LORD STREET

ENVIRONMENTAL STATEMENT

Table of Contents

- **Non-Technical Summary**

Volume 1 – Main Environmental Statement

- **Chapter 1: Introduction**
- **Chapter 2: EIA Process and Methodology**
- **Chapter 3: Alternatives and Design Evolution**
- **Chapter 4: Proposed Development Description**
- **Chapter 5: Demolition and Construction**
- **Chapter 6: Daylight, Sunlight and Overshadowing**
- **Chapter 7: Wind Microclimate**
- **Chapter 8: Socio-Economics and Human Health**
- **Chapter 9: Climate Change and Greenhouse Gases**
- **Chapter 10: Cumulative Effects**
- **Chapter 11: Summary of Mitigation and Residual Effects**

Volume 2

- **Built Heritage, Townscape and Visual Impact Assessment**

Volume 3

- **Appendix 1.1: ISEP Quality Mark**
- **Appendix 2.1: EIA Scoping Report**
- **Appendix 2.2: EIA Scoping Opinion**
- **Appendix 2.3: Transport Statement**
- **Appendix 2.4: Interim Travel Plan**
- **Appendix 6.1: Daylight, Sunlight and Overshadowing Methodology**
- **Appendix 6.2: 3D Views**
- **Appendix 6.3: VSC Table**
- **Appendix 6.4a: NSL Table**
- **Appendix 6.4b: NSL Contours**
- **Appendix 6.5: APSH Table**
- **Appendix 6.6: 2 Hour Time in Sun Plots**
- **Appendix 6.7: Cumulative 3D Views**
- **Appendix 6.8: Cumulative VSC Table**
- **Appendix 6.9a: Cumulative NSL Tables**
- **Appendix 6.9b: Cumulative NSL Contours**
- **Appendix 7.1: Wind Microclimate Assessment**
- **Appendix 8.1: Socio-Economics and Human Health Policy and Guidance**
- **Appendix 9.1: Climate Legislation, Policy and Guidance**

- **Appendix 9.2: Life Cycle Assessment**
- **Appendix 9.3: Carbon and Energy Statement**

On behalf of
Linear Construction Limited

Date
February 2026

Project Number
162TG_T12089

LORD STREET ENVIRONMENTAL STATEMENT NON-TECHNICAL SUMMARY

RAMBOLL

Confidential

LORD STREET
NON-TECHNICAL SUMMARY

Project No.	**162TG_T12089**
Issue No.	**Final**
Date	**17/02/2026**
Made by	**Campbell Risdon**
Checked by	**Campbell Risdon**
Approved by	**Harry Parker**

This report is produced by Ramboll at the request of the client for the purposes detailed herein. This report and accompanying documents are intended solely for the use and benefit of the client for this purpose only and may not be used by or disclosed to, in whole or in part, any other person without the express written consent of Ramboll. Ramboll neither owes nor accepts any duty to any third party and shall not be liable for any loss, damage or expense of whatsoever nature which is caused by their reliance on the information contained in this report.

Version Control Log

Revision	Date	Made by	Checked by	Approved by	Description
Final	17/02/2026	CR	CR	HP	For Planning Submission

Ramboll
240 Blackfriars Road
London
SE1 8NW
United Kingdom
T +44 20 7808 1420
www.ramboll.co.uk

CONTENTS

1.	**CONTENTS**	**3**
1.	**INTRODUCTION**	**1**
1.1	Purpose of Non-Technical Summary	1
1.2	Viewing of ES and Application	1
1.3	Commenting on Application	1
2.	**ENVIRONMENTAL IMPACT ASSESSMENT**	**2**
2.1	EIA Process and Methodology	2
2.2	EIA Scoping	2
2.3	Topics Included in EIA	2
2.4	Topics Excluded from the EIA	2
2.5	Assessment Approach	3
3.	**EXISTING SITE AND SURROUNDING CONTEXT**	**7**
3.1	Site Location	7
3.2	Site Description	7
3.3	Planning History	7
3.4	Environmental Considerations	8
4.	**PLANNING CONSIDERATIONS**	**13**
4.1	Policy Context and Designations	13
5.	**DESIGN EVOLUTION AND ALTERNATIVES**	**14**
5.1	'Do Nothing' Scenario	14
5.2	Alternative Sites	14
5.3	Alternative Land Uses	14
5.4	Existing Consent for the Site	14
5.5	Alternative Site, Height and Massing Layouts	15
6.	**PROPOSED DEVELOPMENT**	**16**
6.1	Proposed Development Description	16
6.2	Site Arrangement	16
6.3	Land Use Distribution	16
6.4	Floorspace Schedule	16
6.5	Built Form, Height and Massing	22
6.6	Public Realm and Open Space	22
6.7	Landscape and Biodiversity Enhancement	22
6.8	Access and Egress	22
6.9	Parking	22
6.10	Waste Management	23
6.11	Plant and Ventilation	23
6.12	Health and Wellbeing Measures	23
6.13	Operational Management Controls	23
7.	**DEMOLITION AND CONSTRUCTION WORKS**	**25**
7.1	Overview	25
7.2	Construction Environmental Management Plan	25
7.3	Community Liaison	25
7.4	Working Hours	25
7.5	Potential Demolition and Construction Environmental Effects	26
8.	**LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS OF PROPOSED DEVELOPMENT**	**27**
8.1	Socio-Economics	28
8.2	Air Quality	**Error! Bookmark not defined.**
8.3	Noise and Vibration	**Error! Bookmark not defined.**

8.4	Wind Microclimate	28
8.5	Daylight, Sunlight and Overshadowing**Error! Bookmark not defined.**	
8.6	Townscape, Visual and Built Heritage	28
9.	**CUMULATIVE EFFECTS**	**32**
9.1	Intra-Project Cumulative Effects	32
9.2	Inter-Project Cumulative Effects	32
10.	**SUMMARY**	**33**

1. INTRODUCTION

1.1 Purpose of Non-Technical Summary

This is the Non-Technical Summary of the Environmental Statement which has been prepared by Ramboll UK Limited (Ramboll) and a team of technical specialists in accordance with the statutory procedures set out in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the 'EIA Regulations')[1].

The Environmental Statement has been prepared to accompany a full planning application by Linear Construction Limited (hereafter referred to as the 'Applicant') to Manchester City Council to develop a vacant site located at Lord Street, Manchester, M8 5BW.

The proposed development comprises the demolition of a derelict structure and site clearance, the excavation of a basement, the erection of a 24 storey residential building.

This Non-Technical Summary presents a summary of the main findings of the environmental impact assessment and provides:

- A description of the site and surrounding context;
- An outline of the reasonable development alternatives considered by the Applicant and an indication of the main reasons for their choice, taking into account the potential environmental impacts;
- A description of the proposed development; and
- A summary of the likely significant environmental effects predicted and key mitigation measures (as relevant).

1.2 Viewing of ES and Application

The full Environmental Statement comprises the following:

- Non-Technical Summary (this document);
- Volume 1: Main Environmental Statement;
- Volume 2: Townscape, Visual and Built Heritage Impact Assessment; and
- Volume 3: Technical Appendices.

The full ES, together with the application and other supporting documents are available for viewing on the MCC website: https://pa.manchester.gov.uk/online-applications/

Digital versions of the full Environmental Statement are available for purchase from Ramboll.

1.3 Commenting on Application

Comments on the application should be forwarded to MCC at:

Manchester City Council

Town Hall

Albert Square

M2 5DB

[1] Secretary of State, 2017. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, London, HMSO.

2. ENVIRONMENTAL IMPACT ASSESSMENT

2.1 EIA Process and Methodology

Environmental impact assessment is a process that identifies the likely significant environmental effects (both beneficial and adverse) of a proposed development. The process aims to prevent and, where prevention is not possible, to reduce or mitigate any likely significant adverse environmental effects, where these are identified, and to enhance any beneficial effects. It is an iterative process which proactively seeks to integrate mitigation within the development proposals so as to avoid significant effects from arising.

The environmental impact assessment process adopted for the proposed development has followed good practice guidelines, as set out by the Institute of Sustainability and Environmental Professionals (formerly the Institute of Environmental Management and Assessment (IEMA)) Quality Mark scheme. The process involved the following key steps:

- Consultation with key stakeholders such as Manchester City Council on key environmental issues;
- Collection and use of the most up-to-date baseline information;
- Use of relevant guidance and good practice methods to predict the likely nature, scale and significance of any environmental change; and
- Reporting of the results of the environmental impact assessment process in the Environmental Statement in a transparent way, to provide the information required to inform the decision-making process.

2.2 EIA Scoping

An environmental impact assessment (EIA) Scoping Opinion Request Report was submitted to Manchester City Council on 17 November 2025 in support of a request for a formal EIA Scoping Opinion pursuant to Regulation 15(1) of the EIA Regulations. The EIA Scoping Opinion Request Report set out a description of the then emerging proposed development; the potential key environmental impacts and likely effects to be considered as part of the EIA; the proposed technical assessment chapters; as well as the proposed assessment methodologies.

Manchester City Council issued a formal EIA Scoping Opinion on 8th January 2026 confirming the scope of the EIA and ES. The EIA has been undertaken and the ES prepared based on the EIA Scoping Opinion.

2.3 Topics Included in EIA

The following topics were scoped into the EIA as technical assessment chapters:

- Daylight, Sunlight and Overshadowing
- Wind Microclimate;
- Socio-Economics and Human Health;
- Climate Change; and
- Built Heritage, Townscape, and Visual.

2.4 Topics Excluded from the EIA

The following topics were scoped out of the EIA:

- Ecology;
- Water Resources and Flood Risk;

- Ground Conditions;
- Transport;
- Air Quality;
- Noise and Vibration;
- Materials and Waste;
- Aviation;
- Archaeology; and
- Major Accidents and Disasters

However, these topics have informed the iterative design process and mitigation measures.

2.5 Assessment Approach

The Environmental Statement provides assessments of potential significant environmental effects during demolition and construction and once the proposed development is complete and operational. Each technical assessment considers different types of effects including direct, indirect, secondary and cumulative; short, medium and long-term; temporary and permanent; beneficial, neutral and adverse effects.

Each of the above scoped-in environmental topics have been addressed in a separate technical assessment chapter in Environmental Statement Volumes 1 and 2. In each chapter, a description of the assessment methodology is given together with the existing site conditions. This is followed by an assessment of the likely effects of the proposed development taking into account mitigation measures that are embedded in the development proposals; the consideration of the need for additional mitigation or any recommendations for enhancement measures to reduce or offset any significant adverse effects identified during the assessment; and a concluding assessment on the residual effects that would remain after these measures have been implemented.

The technical assessment chapters report upon the likely scale (negligible, minor, moderate or major), nature (beneficial, neutral and adverse) and significance of environmental effects.

Consideration is also given to the cumulative effects of the proposed development. The following two types of cumulative effects have been assessed:

- Intra-project effects are different types of impacts from the proposed development that could interact to jointly affect a particular receptor or receptor group at the site. Potential impact interactions could include the combined effects of noise and dust during demolition and construction activities on a particular sensitive receptor; and
- Inter-project effects which are combined or additional effects generated from the proposed development together with other 'approved or existing projects' ('cumulative schemes') as defined by the EIA Regulations. These cumulative schemes may generate their own individually (not significant) effects but when considered together could amount to a significant cumulative effect, for example, combined transport and accessibility impacts from two or more schemes. All technical chapters included in the Environmental Statement have assessed the potential for cumulative effects.

A list of 14 cumulative schemes was prepared as part of the EIA Scoping Report submitted to Manchester City Council. The following approach was adopted to their selection:

- Schemes located within 1 km of the proposed development site area, where it was expected that these schemes would provide either over 150 dwellings; or

- Schemes located within 1 km of the proposed development site area, where it was expected that these schemes would deliver up to or over 10,000 square metres of gross internal floor space.

The locations of the cumulative schemes identified are presented in Figure 2.1. Table 2.1 provides a list of these schemes and their descriptions.

