Other relevant examples of noise management controls/mitigation that would be included within the CEMP and considered to be standard practice and therefore considered as tertiary mitigation measures are set out below (noting that this list is not exhaustive):

- As a general principle, lower noise and vibration generating demolition and construction practices must be adopted where practicable to do so.
- All vehicles and mechanical plant used for the purpose of carrying out the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order so that extraneous noise shall be reduced to a minimum.
- All compressors and generators shall be "sound reduced" models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussion tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers. Generators shall be positioned and enclosed so as to minimise noise transmission to the inhabitants in the neighbourhood as agreed with the Employer's Agent.

- All pumps shall be positioned and enclosed so as to minimise noise transmission to inhabitants in the neighbourhood.

- All machines in intermittent use shall be shut down in the intervening periods between work or, where this is impracticable, throttled down to a minimum.

- No machine shall be permitted which uses a system of dropping a heavy weight, power assisted or by gravity, for the purpose of breaking up paving or foundations.

- Access to the Site shall be such as to ensure a minimum of disturbance to persons in adjacent buildings by vehicles or plant entering or leaving the Site. No deliveries to Site shall take place outside the agreed working hours.

- Any work agreed to be carried outside daytime hours will be subject to agreement of noise levels with Environmental Health Officer. The Contractor shall provide details on work involved, machinery or plant used, exact location, and calculated noise levels at suitable assessment points.

- Any fixed or static plant operating outside normally permitted working hours shall not give rise to a 'rating level', as defined in BS 4142 in excess of the existing free-field background L_{A90} noise levels nearest noise-sensitive receptors (all of which are residential units).

- Without prejudice to the foregoing and to requirements of particular clauses in the Conditions of Contract, the Contractor shall not be permitted to carry out works as stated below, except where such work is absolutely necessary for the saving of life or property and the safety of the Works or as is required under the terms of the Contract:

  – Piling, including sheet piling, by percussive methods outside the hours of 08:00 to 18:00 Mondays to Fridays.

  – The maintenance of mechanical or other construction plant in the proximity of noise sensitive buildings outside the hours of 07:30 – 18:00 weekdays and 08:30 – 14:00 Saturdays.

Operational Stage

14.67 There are no primary or tertiary mitigation measures with regards to controlling noise during the operational stage with exception to noise limits being provided for noise from proposed mechanical services plant, in absence of selections being made at this stage.

14.68 The exact plant to be incorporated as part of the Proposed Scheme has not yet been confirmed and due to the wide range of equipment types and ventilation strategies that could be employed, it is not deemed to be reasonable to undertake an assessment of noise from this source type at this stage.

14.69 Instead, noise from fixed plant will be controlled to meet the noise limits set out in **Table 14.11** at the nearest noise sensitive receptors, with the mitigation required to do so included as primary mitigation to be developed as part of the Proposed Scheme's design. These limits would be by means of a suitably worded condition.

Table 14.11: Mechanical services noise limits

Assessment Position	Noise Limit, $L_{Ar,Tr}$, dB	
	Daytime	Night-time
AP1	50	37
AP2	49	34

14.70 Examples of potential primary mitigation measures that may be included to meet the above limits are attenuators, enclosures, acoustic screens and the selection of lower noise generating equipment. This list of examples is not exhaustive and other measures may be utilised as deemed necessary and appropriate.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Construction and demolition noise

14.71 The assessment has considered a worst-case scenario, assuming the previously stated noise generating construction activities are occurring within the same period at the boundary of the Site nearest to each assessment position, with the respective on-times applied.

14.72 Based on this worst-case scenario, noise levels have been calculated at each assessment position and are presented in **Table 14.12**.

Table 14.12: Calculated construction noise levels

Assessment Position	Calculated Noise Level, $L_{Aeq,T}$, dB	Magnitude of Change
AP1	63	Negligible
AP2	73	Medium

14.73 The sensitivity of AP1 is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a direct, temporary, medium-term, adverse effect which is considered to be negligible.

14.74 The sensitivity of AP2 is considered to be high. The magnitude of change is considered to be medium. Therefore, there is likely to be a direct, temporary, medium-term, adverse effect which is considered to be moderate.

14.75 It is noted that this is based on worst-case locations. For the majority of the site, construction activity will be either minor adverse or negligible.

Secondary Mitigation or Enhancement

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

Residual Effect

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

Significance

14.78 On the basis that the best practicable means are adopted, construction and demolition noise levels would be managed as far as is reasonably practicable. Based on professional judgement, considering the factors previously set out and the fact that construction noise is inherently temporary (particularly when considering noise from worst-case locations being short-term) this effect is considered to be **Not Significant**.

Construction vibration

14.79 Vibration from construction activity typically occurs due to piling activity. Based on the data within BS 5228-2, the following levels of vibration are estimated at the assessment positions.

Table 14.13: Estimated construction vibration levels

Assessment Position	Predicted peak particle velocity (PPV) values	Magnitude of Change
AP1	< 0.3	Negligible
AP2	< 1.0	Small

14.80 The sensitivity of AP1 is considered to be high. The magnitude of change is considered to be negligible. Therefore, there is likely to be a temporary, medium-term, adverse effect which is considered to be negligible.

14.81 The sensitivity of AP2 is considered to be high. The magnitude of change is considered to be small. Therefore, there is likely to be a temporary, medium-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

14.82 No secondary mitigation or enhancement is required.

Residual Effect

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

Significance

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

Operational Stage

Road traffic noise to proposed receptors

14.85 An assessment of site suitability has been undertaken by considering noise intrusion of road traffic to the proposed units included as part of the Proposed Scheme, taking into account the measured baseline noise conditions and an acoustic model of the site.

14.86 The noise model has been used to assess noise levels up the full height each façade of the two buildings. The results of the assessment is detailed further in **Appendix 14.1**.

14.87 With regards to internal noise levels and without consideration of any necessary mitigation measures, the sensitivity of proposed apartments is considered to be high. The magnitude of change is considered to be medium. Therefore, there is likely to be a direct, permanent, long-term, adverse effect which is considered to be moderate.

Secondary Mitigation or Enhancement

14.88 Noise levels predicted at the Site are such that it is necessary to ensure the buildings' envelope will provide appropriate levels of noise mitigation to provide future residents with acceptable internal noise conditions.

14.89 The noise mitigation measures that are required are detailed within **Appendix 14.1**, with the respective glazing performance requirements set out for the specific façades and storeys. It is noted that the Proposed Scheme is expected to be mechanically ventilated and will therefore not have any openings through the façade for this purpose. The control of overheating is discussed in more detail within **Appendix 14.1**.

14.90 The mitigation measures presented within **Appendix 14.1** provide a strategy to how the internal noise levels could be achieved. Meeting internal noise level targets should be secured via planning condition with reference to meeting the internal noise level targets for the assessed low level of effect presented in **Table 14.8**.

Residual Effect

14.91 The sensitivity of proposed apartments is considered to be high. The magnitude of change, following secondary mitigation, is considered to be negligible. Therefore, there is likely to be a direct, permanent, long-term, adverse residual effect which is considered to be negligible.

Significance

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

Plant noise from Proposed Scheme

14.93 Noise limits have been presented previously in **Table 14.11**. These limits would be by means of a suitably worded condition and can be considered primary mitigation.

14.94 The sensitivity of AP1 and AP2 is considered to be high. With the primary noise mitigation measures in place, the magnitude of change is considered to be small. Therefore, there is likely to be a direct, long-term, adverse effect which is considered to be minor.

Secondary Mitigation or Enhancement

14.95 No secondary mitigation or enhancement is required.

Residual Effect

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

Significance

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

Limitations and Assumptions

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

- For construction activity, impacts will be temporary in nature and occur during daytime hours (07:30 – 18:00 weekdays and 08:30 – 14:00 Saturdays) only. The exact methods of construction are not yet known and it is therefore only possible to provide a general guidance as to best practice.

- The various noise propagation models developed for the assessment have been based on information provided by various other design team members, Google Maps and Ordinance Survey data.

- It is assumed that plant items installed on the Oxygen Building to the south are as per the planning application submitted for the site.

Summary

14.99 **Table 14.14** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

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

Table 14.14: Summary of Residual and Significant Effects

Effect	Receptor	Residual Effect	Is the Effect Significant?
Construction Stage			
Construction noise	AP1	Negligible	No
	AP2	Moderate adverse	No
Construction vibration	AP1	Negligible	No
	AP2	Minor adverse	No
Operational Stage			
Road traffic noise to proposed receptors	Proposed apartments	Negligible	No
Plant noise from Proposed Scheme	AP1 & AP2	Minor adverse	No

References

[1] Ministry of Housing, Communities and Local Government, 2024. National Planning Policy Framework. HMSO

[2] Department of Environment, Food and Rural Affairs, 2010. Noise Policy Statement for England

[3] Planning Practice Guidance, 2019 (live document); Noise
[4] Ministry of Housing, Communities and Local Government, 2021. Building Regulations, Overheating: Approved Document O
[5] Secretary of State, 1974. Control of Pollution Act, HMSO
[6] Manchester City Council, 2022. Planning and Noise Technical Guidance
[7] The Association of Noise Consultants, Institute of Acoustics, Charted Institute of Environmental Health, 2017. ProPG: Planning & Noise – Professional Practice Guidance on Planning & Noise, New Residential Development.
[8] British Standards Institute, 2014. BS 8233:2014 - Guidance on sound insulation and noise reduction for buildings. BSI.
[9] British Standards Institute, 2014. BS 4142:2014+A1:2019 - Methods for rating and assessing industrial and commercial sound. BSI.
[10] British Standards Institute, 2014. BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 1: Noise. BSI.
British Standards Institute, 2014. BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 2: Vibration. BSI.
[11] Standards for Highways, 2020. Design Manual for Roads and Bridges LA 111 - Noise and vibration. Highways England, Transport Scotland, Welsh Government, Department for Infrastructure.
[12] Department of Transport, 1988. Calculation of Road Traffic Noise.
[13] The International Organization for Standardization, 1996. ISO 9613-2:1996 - Acoustics — Attenuation of sound during propagation outdoors — Part 2: General method of calculation.
[14] World Health Organization, 2000. Guidelines for Community Noise. WHO.
[15] World Health Organization, 2018. Environmental Noise Guidelines for the European Region. WHO.

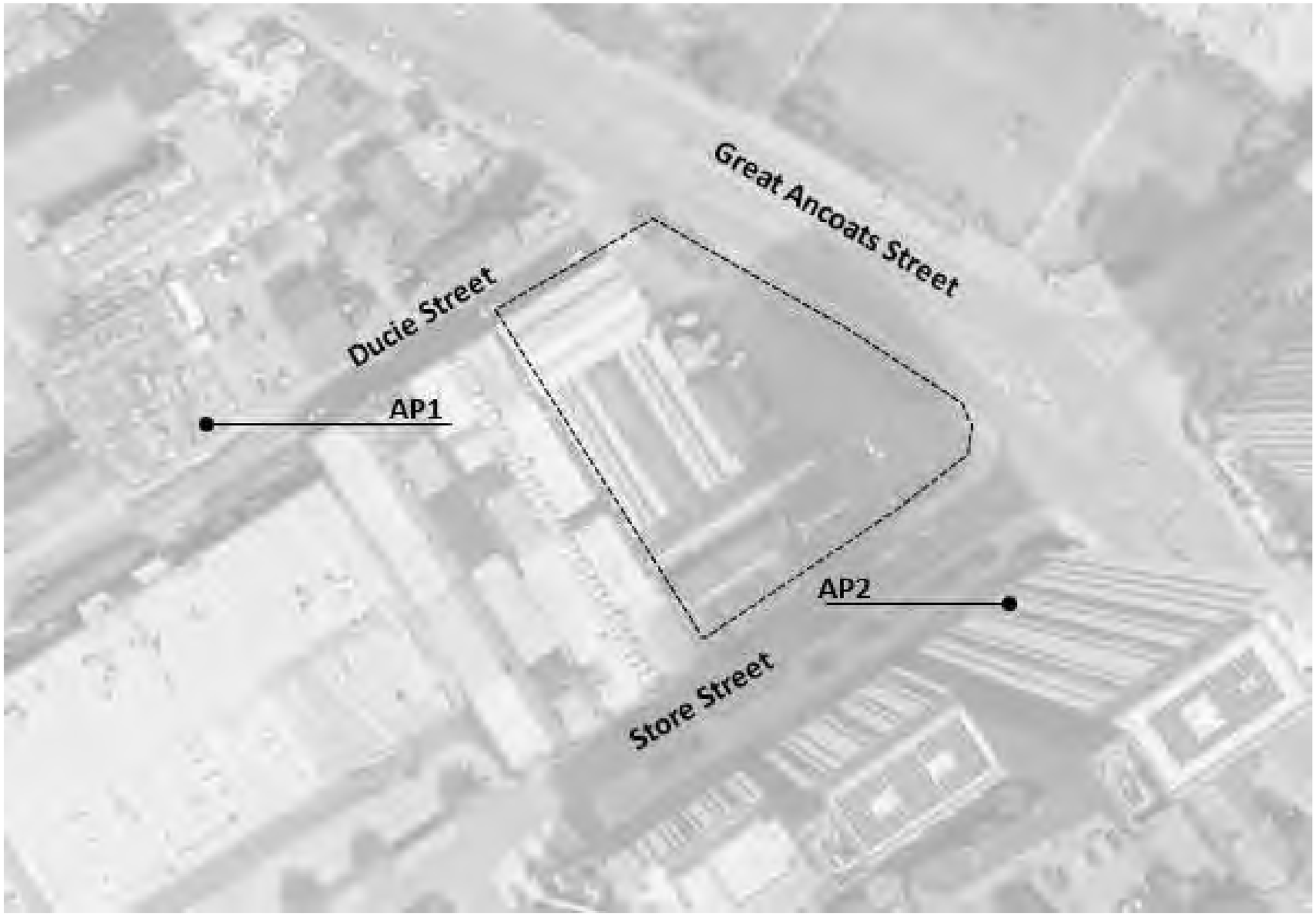


Figure 14.1

Description	Project	Issue
Noise and vibration assessment positions	Stockton's, Manchester	Not for construction

Revision	Date	Author(s)	Reviewer	Comment
0	05/12/2024	TF	-	-

This drawing has been prepared for the private and confidential use of our Client only and Suono Consultancy Limited accepts no responsibility or liability (including in negligence) resulting from third party use of this drawing or for a purpose other than for which it was commissioned.

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15. Assessment of Cumulative Effects

Introduction

15.1 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".

15.2 To accord with the EIA Regulations, in terms of providing an assessment of cumulative effects, this assessment has considered the following types of cumulative effects:

- **Effect interactions**: the interaction of environmental effects of the Proposed Scheme affecting the same receptor either within the Site or in the surrounding area[a], for example an adjacent residential receptor experiencing an increase in construction noise and change in visual amenity during construction; and

- **In-combination interactions**: the combination of environmental effects of the Proposed Scheme with existing or cumulative projects affecting the same receptor, for example multiple new tall buildings in-combination with the Proposed Scheme changing townscape character.

Legislative Framework and Guidance

15.3 Planning Practice Guidance[1] (PPG) refers to the need for cumulative effects to be assessed as part of an ES, but at present, there is no widely accepted assessment methodology or best practice. As such, the methodology in this Chapter is based on previous experience and knowledge at Turley, the types of receptors being assessed and the nature of the Proposed Scheme.

Assessment Methodology

15.4 The assessment of cumulative effects, for both effect interactions and in-combination effects, is largely qualitative in nature. The assessment of effect interactions is based on information contained within the ES, whilst the assessment of in-combination effects is based on publicly available information (i.e. the planning applications submitted for the projects considered for in-combination effects). The approach to the assessment of both effect and in-combination interactions is set out in the following sections.

[a] I.e the technical study areas as defined in **Technical Chapters 7 – 14.**

Effect Interactions

15.5 Following the completion of **Technical Chapters 7 – 14**, the residual effects have been collated into a matrix so that effect interactions on common receptors[b] can be identified. The matrix groups the receptors into categories, aligning with Schedule 4, Paragraph 4 of the EIA Regulations (e.g. population and human health, climate, etc). Where a residual effect is reported in **Technical Chapters 7 – 14** to be negligible, then this was excluded from the matrix (**Table 15.2** and **15.3**). This is on the basis that a negligible residual effect is unlikely to cause a noticeable change at a receptor or the receptor is not considered sensitive to a change.

15.6 Where the level of effect ranged across receptors assessed, the worst case level of effect was included in **Tables 15.2** and **15.3**, i.e. the 'least beneficial' or 'most adverse'. If no residual effects for a receptor group or technical topic (**Technical Chapters 7 – 14**) were identified (e.g. because they were scoped out of further assessment in Chapter 6 or were reported as negligible in **Technical Chapters 7 – 14**), these were not included in **Tables 15.2** and **15.3**.

15.7 Where effect interactions have been identified, a qualitative appraisal has been undertaken for the relevant receptor categories. The qualitative evaluation at the receptor level considered the following:

- Clear identification of specific receptor(s) considered for each effect 'contributing' to a potential effect interaction to understand the common receptor (and their attributes, such as location etc.);
- An appraisal where there are specific common receptors, considering;
  - Magnitude of change (or impact) of each residual effect;
  - Sensitivity (or value, importance, etc.) of the receptor / receiving environment to change;
  - Duration (of the effects individually and collectively utilising the short / medium / long-term criteria set out in **Chapter 2**) and reversibility of the effect;
  - If the effects are temporary and / or permanent;
  - If the effects are experienced / occur concurrently or sequentially; and / or
  - The geographical / spatial extent of the individual effects.

15.8 This process has been documented within the Assessment of Effect Interactions section of this Chapter.

[b] The common sensitive receptors considered within this assessment are those which are assessed within two or more of the technical assessments within the ES.

In-Combination Effects

15.9 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

15.10 The Cumulative Projects considered in this ES have been identified from the following sources:

- The Landstack[c] map function to identify planning applications from MCC;
- MCC's online register of projects[2];
- Planning Inspectorate online register of projects[3];
- Transport and Works Order Act online register of projects[4]; and
- Parliament Hybrid Bills online register[5].

15.11 The Site is located in the East Village Central Development Framework, which is part of the Manchester Piccadilly Strategic Regeneration Framework (SRF) Addendum[6]. The Proposed Scheme is the first application to come forward within the East Village Central Development Framework. As other applications come forward within this area, they will be required to consider the cumulative effects with the Proposed Scheme. Therefore, the SRF has not been considered within this cumulative assessment.

15.12 To reach a proportionate list of relevant Cumulative Projects, the following criteria were used to identify projects for consideration:

- Applications within 1km of the Site;
- Applications dating from January 2017 onwards. It is anticipated that applications prior to this date will already have been built out (and therefore form part of the baseline) and / or where subsequent applications have been submitted these would be captured within the search dates;
- Applications that have been submitted, consented/granted planning permission, or part implemented;
- Applications that have been refused but are subject to an undetermined appeal; and

[c] Landstack is an interactive mapping tool that displays all planning applications submitted to local planning authorities and automatically updates on a weekly basis.

- Projects of a pertinent scale, which has been determined using professional judgment but informed by their scale, perceived impact, or complexity, and are present near the Site boundary[d].

15.13 Professional judgment has been used to determine whether to include or exclude projects from further assessment (i.e. apply proportionality), informed by aspects such as temporal scale, nature of development and other factors.

15.14 The final list of Cumulative Projects is set out in **Table 15.1** and shown on **Figure 15.1**.

Step 2: Assessment of In-Combination Effects

15.15 A review of available information for each Cumulative Project was undertaken using MCC's online planning portal. Relevant ES's or other relevant environmental reports were downloaded for consideration by the project team. Where no environmental reporting was available, professional judgement was used in order to determine any potential in-combination effect.

15.16 Where available, consideration was also given to whether there is likely to be a concurrent construction or operational stage with the Proposed Scheme.

15.17 The sensitive receptors identified for the Proposed Scheme were then cross checked against the receptors identified within the Cumulative Projects. In order for there to be a potential in-combination effect, there needs to be a potential effect on the same receptor for a similar duration within the overall programme (or part of it) for the Proposed Scheme.