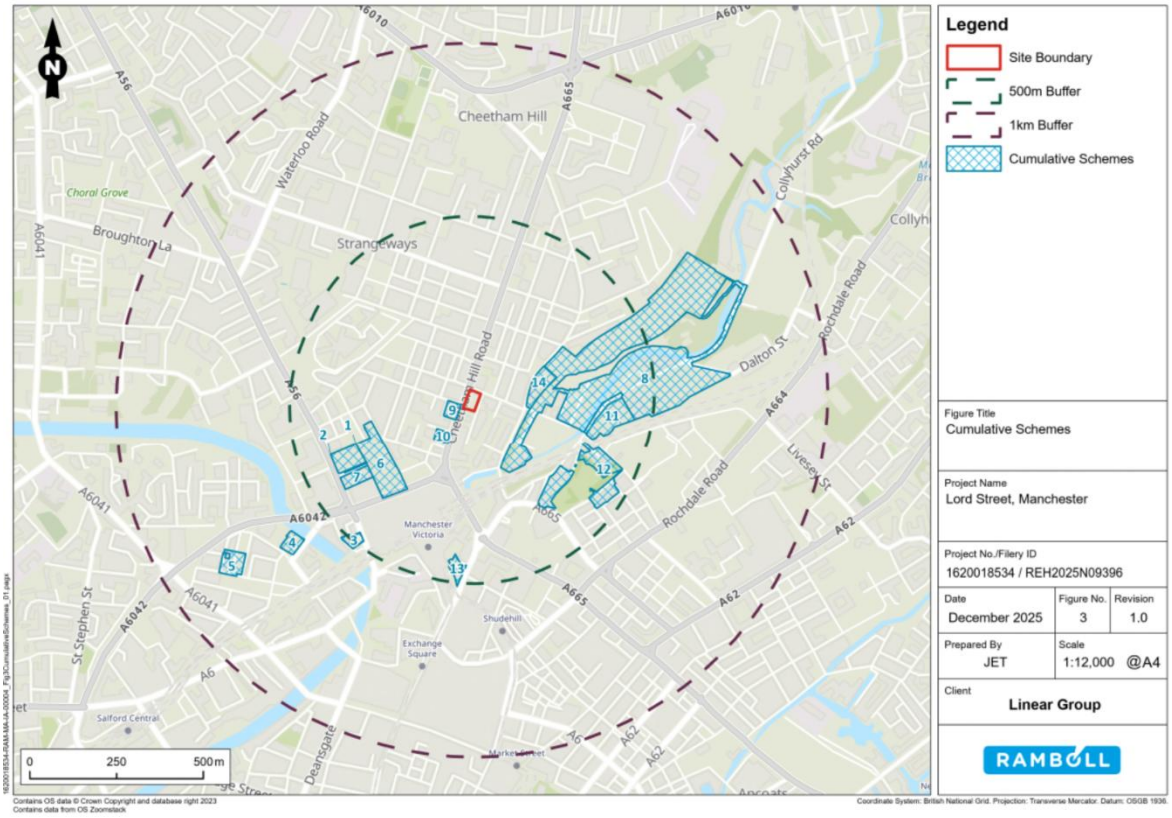


Figure 2.1: Location of Cumulative Schemes

Table 2.1: Cumulative Schemes and Description

Number	Planning Reference	Proposal Summary	Status
1	137941/FO/2023 Brewery Gardens	Residential led mixed use development for 505 apartments with commercial uses. Development comprises two buildings (one part 29, 25 and 20 storeys, one 12 storeys).	Under construction
2	132416/FO/2021 Land bounded by the Travelodge and Surface Level Carparking to the north, Further Surface Level Carparking to the east, Manchester College to the south and Bury New Road to the west. 935m from the site.	Residential led mixed use development for 461 apartments with ground floor commercial uses, comprising two buildings part 27, 20, 17 storeys and part 11 and 10 storeys.	Approved

Number	Planning Reference	Proposal Summary	Status
3	122280/FO/2019 Land Bounded by Great Ducie Street and Mirabel Street Manchester M3 1PJ 550m from the site .	Residential led mixed use development for 84 residential apartments comprising one ten-storey building for 45 apartments, and one 14 storey building for 84 apartments. Commercial uses on the ground floor.	Approved
4	19/74205/FULEIA Land Corner New Bridge Street And, Greengate, Salford 700 metres from the site.	A single building with two blocks (14 and 55 storeys) to include: 542 residential apartments, commercial at ground.	Approved
5	22/80890/REM (submitted pursuant to 21/78473/HYBEIA (Section 73 permission)). Original consent 19/74465/HYBEIA. (Salford City Council) 860 metres from the site.	40-storey (plus ground) building containing 518 apartments, ground floor commercial space.	Approved
6	118831/FO/2018 Former Boddingtons Brewery Site Dutton Street Manchester M3 1LE 935m from site.	Residential led mixed use development for 536 residential units, comprising two buildings (one maximum 17 storeys and one maximum 26 storeys). Commercial floor space included.	Under construction
7	136492/FO/2023 Manchester College 415m from the site.	Phase 2 of the new city centre campus for the Manchester College and UCEN Manchester. 5,870 square metres of educational floorspace within a 5 storey building.	Approved
8	136812/OO/2023 136814/FO/2023 Red Bank Victoria 210m from the site.	Residential scheme including 4,800 units across in multiple buildings ranging from 6 to 34 storeys.	Outline / Approved
9	138696/FO/2023 Land At 33 - 41 Cheetham Hill Road Manchester M4 4FT 50m from the site.	Residential led development comprising a part 17 / part 23-storey residential development comprising 237 apartments.	Approved
10	138302/FO/2023 1 Park Place Manchester M4 4EZ 110m from the site.	Part 25 and part 15 storey residential building comprising 154 apartments.	Approved
11	126944/FO/2020 Land Bound by Dantzic Street, Gould Street, Williamson Street and Bromley Street (known as Victoria Riverside) 425 m from the site.	Three towers (37, 26 and 18 storeys) and podium levels (6 storey) to form 634 residential apartments and townhouse accommodation together with commercial accommodation (1222 sqm)	Under construction
12	116366/FO/2017	Four residential buildings (22 storey building, 17 storey building, 40 storey building and part 12, part 9	3 Plots completed

Number	Planning Reference	Proposal Summary	Status
	124120/JO/2019 Land Bounded by Dantzic Street & Aspin Lane, Land Bounded by Gould Street & Angel Meadows and Land bounded by Old Mount Street, School Street, Naples Street & Ludgate Street 480m from the site.	storey building) to form 756 residential apartments together with ground floor commercial uses (616 sqm)	1 Plot Approved
13	134092/FO/2022 Land at Corporation Street (New Victoria Phase 2) 475m from the site.	Ten storey office building with ground floor commercial unit.	Approved
14	EIASCO/25/011 50-54 Red Bank 180m from the site.	Residential led scheme for 589 units, comprising one 43 storey and one 18 storey building.	EIA Request (pre-planning)

3. EXISTING SITE AND SURROUNDING CONTEXT

3.1 Site Location

The site is located at Lord Street, M8 5BW (centred at National Grid Reference: TQ SJ841994), as presented in Figure 3.1.

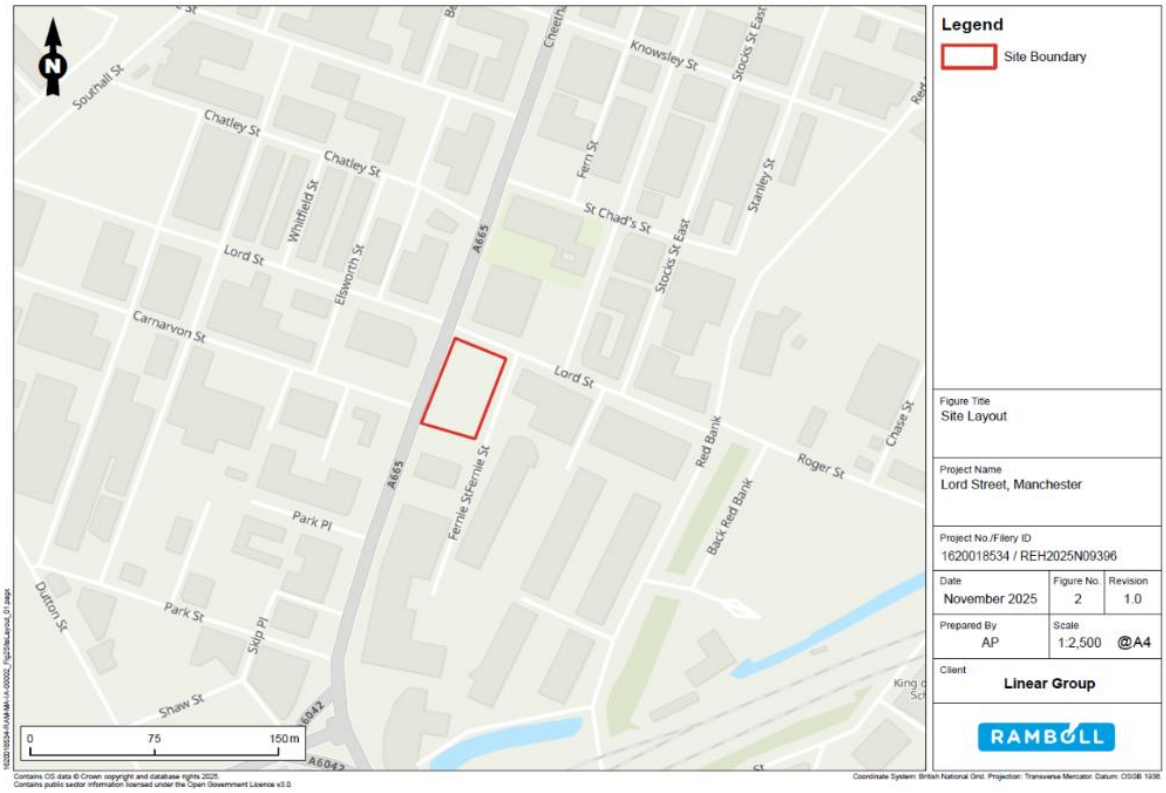


Figure 3.1: Site Location Plan

3.2 Site Description

The site is bounded by:

- Lord Street to the north;
- Fernie Street east;
- A car park and Texaco Petrol Station to the south; and
- Cheetham Hill Road (A665) to the west.

The site covers an area of approximately 0.18 hectares (ha).

The site is not occupied and is made up of derelict land, with some sprawling vegetation and a now vacant single storey tyre shop. Representative photographs of the site are shown in Figure 3.2.

3.3 Planning History

Planning permission was first granted on 21 November 2016 under application reference 113914/FO/2016 for the development of a 16 storey building containing 192 apartments and a ground floor commercial unit. Table 2.1 below provides a list of applications pertaining to the site since 2016.

Table 3.1: Site Planning History	
Reference	**Description**
113914/FO/2016	Erection of a 16 storey building to form 192 residential apartments (Use Class C3a) together with ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings
CDN/19/0095	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0182	Discharge of Conditions 5 and 6 – Construction Management Plan and Local Labour
CDN/19/0330	Discharge of Condition 3 - Drainage
CDN/19/0418	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0536	Discharge of Condition 3 - Drainage
124193/JO/2019	Variation of Condition 10 – Replacement Environmental Standards.
138553/NMC/2023	Non-material amendment to planning permission 124193/JO/2019 to amend condition 2 (Approved drawings) to insert an additional internal staircase and AOV, amend number of car parking spaces, remove sub-basement and change the commercial space to residents' amenity space

3.4 Environmental Considerations

3.4.1 Ecology

Recent appraisal works for ecology undertaken in 2025 confirmed that there are no sensitive ecological areas located within 1 km of the site. On the site, there is widespread vegetation that is not considered to be in good condition. While this vegetation has the potential to support a few types of species including mammals and amphibians, the removal of this vegetation will be managed in line with a Construction Management Plan which will ensure that the vegetation will be checked for any species prior to removal. As such, it is not expected that there will be any significant effects to ecological receptors as a result of the construction or operation of the proposed development.

3.4.2 Water Resources and Flood Risk

There are no surface water features on the site and the closest surface water feature is the River Irk, located approximately 560 m to the southwest. The site is situated within Environment Agency Flood Zone 1 which means there is a 'low' probability of flooding. The site is surrounded by sufficient sewer outlets within its vicinity. A drainage strategy will accompany the planning application and will account for any increased surface water runoff, though this is not expected to be a large quantity. Drainage features will also be developed to reduce surface pollutants.



Figure 3.2: Site Photographs

3.4.3 Ground Conditions

A desk top study was undertaken as a part of the previous site consent under its older planning application (113914/FO/2016). This study confirmed that the site area has been in residential use since at least the 1840s, and that there was minimal risk from ground stability, unexploded ordnance, or exposure to harmful materials. There is one historic landfill located approximately 725 m northeast of the site, however there are no signs of contamination or previous contaminative uses of the site. During the construction of the proposed development, a detailed Construction Management Plan will be developed which will include measures to avoid the risk of contamination to the site from the movement of ground and soil.

3.4.4 Transport

The site is currently accessible through Lord Street and Cheetham Hill Road, though it is obstructed by scaffolding and not open to the public. The site is located within Manchester city centre which offers a high level of accessibility to transport and local amenities within a short walk or bus ride. Manchester Victoria Station is located approximately 355m to the south of the site. Cycling availability is also considered to be highly accessible within the site area, with an 8km cycle radius providing access to Manchester city centre and surrounding neighbourhoods.

The site benefits from its highly accessible location for public transport by train, tram and bus services available within a short distance, the nearest of these located 75 m south of the site along Cheetham Hill Road.