15.18 The qualitative evaluation at the receptor level considered the following:

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

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

[d] Informed by the definition of major development by NPPF; the definition of Schedule 1 and Schedule 2 developments set out within the EIA Regulations; and developments that do not fall into the above but have notable implications due to location or scale.

Table 15.1: List of Cumulative Projects for In-Combination Assessment

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
1	115178/FO/ 2017	Eider House, Ducie Street	Erection of 2 linked buildings ranging in height from 8 to 10 storeys (plus roof top plant room) to provide residential accommodation (Use Class C3) comprising 18 x 1 bed, 84 x 2 bed, 15 x 3 bed, 2 x duplex (4 bed) and 9 townhouses (7 x 3 bed, 1 x 2 bed and 1 x 4 bed) (128 units in total) works to create provision for access and servicing, hard and soft landscaping (to include a secure external area and public realm linking Ducie Street to the Rochdale Canal) and associated works following the demolition of existing buildings. Development to include 128 cycle parking spaces.	168m north-west	Approved	No
2	125248/FO/ 2019	Baring Street Office 2	Erection of 13 storey building (including ground and mezzanine) comprising office space (Use Class B1) above flexible uses at ground and mezzanine levels (Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment)/D1 (Art Gallery, Museum and Conference & Training Centre)/D2 (Cinema)/ Theatre (Sui Generis)) with rooftop amenity spaces and external terrace levels, internal ancillary storage spaces for waste, cycles, rooftop plant, back of house functions and associated landscaping works.	650m south	Under construction	Yes
3	127486/FO/ 2020	Baring Street, Manchester	Construction of a 7,11,14 storey building with roof top plant area and basement, comprising office use (Use Class B1) with external terraces above ground floor commercial units (Use Classes A1 and A3); new public realm and landscaping, cycle parking; external plant, access, servicing and work to the highway (Baring Street) and other associated works	600m south-west	Pending determination	No
4	137263/FO/ 2023	Mayfield Manchester:	Erection of 9 storey office development with mezzanine and plant level (Class E) with ground and basement floor retail, cafe and / or restaurant	600m south	Approved	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
		Phase 1, Poulton	and / or gym (Use Class E) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway and associated works.			
5	126669/FO/2020	Islington Wharf Phase 4	Erection of a Part 16/ Part 11 storey building to form 106 no. apartments (C3 Use Class) together with ground floor commercial uses (Use Class A1, A2 A3 and/or B1), with associated ancillary space, surface car parking, landscaping and associated works	189m east/south-east	Under construction	No
6	136874/FO/2023	Echo Street	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	523m south-west	Under construction	Yes
7	137346/FO/2023	Phoenix Ironworks	Erection of a part 5, part 10 storey building comprising residential apartments and townhouses, residents' amenity space (Use Class C3a), ground floor commercial (Use Class E), cycle and car parking, landscaping, access and servicing, and other associated works following demolition of existing structures.	430m north	Under construction	No
8	133769/FO/2022	66 Jersey Street	Erection of two, 8 storey residential buildings (Use Class C3a) with associated ground floor commercial (Use Class E) and ancillary amenity space, together with cycle and car parking, landscaping and public realm and other associated works following demolition of existing structures	442m north-east	Under construction	No
9	122598/FO/2019	New Islington Phase III	Proposed erection of a residential development comprising 34 no. 3 storey dwellinghouses, 2 no. 6 storey apartment blocks comprising 60 no. apartments with commercial space at the ground floor (Use Classes 10A1, A2, A3, A4, B1 and D1) with outdoor seating, all with associated car parking, landscaping, public realm works and boundary treatments	260m north-east	Under construction	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
10	132626/FO/2022	M1 Piccadilly, Store Street	Erection of 15 storey building comprising 54 apartments (Use Class C3) with associated residential facilities (residents lounge and terrace and office space), 2 car parking spaces and 57 cycle parking spaces, landscaping, access and associated development.	175m west	Approved	No
11	133324/FO/2022	Ancoats Works	Erection two, part 8, part 4 storey buildings and refurbishment of the southern part of the Ancoats Works building to Pollard Street to form 183 residential apartments and 10 duplex apartments (Use Class C3a) together with flexible commercial space (Use Class E/Sui Generis) (274 sqm) with associated landscaping, car and cycle parking and associated works following demolition and partial demolition of existing buildings.	580m north-east	Pending determination	No
12	126608/FO/2020	Store Street	Erection of part 4, part 11 storey residential (Class C3) development (with roof top plant room) comprising 66 (Class C3) residential units (3 x 2 bed town houses, 46 x two bed apartments and 17 x one bed apartments) together with associated car parking (10 spaces including 5 EVC spaces), cycle parking (66 spaces) communal roof terrace (level 6), landscaping and ancillary infrastructure including rooftop PV panels, alterations to access onto Store Street.	83m south-west	Under construction	No
13	125712/FO/2019	London Road Fire Station	Refurbishment, restoration, reconfiguration and extension of former London Road Fire Station site to create a mixed use development comprising of hotel (Use Class C1), workspace/office (Use Class B1, D1), commercial floorspace for shop and food and drink uses (Use Classes A1, A3 and A4), residential apartments (Use Class C3) and leisure (Use Class D2), together with access and highways works, servicing, rooftop plant and associated works	560m south-west	Under construction	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
14	121099/FO/2018	Portugal Street East, Manchester	Construction of two residential buildings (Use Class C3) comprising Block 1 (29 storeys) (224 apartments (4 x 1 bed 1 person, 52 x 1 bed 2 person, 64 x 2 bed 3 person and 104 x 2 bed 4 person) 25% 1 bed and 75 % 2 bed) Block 2 (23 storeys) (264 apartments 44 x1 bed 1 person, 44 x 1 bed 2 person, 92 x 2 bed 3 person and 84 x 2 bed 4 person) (33% 1 bed and 67%% 2 bed) with a linked central podium, to deliver 488 units, shared amenity space, 27 car parking spaces, 492 cycle spaces, landscaping (including new public park) , lighting, highways and associated works following demolition of existing buildings and structures.	210m south	Under construction	Yes
15	122000/FO/2018	Victoria House, Great Ancoats Street	Erection of a part 25 part 3 storey residential tower (Use Class C3) for 177 apartments comprising 59 x 1 bed (34 x 1 bed 1 person and 25 1 bed 2 person), 113 x 2 bed (44 x 2 bed 3 person and 69 x 2 bed 4 person) and 5 x 3 bed (3 bed 5 person) with ground floor commercial space (Use Class A1, A2, A3, A4 and D1) above partial basement level associated shared amenity spaces at 3rd floor level, realm enhancements following demolition of existing buildings.	211m south-east	Under construction / close to completion	Yes
16	127317/FO/2020	Land at Heyrod Street, Piccadilly East The Castings	Erection of a part 25 part 21, part 14, part 7 storey building for 352 apartments comprising 39 Studios, 77x 1 bed, 227 x 2 bed and 9 x 3 bed (Use Class C3) with ground floor commercial space within 4 units (494m2) for Class A1 (Shop), A2 (Financial and Professional Services) A3 (Café and Restaurant), A4 (Drinking Establishment), A5 (Hot Food Take Away), B1 (Office) and D1-D2 uses, ancillary indoor and outdoor amenity space (including 1st and 21st floor external areas) car parking for 20 vehicles, cycle parking and associated hard and soft landscaping works, following demolition of existing buildings.	185m south-east	Under construction	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
17	132214/FO/2021	Ferrous	Erection of a 15 storey building to form 107 apartments (Use Class C3) at floors 1 to 15, residential amenity facilities including a roof terrace (level 14), associated ground floor cycle storage (68 spaces), two ground floor commercial units (Use Class E/ Sui Generis (Drinking Establishment), multipurpose events Pavilion (Use Class E/ Sui Generis (Drinking Establishment), associated landscaping to site perimeter and rooftop PV panels.	160m south	Under construction	No
18	128911/FO/2020	32-34 Laystall Street	Erection of 9 storey residential building (Use Class C3) comprising 89 residential units (28 x 1 bed and 61 x 2 bed) and conversion of and 3 storey extension to 32-34 Laystall Street for use as offices (Class E) with associated external works following demolition of outrigger and associated structures along with other associated works including access, servicing, landscaping and secure cycle parking	50m south-west	Under construction	No
19	135662/FO/2022	Laystall Street	Erection of a 20 storey building to create a 154 bedroom hotel (Class C1) above 2 basement levels with ancillary café / bar / restaurant and gym and other associated works including highway improvements, cycle parking and creation of accessible parking bay following removal of on site structures.	35m north	Under construction	No
20	139986/FO/2024	Sparkle Street	Demolition of existing part vacant buildings and erection of a part 10 storey,part 27, part 28 storey residential development comprising 359 homes (Use Class C3) with supporting amenity spaces, and associated highways works, landscaping, plant areas, and other associated works	127m south-west	Pending determination	Yes
21	132489/FO/2021	Affinity Living Port Street	Erection of a part-33, part-11, part 9 part 7 storey residential building above semi-basement level, with associated residents' amenity space including gym (Use Class C3) (comprising 481 dwellings), commercial	240m north-west	Under construction	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
			space (Use Class E), basement car parking (47 spaces), cycle parking (481 spaces) landscaping, and other associated works			
22	135675/FO/2022	Tariff Street Manchester	Erection of two residential apartment buildings (Use Class C3) comprising Block 1 -part 9, part 10 (plus roof level amenity block) and Block 2- 12 storey building (comprising of 261 dwellings in total) above basement levels with ground floor commercial units (Use Class E (excluding E (b)), associated residents amenity space, cycle parking, landscaping, access, street loading and other associated works following demolition of the existing building and structures on site	284m north-west	Approved	No
23	139778/FO/2024	Lever Street, Manchester	Part retention, part demolition of existing buildings on site with retained fabric to form part of 18 storey building plus plant level comprising office space (Use Class E) above ground floor reception area and ancillary uses, 2 basement levels and associated landscaping.	445m north-west	Pending determination	Yes
24	121375/FO/2018	20-36 High Street	Construction of a 22 storey building comprising 361 residential apartments (122 x 1 bed 2 person, 119 x 2 bed 3 person, 94 x 2 bed 4 person, 21 x 3 bed 5 person and 5 x 3 bed 6 person (34% 1 bed, 59% 2 bed and 7% 3 bed) ground floor commercial floorspace (Use Classes A1 (Shop), A3 (Restaurant and Cafe), A4 (Drinking Establishment) and A5 (Hot Food Take-away) associated landscaping, including new public realm and pedestrian route, together with servicing, cycle parking, access and other associated works following demolition of buildings at 20-22 and 24-26 High Street and 5 market stalls to Church Street.	810m north-west	Approved	Yes
25	124495/FO/2019	Land at Great Ancoats Street, Manchester	Erection of a 12 storey building to create a 212-bedroom hotel (Use Class C1) with ancillary facilities at ground and first floor level and associated servicing, disabled car parking, drop-off area, public realm and hard landscaping works, with access from Pollard Street	293m south-east	Approved	No

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
26	124972/FO/2019	Mayfield	Phased creation of circa 2.4 ha (6 acres) of public park, including hard and soft landscaping and new bridges across the River Medlock; erection of 9 storey office development above basement with mezzanine and plant level (Class B1) with ground floor Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment) B1 (Office) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway; erection of 11 storey Multi-Storey Car Park to provide 581 car parking spaces with associated landscaping; highways and infrastructure works including the creation of new junction from London Road to provide access to the multi-storey car park (MSCP) (Use Class Sui Generis); works to Baring Street, stopping up of Bond Street and Nether Street (alongside associated Traffic Regulation Orders to manage unrestricted parking to Buxton Street, Berry Street and Travis Street (to be delivered and implemented prior to the MSCP becoming operational)) alongside enabling works comprising phased demolition and site clearance, earthworks including re-profiling and construction of retaining walls for the land bounded by the Mancunian Way to the south, Mayfield Depot to the north, Baring Street to the west and Hoyle Street to the east.	491m south	Part completed / Under construction	Yes
27	138763/FO/2023	Old Mill Street, Manchester	Erection of a 6 storey building to provide 40 no. (Use Class C3a) and ground floor commercial space (Use Class E), together with landscaping, parking, cycle parking, supporting infrastructure and associated works.	379m north-east	Pending determination	No
28	137794/FO/2023	12 and 14 -16 Piccadilly	Erection of a 34 storey building (land at no. 14-16 Piccadilly) and conversion of adjacent building (no.12 Piccadilly) (basement to fourth floor) to create an aparthotel, including a ground floor cafe (Use Class E (b)), first floor exhibition hall (Use Class F1) and a rooftop bar and restaurant (Use Class E (b)), and associated works.	520m west	Approved	Yes

ID	Planning Ref	Name	Description	Distance From Site	Status	EIA
29	128191/FO/2020 Associated applications: 133841/JO/2022	Land Bounded By Ashton Canal, Great Ancoats Street, Munday Street And Pollard Street Manchester M4 7DS	Erection of five office buildings and new public realm comprising: 3 no. 8 storey mixed use buildings (Buildings A, D and E) comprising workspaces (Use Class E) together with flexible uses at ground floor (Use Class E) and/or theatre/bar (Sui Generis) together with a multi use rooftop amenity area to Building A; and 2 no. 5 storey mixed use buildings (Buildings B and C) comprising workspaces (Use Class E) together with flexible uses at ground floor (Use Class E) and/or theatre/bar (Sui Generis); together with cycle parking, creation of pedestrian and cycle routes, external amenity spaces, new public realm and other associated engineering and infrastructure works.	130m south-east	Approved	No
30	141607/FO/2024	Part Of The Former Central Retail Park Great Ancoats Street Manchester M4 6DJ	141607/FO/2024 | Creation of a new office campus comprising two office buildings (Use Class E), including: North Building comprising ground plus seven storeys (Use Class E) plus up to a total of two storeys of enclosed and exposed rooftop plant; and South Building comprising ground plus six storeys (Use Class E), plus up to a total of two storeys of enclosed and exposed rooftop plant, and also including flexible commercial uses (Use Class E and / or Use Class Sui Generis (p) and (q)) at ground floor and cycle parking; together with basement car parking, landscaping and public realm, servicing and access arrangements, highways alterations and other associated works (including the establishment of new site levels for the proposed new park)	20m north east	Approved	Yes

Assessment of Effect Interactions

15.20 **Table 15.2** and **15.3** detail those receptor categories where residual effects were identified within **Technical Chapters 7 – 14** for the construction and operational stages of the Proposed Scheme, respectively. **Technical Chapters 7 – 14** have each identified specific sensitive receptors within their assessments, and these have been grouped into common categories in **Table 15.2** and **15.3** for further consideration.

15.21 Where effects are reported as significant in **Technical Chapters 7 – 14**, these are shown in **Table 15.2** and **15.3** as **bold** and shaded grey. Where topic chapters are not included, this is because no effects above negligible were identified.

Construction Stage

Table 15.2: Matrix of Effect Interactions (Construction Stage)

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Chapter 7: Townscape and Visual				
Change to townscape character			**Up to moderate adverse to major adverse**	
Change to the character, composition and amenity of views	**Up to major adverse**			
Chapter 8: Built Heritage				
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset				**Moderate adverse**
Chapter 10: Daylight, Sunlight and Overshadowing[e]				
Change in daylight amenity	Up to major adverse[f]			
Change in sunlight amenity	Up to minor adverse[g]			
Chapter 12: Socio-Economics and Human health				
Employment generated during construction	Minor beneficial			
Chapter 13: Climate Change				

[e] **Chapter 10: Daylight, Sunlight and Overshadowing** did not model and report on the effects of the demolition and construction stage as the completion of the Proposed Scheme at operation was considered to represent the worst-case effect assessment scenario. To ensure a worst case effect interactions assessment, the operational stage effects are used as a worst case construction stage effect in **Table 15.2**.
[f] Major adverse at Oxygen only. Other receptors will experience negligible to minor adverse effects.
[g] Negligible to minor adverse effects were reported at receptors.

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Greenhouse gas emissions		Minor adverse		
Chapter 14: Noise and Vibration				
Construction noise	Up to moderate adverse[h]			
Construction vibration	Up to minor adverse[i]			
Effect Interaction:	**YES**	**NO**	**NO**	**NO**

15.22 No effects above negligible were reported for **Chapter 9: Wind** and **Chapter 11: Solar Glare** during the construction stage and therefore these chapters are excluded from **Table 15.2**.

15.23 As shown in **Table 15.2**, there were residual effects reported to the 'population and human health'; 'climate'; 'landscape'; and 'cultural heritage' receptor groups during the construction stage. There are no effect interactions reported for the climate; landscape and cultural heritage receptor group as there is only one effect reported in these groups. Therefore, only effect interactions to the population and human health receptor group have been considered further.

15.24 The following residual effects were reported in the population and human health group during the construction stage:

- Change to the character, composition and amenity of views;
- Change in daylight amenity;

[h] Moderate adverse at the residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street only.

[i] Minor adverse at the residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street only.

- Change in sunlight amenity;
- Employment generated during construction;
- Construction noise; and
- Construction vibration.

15.25 All effects reported during the construction stage are adverse, with the exception of employment generation which is beneficial.

15.26 Given the urban context of the Site, the concentration of receptors within a small geographical area, the environmental effects considered within **Technical Chapters 7 – 14** and the breadth of receptors within the population and human health receptor category, an effect interaction during the construction stage is not uncommon or unexpected.

15.27 Following analysis of the construction stage effects listed above, the common sensitive receptors are noted to comprise existing residents ('static' receptors) and individuals / groups travelling in the surrounding area (e.g. road users, pedestrians, etc.) ('transient' receptors), as well as the labour force. There is the possibility for both static and transient receptors to experience the effects listed above concurrently. However it is noted that the change in daylight and sunlight amenity and construction noise and vibration are only relevant for receptors in close proximity to the Site. Whereas the change in visual amenity is considered on a wider scale (1km) and the employment generated during construction on an even wider scale (Manchester City and Greater Manchester). Therefore, effect interactions are most likely within the immediate vicinity of the Site.

15.28 Within the immediate vicinity of the Site, the Oxygen building was noted to experience significant adverse effects from construction noise and vibration and reduced daylight. The significant loss of daylight is a worst case scenario informed by the operational assessment (i.e. when the massing is at its greatest).

15.29 Overall, there is some potential for temporary effect interactions during the construction stage, though these are not anticipated to be greater than the level of effect reported in isolation (**Table 15.2**) due to the temporary nature and local scale.

Operational Stage

Table 15.3: Matrix of Effect Interactions (Operation Stage)

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Chapter 7: Townscape and Visual				
Change to townscape character			**Minor beneficial – moderate to major beneficial**	
Change to the character, composition and amenity of views	Minor beneficial to **major beneficial**[j]			
Chapter 8: Built Heritage				
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset				**Moderate adverse**
Chapter 9: Wind				
Exceedance of the industry standard Lawson criteria for pedestrian comfort	**Up to moderate adverse**[k]			
Chapter 10: Daylight, Sunlight and Overshadowing				
Change in daylight amenity	Up to major adverse[l]			

[j] Effects are significant at all viewpoints with the exception of Viewpoint 9 and Viewpoint 11 on Great Ancoats Street.
[k] Moderate adverse and significant at Entrances along Ducie Street only. Other receptors will experience negligible to minor adverse effects which are not significant.
[l] Major adverse at Oxygen only. Other receptors will experience negligible to minor adverse effects.

Effect	Population and Human Health	Climate	Landscape	Cultural Heritage
Change in sunlight amenity	Up to minor adverse[m]			
Chapter 11: Solar Glare				
Solar glare	**Up to moderate adverse[n]**			
Chapter 12: Socio-Economics and Human health				
Provision of housing	Major beneficial			
Chapter 13: Climate Change				
Greenhouse gas emissions		Minor adverse		
Chapter 14: Noise and Vibration				
Plant noise from Proposed Scheme	Minor adverse			
Effect Interaction:	**YES**	**NO**	**NO**	**NO**

15.30 As shown on **Table 15.2**, there were residual effects reported to the 'population and human health'; 'climate'; 'landscape'; and 'cultural heritage' receptor groups during the operation stage. There are no effect interactions reported for the climate and cultural heritage receptor groups as there is only one effect reported in these groups. Therefore, only effect interactions to the population and human health receptor group have been considered further.