The proposed development would be accessed via Fernie Street. The proposed development would be car free and will not create any new trips or traffic associated with its operation. Proposed cycle parking includes one space per allotment, totalling 251 spaces. This will include space for adapted cycles.

3.4.5 Air Quality

The site is contained within the Greater Manchester Combined Authority Air Quality Management area, which measures exceedances of Nitrogen Dioxide. An Air Quality Assessment was undertaken in 2025, which found that concentrations of Nitrogen Dioxide within the area are generally lower than the air quality objectives measured within the Air Quality Management Area. As a result, it is expected that pollutant concentrations will be within the Air Quality Objectives for the site.

During construction, mitigation will be implemented to provide protection against dust and other particulate matter that could have an effect upon human health. These measures will be contained within the Construction Management Plan.

During the operational phase, the proposed development will be car free and as a result will not have a demonstrable effect upon the local air quality.

3.4.6 Noise and Vibration

During the construction phase of the proposed development there will be a short-term, temporary increase in noise and vibration levels because of construction activities, such as excavation works. These effects will be typical of any urban construction project and may lead to some localised disturbance to residential properties in close proximity to the site. However, such impacts are routinely and successfully managed via standard mitigation measures, which will be included within the Construction Management Plan.

Once operational, the proposed development will be used only for residential purposes and will be car-free. As such, levels of traffic in the area, and the noise associated with traffic, is not expected to change. Any building plant used within the operational proposed development would undergo noise testing and emission limits set by British Standard 4142 and any relevant planning policies set by Manchester City Council. This will ensure limited output of noise from the operational proposed development.

3.4.7 Materials and Waste

To build the proposed development, the single building on site will need to be demolished, along with the excavation of the existing ground to construct the basement. Both activities will generate a series of waste, likely to include concrete, wood and vegetation removal. Other materials and any contaminated material will be disposed of to appropriate landfill facilities. All waste arising during demolition and construction will be handled through the use of a Construction Management Plan, which will include best practice guidance for the industry and will furthermore include how the materials will be managed and stored efficiently for legal disposal.

Once completed, operational waste will only be from the residents of the proposed development, as no commercial uses will be present. The proposed development will have appropriate waste storage facilities, with pickups of waste occurring along Fernie Street for both rubbish and recycling.

3.4.8 Aviation

The site is located approximately 15km north of Manchester Airport, the closest airport to the site. As this is a significant distance away and the site is not within any key flight paths or airport exclusion zones, it can be determined that there will be no impacts to operations at the airport or to aviation as a result of the proposed development.

3.4.9 Archaeology

An Archaeological Desk Based Assessment was undertaken as part of the previous planning application approved for the site. The assessment found that the site is not within a conservation area and that there is little potential for any survival of archaeological remains. for archaeology. As such, it is likely that no archaeological assets would be damaged or devalued as a result of the proposed development.

3.4.10 Major Accidents and Disasters

As a fully residential development, the proposed development would not be a source of hazard that could result in a major accident or disaster during operation. Measures to eliminate the risk of disaster and safety measures for both construction and operation have been generated and are

outlined within the Construction Management Plan. It is considered that existing design measures for the proposed development and that standard practice within construction will control any risk of accidents and disasters.

Figure 3.3 below outlines the surrounding key environmental considerations of the site.

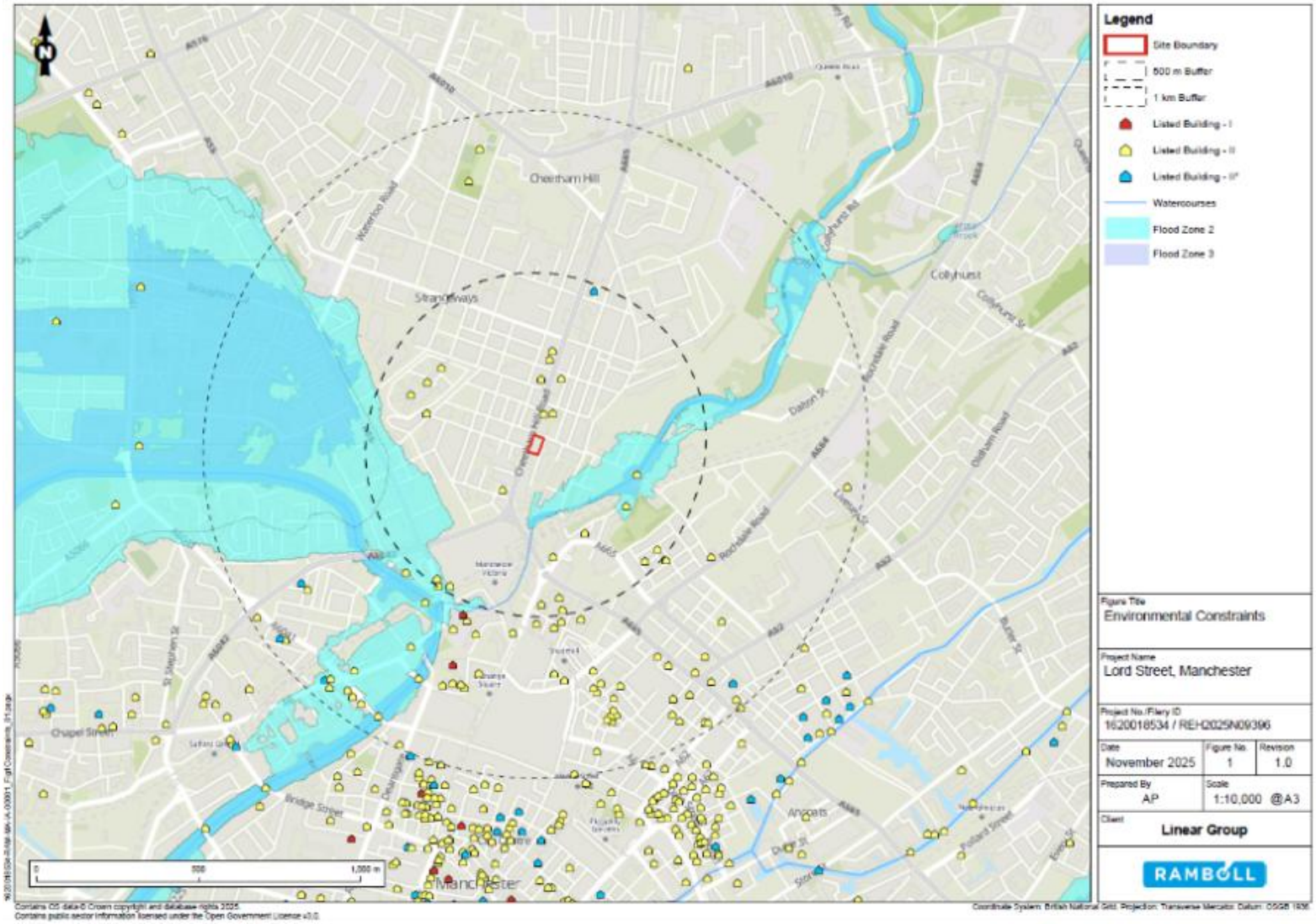


Figure 3.3: Surrounding Environmental Considerations

4. PLANNING CONSIDERATIONS

4.1 Policy Context and Designations

In respect of the EIA Regulations, the proposed development falls within Schedule 2, Paragraph 10b of the EIA Regulations as an 'urban development project'.

For the application, it is necessary to consider the proposed development against relevant policies and guidance at national, regional and local levels. At the national level, planning policy is contained within the National Planning Policy Framework 2025 (NPPF) and supported by the on-line Planning Practice Guidance (PPG).

The statutory development plan for the site comprises the:

- Places for Everyone – Joint Development Plan;
- Greater Manchester Combined Authority Strategy;
- Greater Manchester Combined Authority Housing Strategy; and
- Supporting Supplementary Planning Guidance (SPGs) and Supplementary Planning Documents (SPDs, regional and local) guidance and standards.

The site is located in the Cheetham Hill Ward of Greater Manchester and is not an allocated site under the Greater Manchester Joint Development plan.

In addition, a range of regional and local supplementary guidance documents are relevant to the determination of the application and have been considered in undertaking the EIA. These are listed within each technical chapter where applicable.

5. DESIGN EVOLUTION AND ALTERNATIVES

The EIA Regulations require the ES to report on the reasonable alternatives (for example in terms of development design, location, size and scale) studied by the Applicant, 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 environmental effects.

The design evolution has been informed by the Applicant's development objectives; policy considerations, site design considerations and environmental considerations.

The ES considers the following alternatives:

- The 'Do Nothing' scenario;
- Alternative sites;
- Alternative land uses;
- Existing Consent for the site; and
- Alternative layouts, design and design evolution.

5.1 'Do Nothing' Scenario

The 'Do Nothing' scenario is a hypothetical alternative conventionally considered in EIA as a basis for comparing the development proposal under consideration. The 'Do-Nothing' scenario, in the sense that the site is left in its current state, this is not considered to be a viable or reasonable alternative and is therefore not a realistic scenario given the planning history and previous use of the site and its surrounding context. As the site has been vacant for multiple years now and as expressed by previous planning consent there is a general consensus that it should be developed.

In the event that the site was left vacant, there are several lost opportunities including:

- The opportunity to deliver additional housing;
- The opportunity to maximise the productive use of the site; and
- The opportunity to deliver biodiversity net gain.

5.2 Alternative Sites

No alternative sites were considered as the Applicant owns the site. The site provides an opportunity to provide additional housing within Cheetham Hill that would not be afforded by alternative sites and this is furthermore outside the control of the Applicant.

5.3 Alternative Land Uses

The proposed land uses have been informed by prevailing local and regional policy. No other land uses were considered other than those proposed.

5.4 Existing Consent for the Site

Planning permission was granted for the site for in 2016 under MCC Planning Reference 113914/FO/2016 for the development of the following:

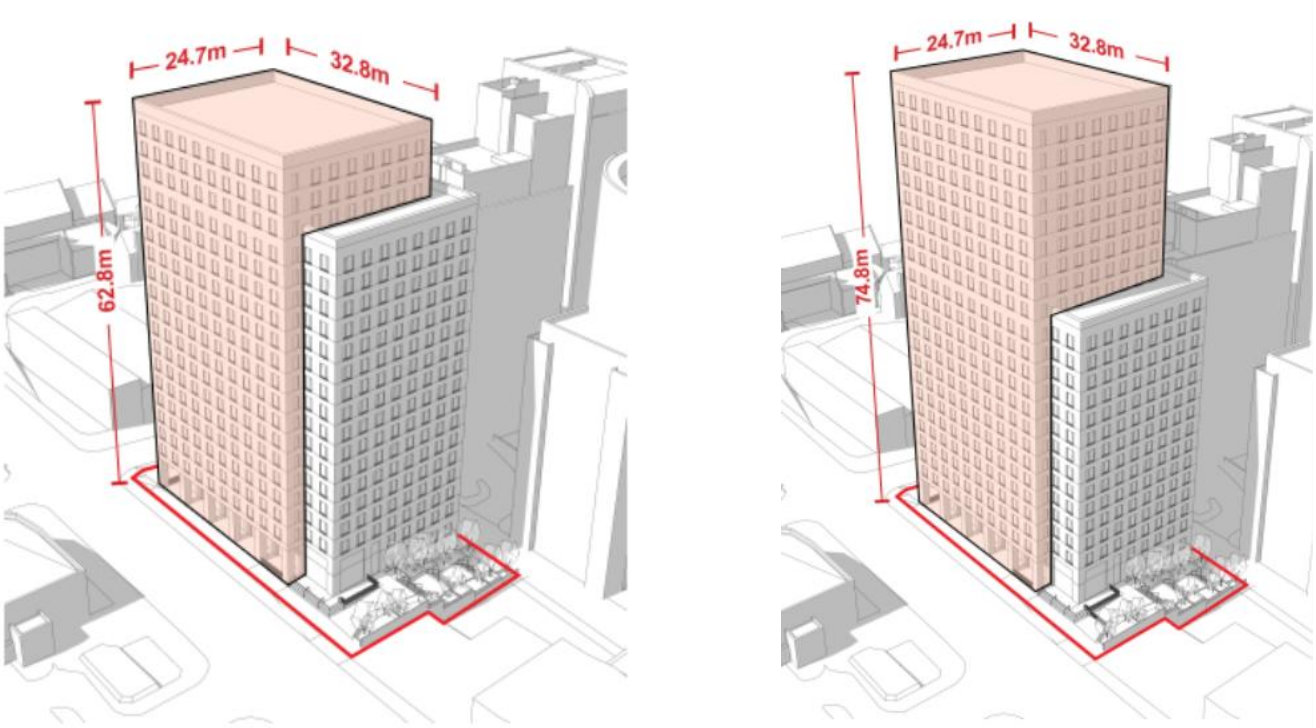
"*Full planning permission for the erection of a 16-storey (15 storeys with part 16th floor mezzanine) residential development consisting of 192 apartments with ground floor commercial floorspace (Use Classes A1, A2, A3 or B1), means of access, basement car parking, amenity space, landscaping and demolition of existing structures".*

The proposed development is therefore similar in nature to the existing consent, with both comprising a single tall building providing residential units. The proposed development therefore represents an increase in the height and number of residential units for compared with the consented scheme, but a reduction in car parking and retail floorspace. As such, the updated design of the proposed development provides greater potential for housing delivery within the local area than its previous design.

5.5 Alternative Site, Height and Massing Layouts

An iterative design evolution process was undertaken and included consultation with MCC. The layout options considered daylight, sunlight and overshadowing and townscape character and visibility. An original option for a 21-storey tower was presented to Manchester City Council. The feedback from Manchester City Council included that the proposed development should take a more slender form by increasing its height and decreasing its width. This resulted in a final height of the proposed development of 74.8 m above ground level. The comparison between these two options is shown in Figure 5.1 below.

Figure 5.1: Increasing height of the proposed development and lowering of the terrace level



6. PROPOSED DEVELOPMENT

6.1 Proposed Development Description

The Applicant is submitting a full planning application for the following:

'Demolition of existing structures and erection of a residential apartment development comprising 251 dwellings (Use Class C3) with landscaping and associated works'

In summary, the proposed development would comprise the following:

- Demolition of the vacant structure on site;
- Excavation of a basement;
- Erection of one 24-storey tower block containing 251 dwellings of 1-bed and 2-bed apartments;
- Delivery of residential amenity space and open space; and
- Delivery of 251 cycle parking spaces.

6.2 Site Arrangement

The site would be almost entirely taken up by the tower block, with the remaining ground floor space providing open amenity space surrounding the tower.

The main entrance to the site would be from Cheetham Hill Road. This entrance would allow residential deliveries, drop off vehicles and pedestrian and cycle access to the site. Vehicles associated with servicing and commercial deliveries would access the site via Fernie Street.

The proposed development would be car free, excluding disabled, service, delivery and drop off vehicles.

Landscaping, private and public amenity space would be delivered across the proposed development. The area surrounding the tower within the site boundary will feature both hard and soft landscaping and would provide public open space. Residential blocks would provide private amenity space in the form of a communal terrace on the 15th storey.

6.3 Land Use Distribution

The proposed development would be underlain by a basement which is expected to extend to a maximum depth of 5.025 m underground.

At ground level will be the entrance to the proposed development alongside landscaping and public realm updates within the site boundary. The ground level up to the 14th level would have the same layout plan, shown below in Figure 6.2. At the 15th level there will be a semi-covered terrace for use by residents, Shown in Figure 6.3. The 16th through 23rd Storeys of the proposed development mirror the floor space plans of the previous ground floor through 14th storey. The building remains closed with no further terraces and terminates at the 24th storey. Roof plans for the proposed development are shown in Figure 6.4 below.

6.4 Floorspace Schedule

The floorspace schedule for the proposed development is presented in Table 6.1.

Table 6.1: Proposed Development Area Schedule

Uses	Gross External Area (GIA) m^2	Gross Internal Area (GEA) m^2
Residential (Use Class C3) – 251 units including private amenity space	22,203	16,046

Table 6.1: Proposed Development Area Schedule		
Total	**22,203**	**16,046**

Table 6.2 below outlines the number of 1-bedroom and 2-bedroom units provided by the proposed development. These are all in private ownership and no affordable housing will be delivered as a result of the proposed development.

Table 6.2: Illustrative Residential Unit and Tenure Mix						
	Studio	**One-bed**	**Two-bed**	**Three-bed**	**Four-bed**	**Total**
Total by Unit	0	83	168	0	0	251
% by unit	**0**	**33.1%**	**66.9%**	**0**	**0**	100%