15.31 The following residual effects were reported in the population and human health group during the construction stage:

[m] Negligible to minor adverse effects were reported at receptors.

[n] Moderate adverse and significant for road users at Old Mill Street junction with Weybridge Street and Old Mill Street junction with Great Ancoats Street. Minor to moderate adverse and significant for road users at Old Mill Street pedestrian crossing. Minor adverse to negligible and not significant at other receptors.

- Change to the character, composition and amenity of views;
- Exceedance of the industry standard Lawson criteria for pedestrian comfort;
- Change in daylight amenity;
- Change in sunlight amenity;
- Solar glare;
- Provision of housing; and
- Plant noise from Proposed Scheme.

15.32 The above effects are largely adverse, with the exception of the provision of housing and the change to views which are beneficial.

15.33 As noted for the construction stage above, given the urban context of the Site, the concentration of receptors within a small geographical area, the environmental effects considered and the breadth of receptors within the population and human health receptor category, an effect interaction during the operational stage is not uncommon or unexpected.

15.34 Following analysis of the operational stage effects identified above, the common sensitive receptors comprise existing and future residents ('static' receptors) and individuals / groups travelling through the Site and surrounds (e.g. road users, pedestrians, etc) ('transient' receptors), as well as people requiring housing.

15.35 There is the possibility for both static and transient receptors to experience a combination of these concurrently. There is also the potential for static receptors to become transient receptors and experience the effect interactions sequentially. For instance, an individual travelling on Old Mill Street experiencing solar glare and changes in views.

15.36 The above-mentioned effects could also interact with the beneficial effects expected to be experienced by people requiring housing. However, effect interactions with the above are considered unlikely given the geographical extent of these receptors (e.g. across Manchester).

15.37 Overall, there is likely to be an effect interaction on both static and transient receptors. The occurrence of effect interactions will be linked to the types of effects occurring, the proximity of the receptors and their sensitivity. Effect interactions during the operational stage are

considered to be long-term and permanent. Due to the number of effects and how they may interact, any effect interaction is likely to be greater than the effects individually. Given the levels and significance of the effects that contribute to an effect interaction on receptors within the population and human health receptor category, the effect interactions are perceived to be significant (as some of the effects individually are significant).

Assessment of In-Combination Effects

15.38 Cumulative Projects identified for the assessment of in-combination effects are detailed in **Table 15.1** and shown on **Figure 15.1**. The assessment of in-combination effects is set out below on a topic by topic basis.

Townscape and Visual

15.39 Cumulative Projects which have planning consent but have not yet started construction have been pinpointed within a 1km radius of the Site. However, not all of those Cumulative Projects will be of sufficient scale or mass to have a cumulative effect. The bulk of those schemes which are of a sufficient height and mass to be visible in the 16 Representative Viewpoints (see **Chapter 7: Townscape and Visual**) have been modelled and shown as wirelines in the Cumulative Views in **Appendix 7.1**. **Table 15.4** below summarizes the cumulative effect.

Table 15.4: Townscape and Visual In-Combination Assessment

Viewpoint	Relevant Cumulative Project	In-combination Assessment Text	Is the In-combination effect identified Significant
1	(12) Store street, (10) M1 Piccadilly, (20) Sparkle Street, (22) Tarriff Street, (19) Laystall Street, (28) 12, 14-16 Piccadilly, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that populate the horizon. The magnitude of change values diminish as a consequence to minor for both category of receptor with a commensurate slight reduction in significance of effect to minor beneficial significance of effect for both categories. The effects will be direct, permanent and long term.	YES
2	(20) Sparkle Street, (12) Store street, (10) M1 Piccadilly, (27) Old Mill Street.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that rise above Store Street and also in the foreground. The magnitude of change values diminish as a consequence to for both category of receptor with a commensurate slight reduction in significance of effect to moderate beneficial significance of effect for visual receptors and minor beneficial of effect for townscape receptors. The effects will be direct, permanent and long term.	NO

Viewpoint	Relevant Cumulative Project	In-combination Assessment Text	Is the In-combination effect identified Significant
3	(14) Portugal Street East, (16) The Castings, (19) Laystall Street, (28) 12, 14-16 Piccadilly, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that populate the horizon but only in a minor way as the Proposed Scheme remains the dominant feature of the view and the cumulative schemes are very much peripheral. The magnitude of change values will remain unchanged therefore and the significance of effect also. The effects will be direct, permanent and long term.	YES
4	(14) Portugal Street East, (19) Laystall Street, (20) Sparkle Street, (18) 32-34 Laystall Street, (29) Munday and Pollard Street, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that populate the horizon and the magnitude of effect will diminish as a result. The magnitude of change values will change to medium and beneficial which will reduce the significance of effect value to minor beneficial for both categories. The effects will be direct, permanent and long term.	NO
5	(14) Portugal Street East, (18) 32-34 Laystall Street, (29) Munday and Pollard Street, (19) Laystall Street, (20) Sparkle Street, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that populate the horizon and the magnitude of effect will diminish as a result. The magnitude of change values will change to medium and beneficial which will reduce the significance of effect value to moderate beneficial for both categories. The effects will be direct, permanent and long term.	YES
6	Elder House.	The Cumulative Projects in this case will completely obscure the view from this viewpoint so the magnitude of change value	NO

Viewpoint	Relevant Cumulative Project	In-combination Assessment Text	Is the In-combination effect identified Significant
		for both categories will fall to no change and the significance of effect will fall to negligible. The effect will be direct, permanent and long term.	
7	(12) Store street, (27) Old Mill Street, (19) Laystall Street, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that populate the horizon and the magnitude of effect will diminish as a result. The magnitude of change values will change to medium and beneficial which will reduce the significance of effect value to moderate beneficial for both categories. The effects will be direct, permanent and long term.	YES
8	(12) Store street, (10) M1 Piccadilly, (19) Laystall Street, (20) Sparkle Street, (30) Manchester Digital Campus.	Both townscape and visual receptors will be affected by the range of Cumulative Projects that line Store Street, especially those in the foreground. The magnitude of change values will change to medium and beneficial which will reduce the significance of effect value to moderate beneficial for both categories. The effects will be direct, permanent and long term.	YES
9	(25) Great Ancoats Street.	Both townscape and visual receptors will be affected by the Great Ancoats scheme here which occupies and domination position in the foreground. The magnitude of change values will reduce to negligible and beneficial in these circumstances which will reduce the significance of effect value to negligible beneficial for both categories. The effects will be direct, permanent and long term	NO
10	(29) Munday and Pollard Street.	The Cumulative Project in this case, Munday and Pollard Street, will completely obscure the view from this viewpoint so the magnitude of change value for both categories will fall to no change and the significance of effect will fall to negligible. The effect will be direct, permanent and long term.	NO

Viewpoint	Relevant Cumulative Project	In-combination Assessment Text	Is the In-combination effect identified Significant
11	(19) Laystall Street, (23) Lever Street.	The Lever Street scheme will have a dramatic effect on both receptor categories and lead to a reduction in magnitude of change values of small beneficial This will lead to a commensurate reduction of significance of effect to minor beneficial effect for both receptor categories. The effect will be direct, permanent and long term.	NO
12	(12) Store street, (10) M1 Piccadilly, (19) Laystall Street, (20) Sparkle Street, (23) Lever Street, (30) Manchester Digital Campus.	The Cumulative Projects will have no real effect in this view as the Proposed Scheme is so close to the viewpoint. Magnitude and significance values remain the same at moderate beneficial for both categories. The effect will be direct, permanent and long term.	YES
13	(28) 12, 14-16 Piccadilly.	The Cumulative Projects will have no real effect in this view as the Proposed Scheme is so close to the viewpoint. Magnitude and significance values remain the same at moderate beneficial for both categories. The effect will be direct, permanent and long term.	YES
14	(27) Old Mill Street.	The Cumulative Projects will have no real effect in this view as the Proposed Scheme is so close to the viewpoint. Magnitude and significance values remain the same at large and moderate beneficial for both categories. The effect will be direct, permanent and long term.	YES
15	(19) Laystall Street, (20) Sparkle Street, (22) Tarriff Street, (16) The	The Cumulative Projects will have no real effect in this view as the Proposed Scheme is so close to the viewpoint and occupies a prominent position. Magnitude and significance values remain the same for both categories at large and major beneficial. The	YES

Viewpoint	Relevant Cumulative Project	In-combination Assessment Text	Is the In-combination effect identified Significant
	Castings, (28) 12, 14-16 Piccadilly, (30) Manchester Digital Campus.	effect will be direct, permanent and long term.	
16	(12) Store street, (16) The Castings,	There are no cumulative effects from this viewpoint so all values stay the same.	YES

Built Heritage

15.40 The Proposed Scheme has been assessed alongside a number of Cumulative Project's and there have been no significant effects identified.

Wind

15.41 As explained further in **Chapter 9: Wind**, a quantitative wind tunnel testing has been undertaken to consider cumulative effects for operational stage. This includes an assessment of the Cumulative Projects that fall within the wind microclimate study area alongside the Proposed Scheme. This subset of Cumulative Projects is listed in Section 2.5 of **Appendix 9.1** and contains those that fall within 450m of the approximate centre of the Site. Cumulative Projects currently under construction that have been included in the existing surrounds configuration are:

Table 15.5: Cumulative Projects Under Construction

Development Name	Planning Reference
Victoria House	122000/FO/2018
The Castings	127317/FO/2020
The Fairfax	121099/FO/2018
Store Street	126608/FO/2020
Sligo House	128911/FO/2020
One Port Street	132489/FO/2021
1NQ	135675/FO/2022

15.42 Cumulative Projects that have been considered within the cumulative surrounds scenario are:

Table 15.6: Cumulative Projects Included in the Assessment

Development Name	Planning Reference
Electric Park	128191/FO/2020
M1 Piccadilly	132626/FO/2022
Motto Hotel	135662/FO/2022
Eider House	115178/FO/2017

15.43 Cumulative Projects in **Table 15.7** have been excluded from the cumulative surrounds scenario. The exclusion of these Cumulative Projects is expected to have an immaterial effect on wind conditions, as they are not located in the prevailing wind direction and are sufficiently separated from the Site by existing surrounding buildings.