Confidential

Figure 6.1: Proposed Basement Plan

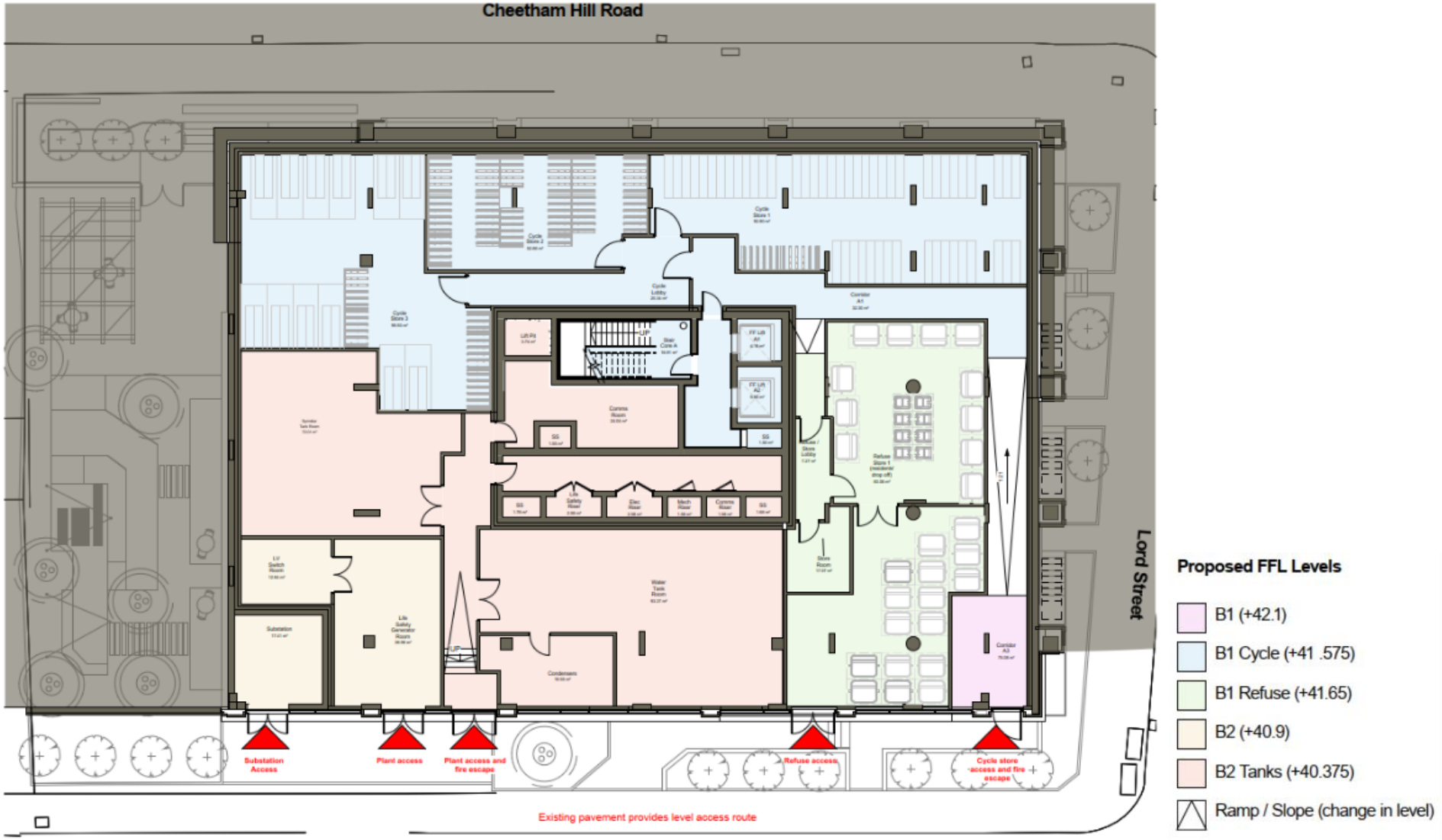


Figure 6.2: Ground Floor Layout Plan

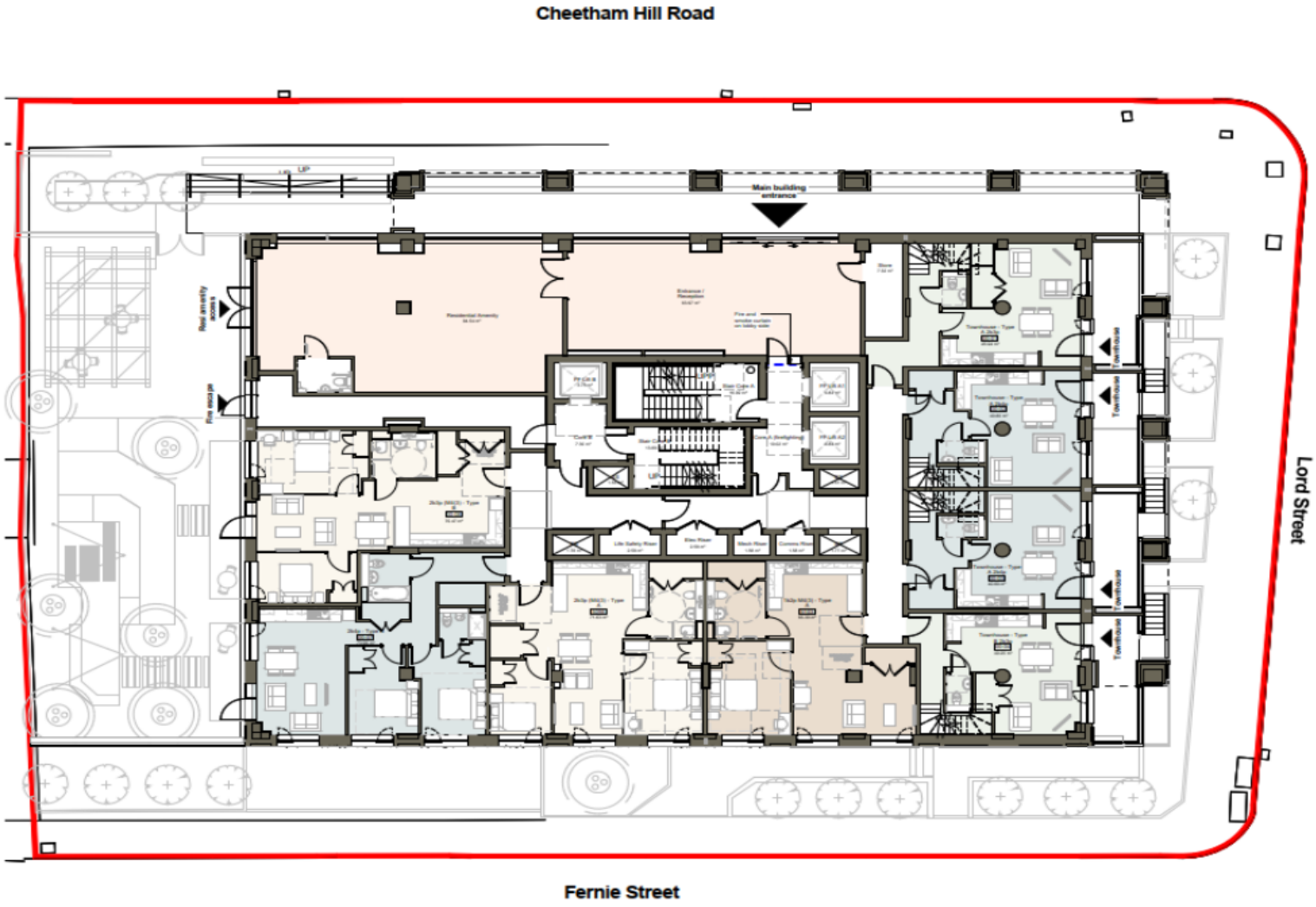


Figure 6.3: Proposed 15th Floor Plan Layout

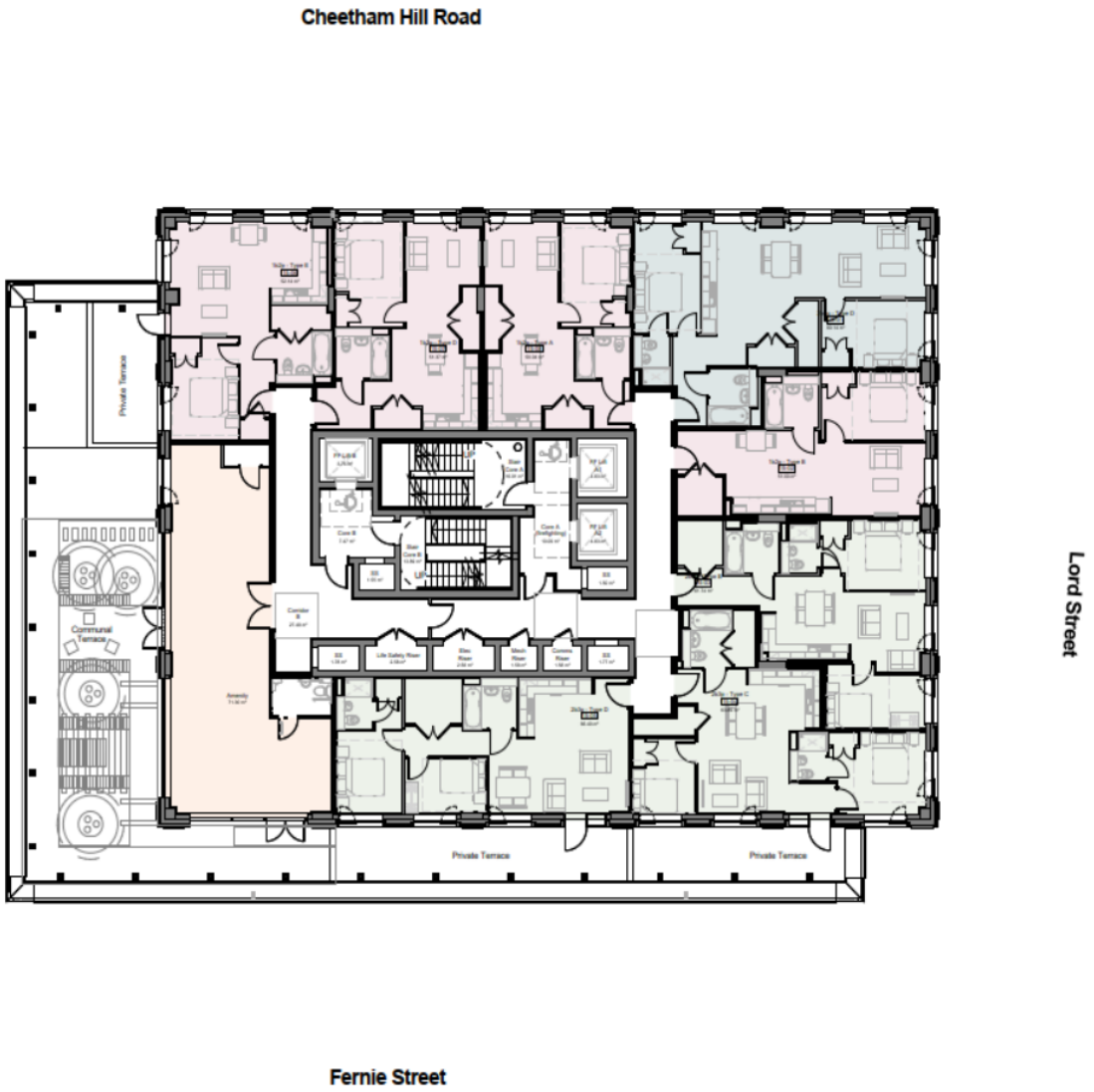
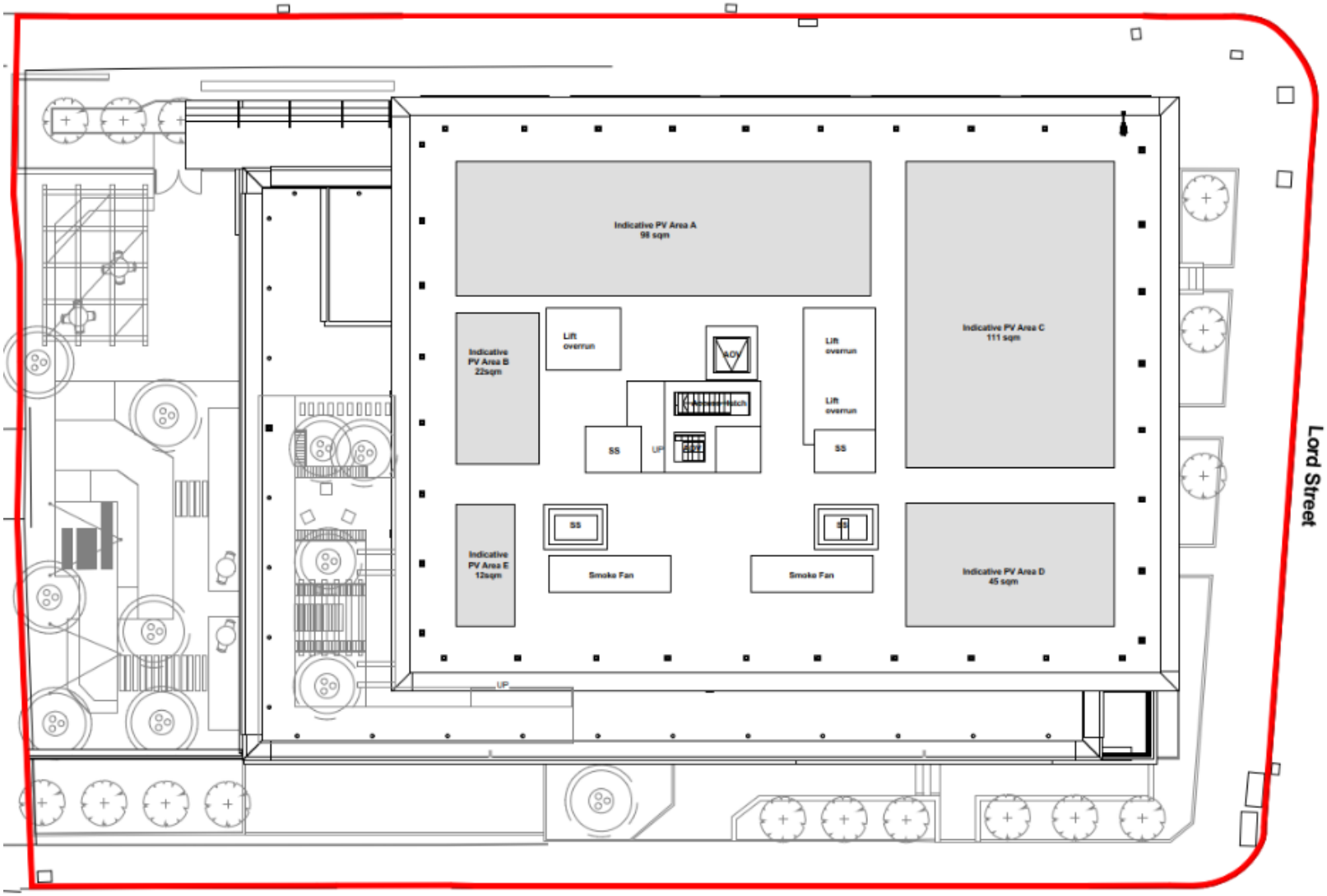


Figure 6.4: Proposed Roof Layout



6.5 Built Form, Height and Massing

The proposed development's building height is 74.8 m above ground level and is 24 storeys tall.

The design of the proposed development has been informed by the surrounding context.

The façade detailing of the blocks would primarily comprise red terra cotta brick and stepped back window systems. This limited palette would provide a uniformed look to the development and is consistent with the surrounding character area.

6.6 Public Realm, Private Amenity and Open Space

Table 6.4 summarises the area of public realm and open space network to be delivered as part of the proposed development. A total of 1,445 m^2 of public realm, public and private amenity space would be delivered.

Table 6.4: Proposed Development Public Realm, Communal Residential, Commercial and Visual, Open Space Provisions

Deliverable	**Area (m^2)**
Private Amenity Space	490
Public Amenity Space	350
Open Space	605
Total	**1,445**

Hard and soft landscaping would be provided at the exterior ground level of the site and on the 15th floor terrace. The public realm provided by the proposed development would be softened with new planting. This will be within the space to the west of the building footprint alongside Cheetham Hill Road.

Public amenity space for both the public and for residents would be provided at the ground level along the western side of the site set back from Cheetham Hill Road.

The existing biodiversity habitat on site is very limited, with the site being filled primarily with overgrown vegetation which will be removed as part of the construction of the proposed development.

A Biodiversity Net Gain Assessment has been undertaken which has quantified the level of biodiversity change from the existing site to the proposed development. The decrease in biodiversity has been calculated at -41.66%. These biodiversity losses would be compensated for by new planting located on the site, alongside off-site compensation for the total loss of habitat.

6.7 Access and Egress

Access to the site will be from Cheetham Hill Road for vehicular access points, with Fernie Street being used for servicing access.

Pedestrian and cycle access would be via entrances on Cheetham Hill Road, Lord Street and Fernie Street. Footways would be provided along the extent of the site frontage which would connect with the existing pavement.

6.8 Parking

The proposed development is car free – no car parking is proposed.

251 cycle parking spaces will be provided to accommodate one cycle space per dwelling. 5% of these spaces will be suitable for larger, adaptable bikes. All cycle spaces will be located within the basement.

6.9 Waste Management

A waste strategy has been produced to accompany the application which provides details on the total estimated waste arising for the proposed development.

Sufficient space within each of the waste storage areas has been provided to accommodate the required number of refuse, recyclable and food waste containers assuming a weekly waste collection frequency.

Waste generated within the proposed development would be from Fernie Street, via a proposed loading and servicing bay.

6.10 Plant and Ventilation

Air source heat pumps will provide hot water to the proposed development, with individual electric panel space heaters providing heating.

The combined estimated energy demand for heating and hot water is estimated at 828.18 kWh per year.

The apartments and townhouses will benefit from whole house balanced mechanical ventilation with heat recovery.

Purge ventilation is provided through openable windows.

In order to mitigate the risk of overheating the design would use a combination of passive and non-passive measures.

All areas would be specified with low energy lighting. Additionally, motion sensors would be applied throughout relevant areas to help reduce lighting demand and turn off lighting when spaces are unoccupied or adequately day-lit reducing internal heat gains from luminaires.

The proposed development will also benefit from multiple sustainability features, including:

- Solar photovoltaic panels will be installed on the roof (339m^2);
- High performance thermal insulation;
- Low air permeability;
- Sophisticated heating controls;
- 100% light-emitting diode (LED) lighting;
- Appliances and white goods specified will be highly energy efficient; and
- Each dwelling will be specified with a smart meter to enable occupants to effectively monitor and manage their energy consumption.

6.11 Health and Wellbeing Measures

The proposed development has sought to promote and encourage healthier lifestyles through the following measures:

- Providing access to open space and amenity space;
- Providing access to employment opportunities;
- Providing housing in a range of residential unit types; appropriately sized; energy efficient; warm and dry;
- Providing safe, accessible spaces;
- Providing cycle spaces and promoting walking; and
- Avoiding exposure to excessive noise, vibration, light spill, overheating or poor air quality.

6.12 Operational Management Controls

An operational management plan would be prepared and implemented at the proposed development for all elements.

A Delivery Servicing Plan and a Waste Management Strategy would be prepared and implemented at the proposed development.

Design measures have been incorporated in respect of emergency and disaster management.

7. DEMOLITION AND CONSTRUCTION WORKS

7.1 Overview

The demolition and construction works would take place over a three-year period. It is anticipated that works would commence in quarter four (Q4) 2026, with completion targeted for Q4 2029.

7.2 Construction Environmental Management Plan

The framework presented in Environmental Statement Chapter 5: Demolition and Construction Description would form the basis for a Construction Environmental Management Plan (CEMP) and has been developed in accordance with standard best practice and regulatory requirements. The CEMP would include a Construction Logistics Plan (CLP) and a Site Waste Management Plan (SWMP) and would be submitted for review and approval by Manchester City Council prior to commencement of works on-site. It would include the following:

- A commitment to environmental protection (all consultants and trade contractors would be invited to declare their support for this at tender stage);
- Documentation of measures to comply with environmental aspects of any planning conditions;
- Detailed control measures and activities to be undertaken to minimise likely environmental impacts, as well as associated roles and responsibilities;
- Target criteria for environmental issues, where practical, such as water and energy consumption;
- Any requirements for monitoring and record keeping;
- Proposed noise, vibration and dust monitoring levels to be agreed by Manchester City Council;
- A dedicated point of contact during normal working hours and in emergencies with responsibility to deal with environmental issues if they arise; and
- A review and monitoring regime of on-site performance against the CEMP provisions by the project team and regular environmental audits of its implementation.

7.3 Community Liaison

The Applicant would engage with and inform the local community and local stakeholders of particular construction tasks and indicative timelines across the individual construction phases and would ensure that both parties are fully involved in any such dialogue.

Matters for public consultation during the demolition, bulk excavation and piling works would be brought to the public's attention through staging drop-in exhibitions and the circulation of bespoke newsletters within the established catchment area. Local stakeholders would be engaged in direct communication with the Applicant, design team and other such consultants as required from time to time through the established Resident's and Community Liaison Groups. These groups would be open to new members as and when required and would be run in accordance with the stipulations of MCC.

7.4 Working Hours

Working hours would be agreed with MCC, but are expected to be:

- 08:00 to 18:00 hours Monday to Friday;
- 08:00 to 13:00 hours Saturday; and
- No working on Sundays or Bank Holidays.

All work which is intended outside of these hours, excluding emergencies, would be subject to prior agreement, and / or reasonable notice to MCC and other relevant parties.

7.5 Potential Demolition and Construction Environmental Effects

The main sources of potential environmental effects during demolition and construction of the proposed development have been identified as:

- Existing views;
- Townscape;
- Daylight, Sunlight and Overshadowing; and
- Global climate change.

Potential impacts have been identified and standard best practice mitigation measures have been incorporated into the development proposals to avoid the likelihood for significant environmental effects.

8. LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS OF PROPOSED DEVELOPMENT

8.1 Daylight, Sunlight and Overshadowing

8.1.1 Demolition and Construction Effects

There is a reasonable level of baseline daylight and sunlight to the surrounding sensitive residential receptors, considering the city centre context of the site and the height and density of the immediate locality.

As any potential daylight and sunlight effects relating to demolition and construction stages will gradually increase to the potential effects identified for the completed proposed development, the interim construction effects have not been assessed, as it is considered that the completed proposed development represents the worst-case assessment in terms of likely daylight and sunlight.

During the construction phase, the daylight and sunlight effects will gradually change from the baseline condition to those impacts (where present) with the proposed development in place, which is described below in the operational phase.

8.1.2 Completed Development Effects

The assessment has been undertaken with reference to BRE Guidance, the industry standard guidance for assessment of daylight and sunlight amenity impact. The following buildings were assessed in relation to daylight and sunlight amenity:

- Britton House, 21 Lord Street, Manchester M4 4FN;
- Jefferson Place, 1 Fernie Street, Manchester M4 4AZ;
- The Hallmark, 6 Cheetham Hill Road, Manchester M4 4GA;
- Melia House, 19 Lord Street, Manchester, M4 4AX;
- Barton Place, 3 Hornbeam Way, Manchester, M4 4AT;
- Masson Place, 1 Hornbeam Way, Manchester M4 4AJ;
- St. Chad's Presbytery, Stocks Street, Manchester, M8 8GG;
- Area of lawn associated with Britton House; and
- Garden and landscaping associated with St Chad's Presbytery.

The focus of the BRE Guidance is on assessment of habitable rooms, such as bedrooms, kitchens and living rooms within neighbouring buildings. In accordance with the BRE Guidance, rooms within neighbouring buildings above that are not of habitable use (for example circulation spaces, WCs), or other neighbouring buildings of commercial use, have not been impact assessed.

Construction of the proposed development will result in reduced daylight and sunlight over the site to windows and rooms of the neighbouring buildings.

Daylight Effects

The scale of effect on the daylight amenity of Jefferson Place and Barton Place **is moderate adverse**, significant**.** No other buildings assessed will have significant effects related to daylight amenity.

Sunlight Effects

St Chad's Presbytery and Britton House have been appraised for impacts to sunlight. Windows of the other neighbouring buildings are either south of the site, meaning that they do not receive direct sunlight over the area of the proposed development or are orientated north-west, north or north-east facing, meaning that these windows and the rooms they serve will have **no significant impact on sunlight amenity.**

Impacts on sunlight amenity of St Chad's Presbytery are negligible. Impacts on sunlight amenity of Britton house are **minor adverse** (not significant). On that basis the impact of the proposed development on the sunlight amenity of these buildings is not significant.

Overall, it is considered that the completed proposed development would result in **moderate adverse** effects on the daylight amenity of Jefferson Place and Barton Place. All other effects on daylight, sunlight and overshadowing are considered to be **not significant.**

8.2 Wind Microclimate

The proposed development was assessed through the use of Computational Fluid Dynamics (CFD) to test for the safeness and comfortability of the site during both the construction and operation of the proposed development.

Baseline conditions for the site show that the site area meets safety criteria and is suitable for short-term standing or better throughout the year. As such, wind conditions are comfortable for pedestrian movement at the building entrances throughout the study area.

8.2.1 Demolition and Construction

During the demolition and construction works, there would be potential for wind to blow into and across any open areas of the site. However, the construction site would be occupied only by site workers, whose sensitivity to windy conditions would be reduced, while pedestrians moving elsewhere in the study area would be too far to notice any effect of a cleared site due to site hoardings. As a result, during demolition and construction works, there are **no significant** effects predicted on off-site and on-site receptors and consequently no additional mitigation is required.

8.2.2 Completed Development

During the operational stage, the wind conditions within and around the site would continue to meet the wind safety and comfort criteria.

Overall, it is considered that the completed proposed development would result in **negligible** effects on the wind microclimate and identified receptors, and as such would not give rise to significant effects on the wind microclimate conditions.

8.3 Socio-Economics and Human Health

8.3.1 Demolition and Construction Effects

The demolition and construction works associated with the proposed development generate 134 gross direct demolition and construction jobs which, when taking into account leakage, displacement and induced/indirect jobs, would be equivalent to 113 net demolition and construction jobs over the 140-150 week development programme. To maximise local recruitment, enhancement measures would comprise commitment to advertise job vacancies in local job agencies and newspapers in accordance with 'local and relevant postcodes' to maximise those employed locally as well as local provision of skills training. These measures would be secured by means of an appropriately worded planning condition. The residual effect would be beneficial and **not significant** at the local authority level.

8.3.2 Completed Development Effects

The proposed development would deliver 251 new residential units, which would result in a **minor beneficial, not significant,** residual effect at the neighbourhood level. The effect at local authority level would not be significant.

The introduction of a new residential population would create a minor beneficial, not significant, effect on local spending within the area. The introduction of this new residential population would

also create a **minor adverse, not significant**, effect on the demand for local open space and recreation.

Residential amenity effects have been considered using the separate technical assessments of daylight/sunlight and wind microclimate. Wind effects are assessed as Negligible and not significant. For daylight, some neighbouring residents would experience noticeable reductions, and **moderate adverse** (significant) effects are identified for parts of Jefferson Place and Barton Place in relation to residential amenity. These effects are localised to specific neighbouring properties. For human health, daylight/sunlight effects are expected to relate primarily to amenity and wellbeing pathways affecting a limited population and are therefore not significant in EIA terms.

Overall, the proposed development is expected to result in a minor beneficial effect for housing supply and the local economy and no significant human health effects. A localised socioeconomic amenity effect is identified for daylight impacts at Jefferson Place and Barton Place, which is consistent with the technical daylight assessment.

8.4 Climate Change and Greenhouse Gas

Potential climate change and Greenhouse Gas effects due to the demolition and construction of the proposed development stages of the proposed development have been assessed. This has been undertaken in line with the relevant national and local guidance and regulations.

A desktop assessment of baseline greenhouse gas emissions from the site in its current layout has been undertaken. As the site is currently vacant there are no greenhouse gas emissions generated from the site. Therefore, any future development on the site will lead to an increase in greenhouse gas emissions.

8.4.1 Demolition and Construction Effects

During demolition and construction works greenhouse gas emissions may be generated directly through the burning of fuels for construction transport, plant and generators, or indirectly as a result of electricity use from the national grid and carbon emissions generated during the manufacture and transport of materials used within the construction of the proposed development.

A lifecycle carbon assessment has been produced calculating all greenhouse gas emissions generated during the demolition and construction stage of the proposed development. The total emissions during the construction stage of the proposed development were compared against regional net zero targets for large scale developments and were found to be below the target level.

As the project progresses the life cycle assessment will be updated to reflect exact specifications and quantities of materials utilised through the construction of the development. Locally sourced materials and materials with lower associated carbon emissions will be prioritised to minimise greenhouse gases generated by the proposed development.

Additionally, a number of management plans will be utilised throughout the demolition and construction stage to ensure sustainable practices in relation to transport, waste and the environment are adhered to throughout its duration.

Overall, it is considered that the demolition of the existing site and construction of the proposed development would result in a minor adverse effect on as a result of greenhouse gases to the global atmosphere, and as such would not give rise to significant effects on Climate Change. As such, there is a **minor adverse** effect on the global atmosphere as a result of the release of greenhouse gases during demolition and construction.

8.4.2 Completed Development Effects

Once construction of the proposed development is complete and the building occupied, greenhouse gases may be generated as a result of energy supplied to the building, vehicle emissions, water usage or the maintenance, repairs or replacement of materials over the lifetime of the development.

A Carbon and Energy Statement has been produced to determine the energy requirements of the proposed development. The development has been designed to be thermally efficient, fully electric and utilise solar power panels to produce renewable energy onsite and reduce reliance on the grid. The calculated energy demand for the proposed development has been compared to regional net zero targets for large scale developments and found to be below the target level.

The proposed development will not provide car parking, limiting associated vehicle emissions from the scheme.

As part of the design process, materials fixtures and fittings installed within the proposed development will be prioritised based on their durability and longevity, reducing the requirement to replace or refurbish the proposed development. Furthermore, fixtures will be selected to with high energy and water efficiency ratings to reduce overall consumption from the proposed development.

Overall, it is considered that the completed proposed development has taken significant steps to minimise the amount of greenhouse gases emitted to the atmosphere. As such, residual effects are not considered to be significant and there will be a **minor adverse** effect on the global atmosphere and energy and water consumption from the operational proposed development.

8.5 Townscape, Visual and Built Heritage

Around the site, there are four main townscape character areas that contextualise the site and its surroundings. These include:

- Townscape Character A – Cheetham Hill Road Corridor;
- Townscape Character B – Lord Street/Fernie Street;
- Townscape Character C – Green Quarter Cluster; and
- Townscape Character D – NOMA/Victoria North.

Fourteen different viewpoints have been considered within the assessment and how they will be impacted by the proposed development. These are shown below in Figure 8.1.

8.5.1 Demolition and Construction

During demolition and construction, the removal of the derelict structure and overall cleanup of vegetation on the vacant site creates a **minor-moderate beneficial** (not significant) effect on all of the townscape areas assessed.

8.5.2 Completed Development

Of all viewpoints assessed, only one viewpoint has significant effects associated with the construction of the proposed development. This is Viewpoint C – Lord Street/Strangeways, which will experience a **moderate-major** (significant) effect on the views from this area. No other townscape views assessed resulted in significant effects and all of the other impacts were assessed as beneficial or neutral for the surrounding area.



Figure 8.1: Location of viewpoints considered in the assessment.

The proposed development would not give rise to any unacceptable impacts to heritage, townscape or visual receptors. On the whole, the proposed development would demonstrably improve the appearance, character and function of the townscape. Given the lack of effects, no additional mitigation is proposed.

9. CUMULATIVE EFFECTS

9.1 Intra-Project Cumulative Effects

Intra-project cumulative effects from the proposed development itself on surrounding sensitive receptors and on-site receptors during the demolition and construction works and also once the proposed development is completed, were considered.

9.1.1 Demolition and Construction

No intra-project cumulative effects are anticipated for the proposed development during demolition and construction.

9.1.2 Completed Development

No intra-project cumulative effects are anticipated for the proposed development once completed.

9.2 Inter-Project Cumulative Effects

Consistent with the effects of the proposed development, the cumulative schemes would deliver high quality new housing and public realm improvements, generate employment and have a beneficial effect on the local economy through additional spending. The cumulative schemes would contribute to the ongoing high-rise redevelopment of the study area and thereby add to the changing townscape character and local views.

It is reasonably assumed that the cumulative schemes would make appropriate financial contributions towards community infrastructure, public transport capacity and highway works as necessary, to off-set or reduce their individual environmental effects.

Where there are potential overlaps of the demolition and construction stages of the proposed development with cumulative schemes, significant cumulative effects have been assessed chapter-by-chapter within Volume 1 of the environmental statement.

10. SUMMARY

The proposed development has evolved through a detailed understanding of the site, its emerging surrounding context, the aspirations of local and regional policy, and consultation with MCC, key stakeholders and the general public.

The proposed development would deliver a high-quality residential development which would comprehensively regenerate the site.

No significant beneficial environmental effects have been identified, however many non-significant beneficial environmental effects have been identified in relation to the proposed development.

The following significant adverse environmental effects have been identified:

- A **moderate adverse** effect on daylight amenity on Jefferson Place;
- A **moderate adverse** effect on daylight amenity on Barton Place;
- A **moderate adverse** effect on human health from loss of daylight amenity on Jefferson and Barton Place; and
- A **moderate-major** neutral effect on Viewpoint C – Lord Street/Strangeways from the operational proposed development.

Identified additional mitigation measures would be secured by means of appropriately worded planning conditions and financial contributions.

1. Introduction

Introduction

1.1 This Environmental Statement (ES) has been prepared on behalf of Linear Construction Limited (the 'Applicant'), in accordance with the statutory procedures set out in The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)1 (the 'EIA Regulations').

1.2 The ES relates to the development of land which is located off Lord Street, Cheetham Hill, Manchester (the 'site'). The site falls within the jurisdiction of Manchester City Council (MCC). The site is located at Ordnance Survey (OS) National Grid Reference (NGR) SJ841994.