Table 15.7: Cumulative Schemes Excluded from the Assessment

Development Name	Planning Reference
Ferrous	132214/FO/2021
Land at Great Ancoats Street, Manchester	124495/FO/2019

15.44 Other Cumulative Projects are sufficiently far from the Proposed Scheme that potential cumulative effects will be negligible and do not warrant consideration within the assessment.

15.45 The results of this modelling exercise are presented in detail in **Figures 4.9** to **4.12** of **Appendix 9.1**. Following the introduction of the Cumulative Projects, conditions in and around the Site remain broadly the same as they do within the context of existing surroundings. Cumulative effects are therefore judged to be negligible.

15.46 At the time of the current modelling campaign, Cumulative Project 30 (141607/FO/2024) was not part of the cumulative development scenario as it was not known to have received planning approval. Being 150m north-northwest of the Proposed Scheme, cumulative effects between the Proposed Scheme and Cumulative Project 30 are not expected to be detrimental to either. Specifically, there may be a minor increase in the speed of westerly or easterly winds passing between the two developments, but these are not sufficiently relevant to either scheme for a mild increase of this nature to be of note. Conditions in the vicinity of the Proposed Scheme, will benefit from additional shelter from the north-northwest, while further effects on Cumulative Project 30 would be limited to a small beneficial effect as a result of a modest increase to the level of shelter provided for southerly winds. Additional cumulative effects as a result of this scheme would not, therefore, be significant.

Daylight, Sunlight and Overshadowing

15.47 Cumulative Projects which are already under construction and in sufficient proximity to the Site have been included in the existing baseline and, where appropriate, the effect

of the Proposed Scheme upon their daylight and sunlight amenity has been assessed in **Chapter 10: Daylight, Sunlight and Overshadowing**.

15.48 Cumulative Projects 1 and 10 have been identified as having common receptors with the Proposed Scheme. The same 2281 Site facing windows serving 1331 rooms within 21 buildings (the receptors assessed in **Chapter 10: Daylight, Sunlight and Overshadowing**) have been assessed for VSC and NSL for daylight, whilst 195 rooms were assessed for APSH for sunlight within the 12 buildings which are material for consideration in sunlight terms i.e. their windows are orientated to within 90^0 of due south.

15.49 The detailed assessment results can be found in **Appendix 10.2** and show that, in combination with Cumulative Projects 1 and 10. There will be a small decrease in compliance which will result in Jutland House being affected to a minor adverse rather than negligible extent. The effect on all other properties remains the same.

15.50 Whilst adding the Cumulative Project 30 to the in combination assessments is likely to change the assessment results, in view of its level of massing and its location relative to the surrounding sensitive receptors, these changes are likely to be marginal and so they will not affect the conclusions of the assessment as they are currently reported.

15.51 The locations, heights and massing levels of all of the other Cumulative Projects are, based on professional judgement, considered unlikely to create any in-combination effect with the Proposed Scheme in terms of daylight and sunlight.

Solar Glare

15.52 The Proposed Scheme in isolation represents the worst-case assessment in terms of likely solar glare effects. This is because neighbouring Cumulative Projects have the potential to block sunlight reaching the façades of the Proposed Scheme and/or obscure the Proposed Scheme from the viewpoints assessed. Where Cumulative Projects are under construction and may be visible within a driver's field of view, which is the case for the following Cumulative Projects, their completed form has been included within the 3D model as massing only, reflections from these Cumulative Projects are not considered:

- Islington Wharf Phase 4 (Cumulative Project 5)
- New Islington Phase III (Cumulative Project 9)
- Store Street (Cumulative Project 12)
- Victoria House, Great Ancoats Street (Cumulative Project 15)
- Land at Heyrod Street, Piccadilly East The Castings (Cumulative Project 16)
- Ferrous (Cumulative Project 17)
- 32-34 Laystall Street (Cumulative Project 18)
- Laystall Street (Cumulative Project 19)

- Affinity Living Port Street (Cumulative Project 21)

Socio-Economics and Human Health

Construction Stage

15.53 The construction stage of all Cumulative Projects may overlap with the Proposed Scheme in terms of timescales. In-combination effects with the relevant construction stage receptor (labour force in the local and wider impact areas) are therefore likely, as outlined below:

- **Employment generated (high sensitivity):** All Cumulative Projects will generate employment in the construction sector. In-combination effects with the relevant construction stage receptor (labour force in the local and wider impact areas) are therefore likely as a result of employment generated. The combined magnitude of change is anticipated to be large. This cumulative beneficial effect is considered to be temporary, medium-term and Major. This will exceed the level of effect (Minor) considered at the project level (**Chapter 12: Socio-Economics and Human Health**). The cumulative effect is **Significant**.

Operational Stage

15.54 The operational stage of all Cumulative Projects will overlap with the Proposed Scheme in terms of timescales. In-combination effects with the relevant operational stage receptors (people requiring housing in the local impact area) are therefore likely, as outlined below:

- **Provision of housing (high sensitivity):** The majority of Cumulative Projects will provide housing (the exceptions being 2 3, 4, 6, 13, 23, 25, 26, 28, 29 and 30). In total, it is understood that Cumulative Projects will deliver a combined c. 3,850 homes. In-combination effects with the relevant operational stage receptor (people requiring housing in the local impact area) are therefore likely as a result of the provision of housing. The combined magnitude of change is anticipated to be large. This cumulative beneficial effect is considered to be permanent, long-term and Major. This is comparable to the level of effect (Major) considered at the project level (**Chapter 12: Socio-Economics and Human Health**). This effect is **Significant**, as it is at the project level.

Climate Change

15.55 The atmospheric concentration of greenhouse gases (GHGs) and resulting effect on climate change is affected by all sources and sinks globally, anthropogenic and otherwise. As GHG emissions impacts and resulting effects are global rather than affecting one localised area, the approach to cumulative effects assessment for GHGs differs from that for many EIA topics where only projects within a geographically bounded study area would be included.

15.56 For example, air pollutants are dispersed and diluted after being emitted and only the cumulative contributions of other relatively nearby sources contribute materially to the pollutant concentration, and hence effect, at a particular sensitive receptor in the study area. Due to the persistence of GHGs in the atmosphere, that same dispersion effect contributes to the global atmospheric GHG emissions balance. There is no

greater local climate change effect from a localised impact of GHG emission sources (or vice versa).

15.57 For this reason, IEMA's GHG in EIA guidance[7] states that effects of GHG emissions from specific cumulative projects should not in general be assessed. Instead, the contextualisation of GHG emissions from the Proposed Scheme within the context of current and future baseline GHG emissions at various specific geographical levels (i.e. local authority, region and UK) is inherently a cumulative assessment within that boundary.

Noise and Vibration

15.58 No common receptors have been between the Proposed Scheme and Cumulative Projects 1, 2, 3, 4, 6, 7, 8, 9, 11, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28 and as such no in-combination effect is anticipated.

15.59 For the remaining Cumulative Projects where there are common receptors (Cumulative Projects 5, 10, 12, 18, 19, 29 and 30), the potential construction and operational stage in-combination effects have been considered.

15.60 During construction there are not anticipated to be any in-combination effects with the Proposed Scheme due to either there being no concurrent construction stage with the Proposed Scheme or due to distances between the Cumulative Project, Proposed Scheme and receptors.

15.61 During operation there is the potential for in-combination effects from mechanical services plant noise. However where Cumulative Projects have common receptors with the Proposed Scheme, the mechanical services plant noise is not expected to increase in-combination due to screening proposed through the Cumulative Projects and the location to receptors.

15.62 Overall, none of the Cumulative Projects are located close enough or directly in line with the sensitive receptors for the cumulative effects to be significant.

Summary

15.63 The assessment of cumulative effects considered effect interactions (where more than one effect is experienced by a single receptor) and in-combination effects (where effects on a receptor may combine with those of other projects in the locale).

Effect Interactions

15.64 The assessment of effect interactions, which considers multiple effects generated by the Proposed Scheme impacting upon the same receptor, identified that effect interactions would be experienced by the 'population and human health' factors / receptor groups for the construction and operational stages.

15.65 At the construction stage, there is a possible effect interaction to the population and human health factor / receptor group, specifically beneficial socio-economic and human health effects (i.e. the generation of employment); the adverse change in visual amenity from construction stage activities; the adverse effect of reduced daylight and sunlight; and the adverse effect of noise and vibration from construction activities.

However, the construction stage will be temporary (medium-term), and the effects will be experienced differently (e.g. beneficial and adverse effects). As a worst case, any effect interaction is considered to align with the worst case level of effect reported in isolation (which is major adverse and significant from the change in visual amenity, but note that this is only for certain receptors).

15.66 During the operational stage of the Proposed Scheme, there is also a possible effect interaction to the population and human health factor / receptor group in relation to the adverse effects of reduced daylight and sunlight amenity; wind conditions; solar glare; and plant noise (albeit these effects ranged for different receptors) and beneficial changes to views and provision of housing. The interactions are likely to be greater than the effects individually, which are perceived to be significant (as some of the effects individually are significant).

In-Combination Effects

15.67 The assessment of in-combination effects considered 30 Cumulative Projects on a technical topic by topic basis (i.e. **Technical Chapters 7 – 17**).

15.68 A summary of the evaluation of in-combination effects is provided within **Table 15.8.**

15.69 Where a greater in-combination effect is identified and is considered to be Significant, this has been highlighted in grey**.**

Table 15.8: Summary of In-Combination Effects

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Townscape and visual	A number of the Cumulative Projects will be visible in some of the viewpoints. This is significant for Viewpoints 1, 3, 5, 7, 8, 12, 13, 14, 15, 16.
Built Heritage	The Proposed Scheme has been assessed alongside a number of Cumulative Project's and there have been no significant effects identified.
Wind	Relevant Cumulative Projects within the study area of 450m have been modelled and wind conditions around the Site remain broadly the same as they do within the context of existing surroundings. Therefore there is no cumulative effect.
Daylight, Sunlight and Overshadowing	There are only common receptors with Cumulative Projects 1 and 10. The cumulative effects of the Proposed Scheme with these Cumulative Projects has been modelled which found there will be a small decrease in compliance which will result in Jutland House being affected to a minor adverse rather than negligible extent. There is no cumulative effect on any other receptors. Effects of Cumulative Project 30 would be marginal and not alter the conclusions.