1.3 The development proposals comprises a residential led scheme (the 'proposed development') for which the Applicant has prepared a full planning application for (referred to hereafter as the 'application'). The application will be submitted to MCC.

1.4 The Applicant recognises that the proposed development falls under the definitions set out within Schedule 2, Paragraph 10(b) 'Urban Development project' of the EIA Regulations which, owing to its nature, scale and location, is likely to give rise to significant effects on the environment. The Applicant has therefore voluntarily commissioned an environmental impact assessment (EIA) for the proposed development, the findings of which are presented within this ES.

1.5 EIA is a formal process in which the likely significant effects of certain types of development projects on the environment are identified, assessed and reported upon.

1.6 This ES presents the results of the EIA that has been undertaken of the proposed development as a whole and of the site a whole.

1.7 In accordance with the EIA Regulations, the ES reports on the likely significant environmental effects of the proposed development during the demolition and construction stage, the subsequent completed development stage.

1.8 The EIA has taken into account the mitigation measures that are being proposed by the Applicant, including those measures that have been integrated into the planning and design of the proposed development to avoid and, where avoidance is not possible, to reduce and/or off-set likely significant adverse effects. It then assesses the significance of the residual effects.

1.9 The EIA has been carried out by Ramboll UK Limited ('Ramboll') and a team of technical specialists in accordance with good practice guidelines including, the Institute of Sustainability and Environmental Professionals (ISEP, formerly the Institute for Environmental Management and Assessment (IEMA)) Quality Mark criteria. The EIA team, in addition to the Applicant's wider design and planning team, is presented in Table 1.2, along with the respective disciplines.

1.10 The ES comprises the following:

- Non-Technical Summary (NTS);
- Volume 1: Main Environmental Statement Report (this document);
- Volume 2: Townscape and Visual Impact Assessment (TVIA); and
- Volume 3: Technical Appendices.

1.11 This chapter of the ES provides a general description of the site, the relevant planning context, planning application details, as well as the content and structure of the ES. More detailed information on the site is provided in the technical assessments of this Volume, as well as in ES Volume 2. Further information on how the scope of the EIA was defined and on the structure of this ES, is provided in Chapter 2: EIA Process and Methodology.

1.12 This chapter is accompanied by Technical Appendix 1.1: ISEP Quality Mark Checklist.

[1] Secretary of State, 2017. Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended), London, HMSO.

Development Context

Site Location and Context

1.13 The site is located at Lord Street, M4 4EX (centred at NGR: SJ841994), as presented in Figure 1.1.

1.14 The boundaries and immediate surroundings of the site comprise the following:

- North: Immediately north of the site is Lord Street. Following Lord Street is a small commercial unit containing multiple businesses and a car park in the rear. On the north side of this retail unit lies a small garden and the Manchester Oratory Catholic Church, which contains two separate Grade II Listed Buildings within its perimeter.
- South: The site is bordered by a car park and associated Texaco Petrol station located along Cheetham Hill Road. Further south are residential properties located within an apartment complex. Park Place Bus Station is situated outside of this complex, providing services to Piccadilly Gardens and Sale through bus routes 135 and 41.
- West: The west of the site is completely bound by the A665 Cheetham Hill Road. Beyond this lies the connection to Carnarvon Street and Topps Tiles Clearance Outlet and its associated car park.
- East: the site is bound by Fernie Street to the east with residential and commercial properties located further beyond the road.

Site Description

1.15 As presented in Figure 1.1, the site is 0.18 hectares (ha) in area and made up of a rectangular parcel of land and comprises vacant, derelict land with one disused building, a single storey, former tyre shop.

1.16 The site consists of hardstanding and scrub. No trees are present on the site. The site and its surrounding environmental context is shown below in Figure 1.2.

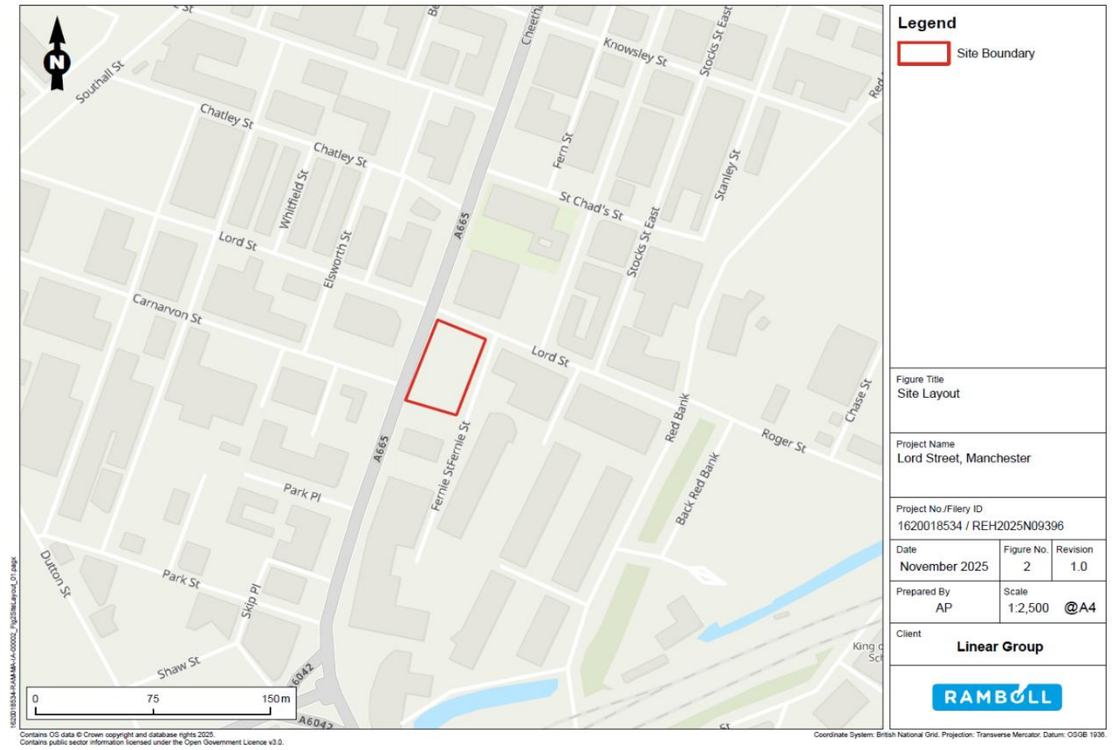


Figure 1.1: Site Location Plan

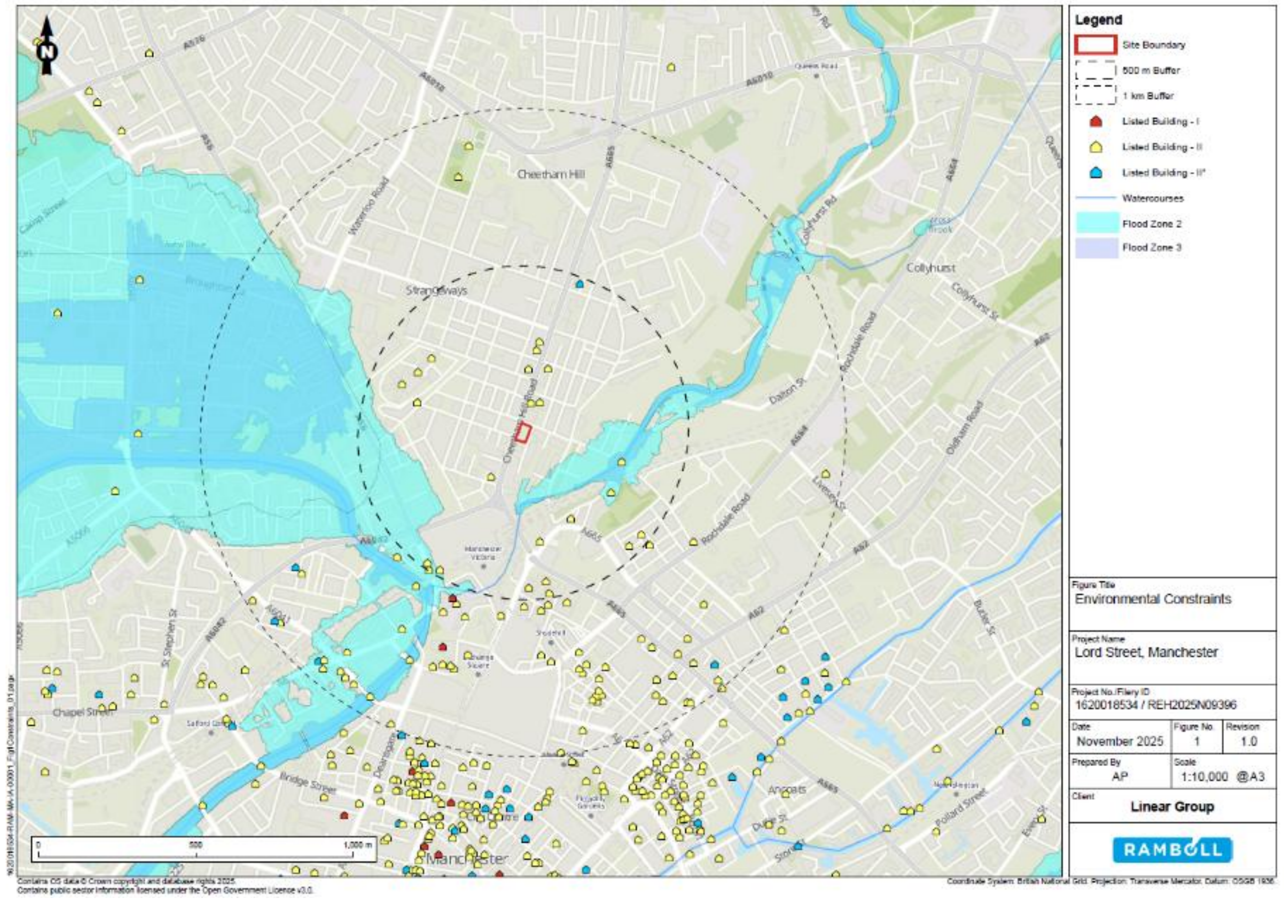


Figure 1.2: Site and Surrounding Environmental Context

1.17 Vehicular and pedestrian access to the site is provided from Lord Street, however the site is not currently accessible to the general public.

Environmental Considerations

1.18 A detailed description of the environmental considerations and sensitive receptors considered in the EIA are presented in each of the technical assessment chapters (Chapters 6 to 9) of this Volume and in ES Volume 2.

1.19 There are no statutory or non-statutory land-based designations within the site boundary, nor does the site contain any historic statutory or non-statutory designations. The site is however located within the Impact Risk Zone of the Rochdale Canal Site of Special Scientific Interest and Special Conservation Area. There are no further statutory or non-statutory designations located within 1km of the site.

1.20 The site falls within the Manchester City Council Air Quality Management Area, which has measured exceedances for PM10 and NO2 since 2001.

1.21 The underlying geographic formation of the site consists of the Chester Formation of sandstone and sedimentary bedrock. The Till, Devensian superficial deposit is also present underneath the site. The site is not located within a Groundwater Source Protection Zone. There are no boreholes present within the site boundary.

1.22 Groundwater and surface water sampling revealed elevated levels of cyanide and ammoniacal nitrogen above Environmental Quality Standards.

1.23 Elevated ground gas concentrations have been recorded during previous investigations; however, the scope of these investigations were limited by the presence of existing gas holders, associated infrastructure and ancillary buildings, which restricted the depth and location of exploratory locations.

1.24 The Environmental Agency Flood Mapping confirms that the site is not located within Flood Zone 2 or 3. There are portions of the site located within the northern and northwestern boundaries that are within a 1 in 1000 year annual likelihood of surface water flooding.

1.25 There are no Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs) or National Nature Reserves (NNRs) located within 2 km of the site.

1.26 There are no heritage assets within the site redline boundary. There are two grade II listed buildings within 100 m of the site boundary;

- St Chad's Cheetham Hill First World War Memorial Cross (list entry 1485562), located approximately 80 m north of the northern site boundary; and
- Roman Catholic Church of St Chad (list entry 1208542), located approximate 85 m north of the northern site boundary.

1.27 The site does not fall within a conservation area.

1.28 Publicly available environmental sensitivity data sets for the site and surrounding study area are presented in Figure 1.2 providing a summary of the key sensitive receptors group.

Planning Context

Planning Policy Context

1.29 The proposed development has been considered against relevant planning policies and guidance at national, regional and local levels.