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Solar Glare	The Proposed Scheme in isolation represents the worst-case assessment in terms of likely solar glare effects, as Cumulative Projects could block reflections. Therefore the assessment of the Proposed Scheme in isolation represents the worst case cumulative effect. This is significant only at Old Mill Street junction with Weybridge Street; Old Mill Street pedestrian crossing; and Old Mill Street junction with Great Ancoats Street.
Socio-Economics and Human Health	All Cumulative Projects will generate employment in the construction sector, which in-combination with the Proposed Scheme would generate a greater effect than for the Proposed Scheme in isolation, which is significant (beneficial). The majority of Cumulative Projects will provide housing, which in-combination with the Proposed Scheme would be also be significant (beneficial)
Climate Change	All global cumulative GHG sources are relevant to the effect on climate change, which is taken into account when defining the global climatic system receptor as being of high sensitivity to further emissions in **Chapter 13: Climate Change**. Therefore, the cumulative effect remains as reported in **Chapter 13: Climate Change**, which is not significant.
Noise and Vibration	None of the Cumulative Projects are located close enough or directly in line with the sensitive receptors for the cumulative effects to be significant.

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) [Accessed: 11/12/2024].
[2] https://pa.manchester.gov.uk/online-applications/
[3] https://infrastructure.planninginspectorate.gov.uk/projects/register-of-applications/.
[4] https://www.gov.uk/government/collections/twa-inspector-reports-and-decision-letters.
[5] https://www.parliament.uk/business/bills-and-legislation/current-bills/hybrid-bills/.
[6] East Village Central Development Framework. Manchester Picadilly SRF Addendum – November 2022. 10359-SHP-RP-03. Available at: East_Village_Final_Accessible.pdf
[7] IEMA (2022). EIA Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance

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Site Boundary

1km radius

Cumulative Project

Map Ref	Name
1	Eider House, Ducie St (115178/FO/2017)
2	Baring Street Office 2(125248/FO/2019)
3	Baring St (127486/FO/2020)
4	Mayfield Manchester: Phase 1 (137263/FO/2023)
5	Islington Wharf Phase 4 (126669/FO/2020)
6	Echo Street (136874/FO/2023)
7	Phoenix Irownworks (137346/FO/2023)
8	66 Jersey Street (133769/FO/2022)
9	New Islington Phase III (122598/FO/2019)
10	M1 Piccadilly, Store Street (132626/FO/2022)
11	Ancoats Works (133324/FO/2022)
12	Store Street (126608/FO/2020)
13	London Road Fire Station (125712/FO/2019)
14	Portugal Street East (121099/FO/2018)
15	Victoria House (122000/FO/2018)
16	The Castings (127317/FO/2020)
17	Ferrous (132214/FO/2021)
18	32 -34 Laystall Street (128911/FO/2020)
19	Laystall Street (135662/FO/2022)
20	Sparkle Street (139986/FO/2024)
21	Affinity Living, Port Street (132489/FO/2021)
22	Tariff Street (135675/FO/2022)
23	Lever Street (139778/FO/2024)
24	20-36 High Street (121375/FO/2018)
25	Land at Great Ancoats Street, Manchester (124495/FO/2019)
27	Old Mill Street (138763/FO/2023)
28	12 and 14-16 Piccadilly (137794/FO/2023)
29	Land Bounded By Ashton Canal, Great Ancoats Street, Munday Street And Pollard Street (128191/FO/2020)
30	Part Of The Former Central Retail Park (141607/FO/2024)

CLIENT:
Liquid Business (Manchester) Limited

PROJECT:
Stocktons

DRAWING:
Cumulative Project Plan

PROJECT NUMBER:
CLIM3002

DRAWING NUMBER:
Figure 15.1

CHECKED BY:
SM

REVISION:
1.0

STATUS:
Final

DATE:
February 2025

SCALE:
1:1 @ A3

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EIA

16. Summary

Introduction

16.1 The purpose of this Chapter is to provide a summary of the outcome of the assessments reported within **Technical Chapters 7 – 14**, focussing on the following key objectives:

- Provide a summary of residual and likely significant effects; and
- Provide a summary of the assessment of cumulative effects, including how they differ from effects identified for the Proposed Scheme in isolation and conclude if these are significant or not.

16.2 Through delivering these objectives, MCC should have sufficient information on environmental impacts to inform their decision-making process.

16.3 The residual effects defined within this Chapter rely upon the implementation of the mitigation set out within **Volume 3: Environmental Management Plan**. This is critical as the project team have developed detailed mitigation in order to avoid, resolve or off-set impacts. Without the implementation of **Volume 3: Environmental Management Plan**, the conclusions of the ES may change.

Summary of Residual and Significant Effects

16.4 Each of the **Technical Chapters 7 – 14** reports the output of the assessment through residual and likely significant effects, inclusive of a summary. All likely residual effects across the ES are summarised for both the construction and operation stages in **Table 16.1** and **Table 16.2**, respectively.

16.5 Where Technical Chapters have identified individual level of effects for specific sensitive receptors for an assessed effect, each level of significance concluded has been stated in **Table 16.1** and **Table 16.2** and the greatest level of impact has been considered when considering the effects as a whole (i.e. to all receptors).

16.6 Where effects were identified to be significant, this is indicated by the text being in **bold/shaded grey**. The effects are coloured red where adverse; green where beneficial; or in automatic / normal text where the effect is negligible.

Table 16.1: Summary of Residual Effects their Significance During Demolition and Construction

Potential Effect	Receptor	Residual Effect
Chapter 7: Townscape and Visual		
Change to townscape character	Zone C Piccadilly Viewpoints 6, 7, 13, 14 and 16	**Moderate adverse** to **major adverse**
	Zone D Eastern Gateway Viewpoint 8	**Moderate adverse**
	Zone G Ancoats Viewpoints 11 and 15	**Moderate adverse** to **major adverse**
	Zone H New Islington Viewpoints 1, 3, 4, 5 and 12	**Moderate adverse** to **major adverse**
	Zone I Miles Platting Viewpoint 2	Minor adverse
	Zone J Medlock Valley Viewpoints 9 and 10	Minor adverse to moderate adverse
Change to the character composition and amenity of views	Viewpoint 1 Old Mill Street	**Moderate adverse**
	Viewpoint 2 Old Mill Street	Minor adverse
	Viewpoint 3 New Islington Basin	**Major adverse**
	Viewpoint 4 Rochdale Canal	**Major adverse**
	Viewpoint 5 Great Ancoats Street	**Minor** to **moderate adverse**
	Viewpoint 6 Vantage Quay Bridge	**Major adverse**
	Viewpoint 7 Rochdale Canal	**Major adverse**

Potential Effect	Receptor	Residual Effect
	Viewpoint 8 Store Street	**Moderate adverse**
	Viewpoint 9 Great Ancoats Street	Minor adverse
	Viewpoint 10 Pollard Street	**Moderate adverse**
	Viewpoint 11 Great Ancoats Street	**Moderate adverse**
	Viewpoint 12 Old Mill Street	**Moderate adverse**
	Viewpoint 13 Store Street	**Moderate adverse**
	Viewpoint 14 Store Street	**Moderate adverse**
	Viewpoint 15 Redhill Street	**Major adverse**
	Viewpoint 16 Ducie Street	**Moderate adverse**
Chapter 8: Built Heritage		
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset	Stocktons Site (non-designated heritage asset)	**Moderate adverse**
Chapter 9: Wind		
No construction stage effects scoped in for assessment.		
Chapter 10: Daylight, Sunlight, and Overshadowing		
This is represented by the operational assessment in **Table 16.2.**		
Chapter 11: Solar Glare		
This is represented by the operational assessment in **Table 16.2.**		
Chapter 12: Socio-Economics and Human Health		

Potential Effect	Receptor	Residual Effect
Employment generated during construction	Labour force in Manchester City and Greater Manchester	Minor beneficial
Chapter 13: Climate Change		
Greenhouse gas emissions	Global climate system	Minor adverse
Chapter 14: Noise and Vibration		
Construction noise	Residential apartment building to the north-west on Ducie Street	Negligible
	Residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street	Moderate adverse
Construction vibration	Residential apartment building to the north-west on Ducie Street	Negligible
	Residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street	Minor adverse

Table 16.2: Summary of Residual Effects and their Significance During Operation

Potential Effect	Receptor	Residual Effect
Chapter 7: Townscape and Visual		
Change to Townscape character	Zone C Piccadilly Viewpoints 6, 7, 13, 14 and 16	**Moderate beneficial** to **major beneficial**

Potential Effect	Receptor	Residual Effect
	Zone D Eastern Gateway Viewpoint 8	**Moderate beneficial**
	Zone G Ancoats Viewpoints 11 and 15	**Moderate beneficial** to **major beneficial**
	Zone H New Islington Viewpoints 1, 3, 4, 5 and 12	**Moderate beneficial** to **major beneficial**
	Zone I Miles Platting Viewpoint 2	Minor beneficial
	Zone J Medlock Valley Viewpoints 9 and 10	Minor beneficial to moderate beneficial
Change to the character composition and amenity of views	Viewpoint 1 Old Mill Street	**Major beneficial**
	Viewpoint 2 Old Mill Street	**Moderate beneficial**
	Viewpoint 3 New Islington Basin	**Major beneficial**
	Viewpoint 4 Rochdale Canal	**Major beneficial**
	Viewpoint 5 Great Ancoats Street	**Minor** to **Moderate beneficial**
	Viewpoint 6 Vantage Quay Bridge	**Major beneficial**
	Viewpoint 7 Rochdale Canal	**Major beneficial**
	Viewpoint 8 Store Street	**Moderate beneficial**
	Viewpoint 9 Great Ancoats Street	Minor beneficial
	Viewpoint 10 Pollard Street	**Moderate beneficial**
	Viewpoint 11 Great Ancoats Street	Minor beneficial

Potential Effect	Receptor	Residual Effect
	Viewpoint 12 Old Mill Street	**Moderate beneficial**
	Viewpoint 13 Store Street	**Moderate beneficial**
	Viewpoint 14 Store Street	**Moderate beneficial**
	Viewpoint 15 Redhill Street	**Major beneficial**
	Viewpoint 16 Ducie Street	**Moderate beneficial**
Chapter 8: Built Heritage		
Direct (fabric loss) and Indirect (compromise of setting) changes to non-designated heritage asset	Stocktons Site (non-designated heritage asset)	**Moderate adverse**
Chapter 9: Wind		
Exceedance of the industry standard Lawson criteria for pedestrian safety	All receptor locations	Negligible
Exceedance of the industry standard Lawson criteria for pedestrian comfort[a]	Thoroughfares at the east of Building B (Location 56)	Minor adverse
	An entrance at the east of Building B (Location 57)	Minor adverse
	Recreational spaces at ground level (Locations 52, 55 and 91)	Negligible
	Recreational spaces at ground level (Location 53 and 54)	Minor adverse

[a] See **Appendix 9.1** for the position of the locations.

Potential Effect	Receptor	Residual Effect
	Recreational spaces on Building B terrace (Location 116, 117 and 118)	Negligible
	Outdoor seating at the northwest of Building A (Locations 50, 51 and 92)	Negligible
	A thoroughfare on Ducie Street (Location 69)	Minor adverse
	An entrance along Ducie Street (Location 77)	Negligible
	Entrances along Ducie Street (Location 72)	Minor adverse
	Entrances along Ducie Street (Location 68)	**Moderate adverse**
	An entrance along Ducie Street (Location 75)	Negligible
	Thoroughfares (Locations 1, 3, 5, 6, 7, 9, 10, 14, 15, 16 17, 18, 20, 21, 23, 25, 26, 27, 28, 30, 31, 32, 33, 34, 38, 39, 40, 42, 43, 45, 46, 47, 58, 59, 60, 61, 62, 63, 64, 66, 70, 71, 73, 74, 76, 78, 80, 81, 82, 83, 84, 85, 86, 87, 89, 93, 96, 97)	Negligible
	Entrances (Locations 2, 4, 8, 22, 36, 37, 44, 88, 94, 95)	Negligible
	Recreational spaces (Locations 11, 12, 13, 48, 49, 90, 102, 103)	Negligible
	Car parks / roads (Locations 19, 24, 29, 35, 41, 65, 67, 79)	Negligible
	Viewing balconies (Locations 101, 119, 120)	Negligible

Potential Effect	Receptor	Residual Effect
Chapter 10: Daylight, Sunlight, and Overshadowing		
Change in daylight amenity	Oxygen	Major adverse
	47 Ducie Street	Negligible
	Quantum	Negligible
	William Jessop Court	Minor adverse
	5 Wharf Close	Negligible
	John Smeaton Court	Minor adverse
	Thomas Telford Basin	Minor adverse
	Paradise Mews	Negligible
	Laystall Street Consented Scheme	Minor adverse
	Islington Wharf Phase 2	Negligible
	Islington Wharf Phase 3	Minor adverse
	Islington Wharf Phase 1 BLK A	Minor adverse
	Islington Wharf Phase 1 BLK B	Minor adverse
	Islington Wharf Phase 4	Minor adverse
	Laystall House	Minor adverse
	32-34 Laystall Street	Minor adverse
	57-59 Ducie Street	Minor adverse
	Jutland House	Negligible

Potential Effect	Receptor	Residual Effect
	Whittle's Croft Wharf	Negligible
	Piccadilly Village	Negligible
	Store Street Scheme	Minor adverse
Change in sunlight amenity	Oxygen	Negligible
	Quantum	Negligible
	Paradise Mews	Negligible
	Islington Wharf Phase 2	Negligible
	Islington Wharf Phase 3	Minor adverse
	Islington Wharf Phase 1 BLK A	Negligible
	Islington Wharf Phase 4	Negligible
	Laystall House	Minor adverse
	32-34 Laystall Street	Minor adverse
	57-59 Ducie Street	Negligible
	Jutland House	Negligible
	Whittle's Croft Wharf	Negligible
Chapter 11: Solar Glare		
Solar Glare	Road users at the following locations: • Houldsworth Street junction with Newton Street	Negligible adverse

Potential Effect	Receptor	Residual Effect
	• Houldsworth Street junction with Dean Street • Store Street pedestrian crossing • Great Ancoats Street junction with Store Street/Old Mill • Great Ancoats Street junction with Newton Street • Great Ancoats Street pedestrian crossing • Great Ancoats Street junction with Laystall Street	
	Road users at the following locations: • Woodward Street junction with Weybridge Road/New Islington • Bengal Street junction with Redhill Street • Murray Street junction with Jersey Street • Murray Street junction with Redhill Street • Henry Street junction with Redhill Street • Pickford Street junction with Redhill Street • Store Street junction with Great Ancoats Street • Great Ancoats Street junction with Adair Street • Great Ancoats Street junction with Pollard Street	Minor adverse

Potential Effect	Receptor	Residual Effect
	Tram driver's on the Westbound tram tracks	Minor adverse
	Old Mill Street pedestrian crossing	**Minor to moderate adverse**
	Road users at the following locations: • Old Mill Street junction with Weybridge Street • Old Mill Street junction with Great Ancoats Street	**Moderate adverse**
Chapter 12: Socio-Economics and Human Health		
Provision of housing	People requiring housing in the Manchester City	**Major beneficial**
Chapter 13: Climate Change		
Greenhouse gas emissions	Global climate system	Minor adverse
Chapter 14: Noise and Vibration		
Road traffic noise to proposed receptors	Proposed apartments	Negligible
Plant noise from Proposed Scheme	Residential apartment building to the north-west on Ducie Street) Residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street	Minor adverse

16.7 As summarised in **Table 16.1** and **Table 16.2**:

- During demolition and construction, there are 3 significant adverse residual effects (in relation to townscape and visual, and built heritage); and

- During operation, there are 3 significant beneficial effects (in relation to townscape and visual, and socio-economics and human health), and 3 significant adverse effects (in relation to built heritage, wind, and solar glare) are reported.

Summary of Cumulative Effects Assessment

16.8 The assessment of cumulative effects considered effect interactions (where more than one effect is experienced by a single receptor) and in-combination effects (where effects on a receptor may combine with those of other projects in the locale).

Effect Interactions

16.9 Effect interactions considers multiple effects generated by the Proposed Scheme impacting upon the same receptor / receptor category. The assessment of effect interactions identified that effect interactions would be experienced by the 'population and human health' factors / receptor groups for the construction and operational stages.

16.10 During the construction stage, there is a possible effect interaction to the population and human health factor / receptor group, specifically in relation to beneficial socio-economic and human health effects (i.e. the generation of employment); the adverse change in visual amenity from construction stage activities; the adverse effect of reduced daylight and sunlight; and the adverse effect of noise and vibration from construction activities. However, the construction stage will be temporary (medium-term), and the effects will be experienced differently (e.g. beneficial and adverse effects). As a worst case, any effect interaction is considered to align with the worst case level of effect reported in isolation (which is major adverse and significant from the change in visual amenity, but note that this is only for certain receptors).

16.11 During the operational stage of the Proposed Scheme, there is also a possible effect interaction to the population and human health factor / receptor group in relation to the adverse effects of reduced daylight and sunlight amenity; wind conditions; solar glare; and plant noise (albeit these effects ranged for different receptors) and beneficial changes to views and provision of housing. The interactions are likely to be greater than the effects individually, which are perceived to be significant (as some of the effects individually are significant).

Assessment of In-combination Effects

16.12 The assessment of in-combination effects considered 29 Cumulative Projects on a technical topic by topic basis (i.e. **Technical Chapters 7 – 14**).

16.13 A summary of the output of the in-combination assessment is set out within **Table 16.3**.

16.14 Where a greater in-combination effect is identified and is considered to be Significant, this has been highlighted in grey**.**

Table 16.3: Summary of In-combination Appraisal

Technical Topic	Summary of In-Combination Effects with Relevant Projects
Townscape and visual	A number of the Cumulative Projects will be visible in some of the viewpoints. This is significant for Viewpoints 1, 3, 5, 7, 8, 12, 13, 14, 15, 16.
Built Heritage	The Proposed Scheme has been assessed alongside a number of Cumulative Project's and there have been no significant effects identified.
Wind	Relevant Cumulative Projects within the study area of 450m have been modelled and wind conditions around the Site remain broadly the same as they do within the context of existing surroundings. Therefore there is no cumulative effect.
Daylight, Sunlight and Overshadowing	There are only common receptors with Cumulative Projects 1 and 10. The cumulative effects of the Proposed Scheme with these Cumulative Projects has been modelled which found there will be a small decrease in compliance which will result in Jutland House being affected to a minor adverse rather than negligible extent. There is no cumulative effect on any other receptors. Effects of Cumulative Project 30 would be marginal and not alter the conclusions.
Solar Glare	The Proposed Scheme in isolation represents the worst-case assessment in terms of likely solar glare effects, as Cumulative Projects could block reflections. Therefore the assessment of the Proposed Scheme in isolation represents the worst case cumulative effect. This is significant only at Old Mill Street junction with Weybridge Street; Old Mill Street pedestrian crossing; and Old Mill Street junction with Great Ancoats Street.
Socio-Economics and Human Health	All Cumulative Projects will generate employment in the construction sector, which in-combination with the Proposed Scheme would generate a greater effect than for the Proposed Scheme in isolation, which is significant (beneficial). The majority of Cumulative Projects will provide housing, which in-combination with the Proposed Scheme would be also be significant (beneficial)
Climate Change	All global cumulative GHG sources are relevant to the effect on climate change, which is taken into account when defining the global climatic system receptor as being of high sensitivity to further emissions in **Chapter 13: Climate Change**. Therefore,

Technical Topic	Summary of In-Combination Effects with Relevant Projects
	the cumulative effect remains as reported in **Chapter 13: Climate Change**, which is not significant.
Noise and Vibration	None of the Cumulative Projects are located close enough or directly in line with the sensitive receptors for the cumulative effects to be significant.