National Policy and Guidance

1.30 The EIA is written in regard to the following national policy and guidance in informing assessments, their methodology and identification of sensitive receptors:

- National Planning Policy Framework (NPPF); and
- Planning Practice Guidance

Regional Planning Policy

1.31 The EIA will have regard to the Places for Everyone Joint Development Plan. The Joint Development Plan is a plan for nine of the ten Greater Manchester districts, which will determine the type of development that will take place within the districts, maximising the use of brownfield land and urban spaces, whilst protecting Green Belt land from the risk of unplanned development. It will also ensure all new developments are sustainably integrated into Greater Manchester's transport network or supported by new infrastructure.

1.32 The Joint Development Plan Document:

- Sets out how nine districts should be developed up until 2037;
- Identifies the amount of new development that will come forward, in terms of housing, offices and industry and warehousing, and the main areas in which these will be focused;
- Supports the key delivery of infrastructure, such as transport and utilities;
- Protects the important environmental assets across the city region;
- Allocates sites for employment and housing outside of the existing urban area; and
- Defines a new Green Belt boundary for Greater Manchester.

Local Policy

1.33 The ES has been written with regard to MCC's Local Development Framework Core Strategy Development Plan Document and any relevant Supplementary Planning Documents (SPDs) and Supplementary Planning Guidance (SPGs).

1.34 Key policies and guidance from these documents and others have been referenced in the Planning Statement which accompanies the application, and in technical assessment chapters where relevant.

Planning History

1.35 Planning permission was first granted on 21 November 2016 under application reference 113914/FO/2016 for the development of a 16 storey building consisting of 192 apartments and a ground floor commercial unit. Since this application, multiple applications have been filed for the proposed development in order to discharge the planning conditions associated with the permission. These are detailed in Table 1.1.

1.36 The scheme was later amended through a non-material amendment application (138553/NMC/2023) which retained the same number of residential units but reduced the level of onsite parking.

Table 1.1: Site Planning History

Reference	Description
113914/FO/2016	Erection of a 16 storey building to form 192 residential apartments (Use Class C3a) together with ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings
CDN/19/0095	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0182	Discharge of Conditions 5 and 6 – Construction Management Plan and Local Labour
CDN/19/0330	Discharge of Condition 3 - Drainage
CDN/19/0418	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0536	Discharge of Condition 3 - Drainage
124193/JO/2019	Variation of Condition 10 – Replacement Environmental Standards.
138553/NMC/2023	Non-material amendment to planning permission 124193/JO/2019 to amend condition 2 (Approved drawings) to insert an additional internal staircase, amend number of car

Table 1.1: Site Planning History	
	parking spaces, remove sub-basement and change the commercial space to residents' amenity space

Project Team

1.37 Table 1.2 sets out the project and design team for the project.

Table 1.2: Design and EIA Team	
Company	**Role**
AEW Architects	Architect / Principal Designer
Enabl	Planning Consultant
Rihbell	Project Manager
Reform	Landscape Architect
Ramboll	EIA Coordinator Human Health and Socioeconomics Consultant
Architectural Aerodynamics	Wind Microclimate Consultant
Reform	Townscape and Visual Impact Consultant
Proximity	Daylight, Sunlight, Solar Glare Consultant
Redmore	Climate Change Consultant

1.38 As required by Regulation 18(5)(b) of the EIA Regulations, Table 1.3 presents a statement from the Applicant outlining the relevant expertise or qualifications of the competent experts that have undertaken the EIA and prepared this ES.

Table 1.3: Topic Chapter Professional Experience	
Introductory and Concluding Chapters, Non-Technical Summary Ramboll	Project Manager – Campbell Risdon Campbell is a Senior Consultant with over two years of experience coordinating and managing EIAs within the property sector. He holds an MSc from the University of Manchester in Environmental Impact Assessment and Management and is an Associate member of ISEP. Project Director – Harry Parker Harry is a Chartered Environmentalist with 18 years' experience in environmental impact assessment (EIA) working in public and private sector. During his career Harry has managed and directed EIAs for a wide range of residential and commercial developments across the UK and Ireland
Daylight, Sunlight and Overshadowing Proximity	Jerome Muir Jerome is a senior chartered building surveyor specialising in rights to light and daylight and sunlight impact assessment for over 8 years.
Wind Microclimate Architectural Aerodynamics	Joseph Osman Joseph has an MEng degree in aerospace engineering, and since 2008 has helped to deliver hundreds of high-profile wind engineering projects, including tall buildings, masterplans, stadia and bridges. During a 7 year period working within the product management team for one of the worlds leading off-the-shelf CFD codes, Joseph worked to ensure that CFD methods can be applied accurately and robustly to a diverse range of applications.
Socioeconomics and Human Health Ramboll	Ivan Tennant Ivan is a chartered town planner leading on the provision of evidence to test the quality and policy compliance of major development and planning projects, many of which have been subject to EIA. He has appeared on multiple occasions as an expert witness to explain this evidence at examinations in public and private enquiries. Isobel Kiely Isobel has a BA (Hons) in sociology and social research. Isobel has built her career around the significant impact that businesses, policies, developments, infrastructure, and initiatives can have on the health and wellbeing of their surrounding communities. She is experienced in Health Impact Assessments (HIA) and Environmental Impact Assessments (EIA) health chapters. Henry Lucas Henry has over 2 years 'experience writing socio-economic chapters for Environmental Impact Assessments across various residential, mixed-use, and energy developments across the UK. His work involves a combination of policy analysis, socio-economic analysis, and impact assessment, adhering to ISEP standards. Henry also has the ability to contribute to Health Impact Assessments (HIAs) and Equalities Impact Assessments (EqIAs).
Climate Change and Greenhouse Gases Redmore	Megan Pond Megan holds a BSc in Chemistry and has provided input to Environmental Statements for both Air Quality and Climate Change reporting for 2 years.

Environmental Statement

Environmental Statement Structure

1.39 The ES comprises the following documents:

- Non-Technical Summary
- Volume 1: Main Environmental Statement

1. Introduction;
2. EIA Process and Methodology;
3. Alternatives and Design Evolution;
4. Proposed Development Description;
5. Demolition and Construction Description;
6. Daylight, Sunlight and Overshadowing;
7. Wind Microclimate;
8. Socioeconomics and Human Health;
9. Climate Change;
10. Cumulative Effects; and
11. Summary of Additional Mitigation and Residual Effects

- Volume 2: Townscape and Visual Assessment.
- Volume 3: Technical Appendices:

Appendix 1.1: ISEP Quality Mark Checklist;
Appendix 2.1: EIA Scoping Report;
Appendix 2.2: EIA Scoping Opinion;
Appendix 2.3: Transport Statement;
Appendix 2.4: Interim Travel Plan;
Appendix 6.1: Daylight, Sunlight and Overshadowing Methodology;
Appendix 6.2: 3D Views;
Appendix 6.3: Vertical Sky Component (VSC) Table;
Appendix 6.4a: No Sky Line (NSL) Table;
Appendix 6.4b: NSL Contours;
Appendix 6.5: Annual Probable Sunlight Hours (APSH) Table;
Appendix 6.6: 2 Hour Time in Sun Plots;
Appendix 6.7: Cumulative 3D Views;
Appendix 6.8: Cumulative VSC Table;
Appendix 6.9a: Cumulative NSL Tables;
Appendix 6.9b: Cumulative NSL Contours;
Appendix 7.1: Wind Microclimate Assessment;
Appendix 8.1: Socio-Economics and Human Health Policy and Guidance;
Appendix 9.1: Climate Legislation, Policy and Guidance;
Appendix 9.2: Life Cycle Assessment; and
Appendix 9.3: Carbon and Energy Statement.

1.40 The required content of the ES is set out in Schedule 4 of the EIA Regulations. Table 1.4 presents the requirements of the EIA Regulations and indicates where in this ES the requirements have been met.

Table 1.4: Information Required in an Environmental Statement (Schedule 4 of EIA Regulations)

Required Information		**Chapter of the ES**
1	A description of the development, including in particular: a description of the location of the proposed development; a description of the physical characteristics of the proposed development, including, where relevant, requisite demolition works, and the land-use requirements during the operation stage; a description of the main characteristics of the operational phase of the proposed 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; 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 operation stage.	ES Chapter 1: Introduction, ES Chapter 4: Proposed Development Description, ES Chapter 5: Demolition and Construction Description, ES Chapters 6-16, ES Volumes 2 and 3
2	A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the Applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	ES Chapter 3: Alternatives and Design Evolution
3	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the proposed 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.	ES Chapter 3: Alternatives and Design Evolution

Table 1.4: Information Required in an Environmental Statement (Schedule 4 of EIA Regulations)

Required Information		Chapter of the ES
4	A description of the factors specified in Regulation 4(2) likely to be significantly affected by the proposed 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.	ES Chapters 6-10, Volume 1, ES Volumes 2 and 3
5	A description of the likely significant effects of the proposed development on the environment resulting from, *inter alia*: a) the construction and existence of the development including, where relevant, demolition works; b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; c) the emission 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 effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. The description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the proposed development, including in particular those established under Council Directive 92/43/EEC and Directive 2009/147/EC.	ES Chapters 6-10, Volume 1, Volumes 2 and 3
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 required information and the main uncertainties involved.	ES Chapters 6-10, Volume 1 ES Volumes 2 and 3
7	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). The 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 phases.	ES Chapter 5: Demolition and Construction Description, Volume 1 Mitigation sections of ES Chapters 6-10, Volume 1 and ES Volumes 2 and 3
8	A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	ES Chapters 6-10, ES Volume 1, ES Volumes 2 and 3
9	A non-technical summary of the information provided under 1 to 8 above.	Non-Technical Summary
10	A reference list detailing the sources used for the descriptions and assessments included in the ES.	ES Chapters 1-10, ES Volume 1, ES Volumes 2 and 3

Environmental Statement Good Practice

1.41 As with EIA, good practice in the preparation of the ES is defined in a number of sources, with more specific issues covered by ES review checklists. Many of these checklists are very detailed and go to some length. In terms of widely applicable and practical guidance, the Institute of Sustainability and Environmental Professionals (formerly the Institute of Environmental

Management and Assessment (IEMA)) Quality Mark indicator check has been referenced in undertaking the EIA and in producing this ES as described in Technical Appendix 1.1, ES Volume 3.

1.42 Ramboll is a Registrant on the ISEP Quality Mark. Accordingly, as part of Ramboll's Quality Assurance procedures and Quality Mark Commitments, the EIA has been undertaken to meet the Quality Mark Commitments as set out in Technical Appendix 1.1, ES Volume 3.

2 EIA PROCESS AND METHODOLOGY

Introduction

2.1 This chapter of the ES sets out the general approach to the process and methodology that is adopted when undertaking an EIA. It describes the EIA legislative framework and identifies the key guidance that was considered. The scoping and consultation process that was adopted to identify the key environmental topics for inclusion in the EIA and ES is outlined.

2.2 While the overall EIA approach and methodology are described in this chapter, further detail on how the approach and methodology were tailored to the scoped-in environmental topics is presented in the relevant technical assessment chapters of ES Volumes 1 and 2.

2.3 This chapter is accompanied by the following technical appendices within ES Volume 3:

- Technical Appendix 2.1: EIA Scoping Opinion Request Report;
- Technical Appendix 2.2: Manchester City Council EIA Scoping Opinion:
- Technical Appendix 2.3: Transport Statement; and
- Technical Appendix 2.4: Interim Travel Plan.

Environmental Impact Assessment

2.4 The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations, 2017[1] (the 'EIA Regulations'). The EIA Regulations set out the statutory process and minimum requirements for EIA and the contents of the ES. Specifically, they prohibit the grant of planning permission for developments likely to have significant effects on the environment, defined in the EIA Regulations as 'EIA Development', unless information on those effects is considered by the relevant planning authority in reaching its decision on a planning application. That information includes both the ES, which is the Applicant's own assessment, and any other information provided by consultation bodies, the public, and any other persons about the proposal's environmental effects.

2.5 In addition to the EIA Regulations, the following guidance on EIA and the application of the EIA Regulations have been considered in undertaking this EIA:

- ISEP:
  - ISEP Guidelines for Environmental Impact Assessment[2];
  - ISEP Special Report into the State Environmental Impact Assessment Practice in the UK[3];
  - ISEP Demystifying Cumulative Effects[4];
  - ISEP Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance[5];
  - ISEP Guide to Climate Change Resilience and Adaptation[6];
  - ISEP Delivering Proportionate EIA[7]:
  - ISEP Health in Environmental Impact Assessment[8];
  - ISEP Shaping Quality Development[9]:
- Department for Communities and Local Government (DCLG) [now Department for Levelling Up, Housing and Communities]: Amended Circular on Environmental Impact Assessment (consultation paper)[10];
- DCLG [now Department for Levelling Up, Housing and Communities] Environmental Impact Assessment: A guide to good practice and procedures (consultation paper)[11];
- Department for Communities and Local Government:
  - NPPF, 2025[12];
  - PPG[13];
- Ministry of Housing, Communities and Local Government (MHCLG) Online Resource - Guidance for Environmental Impact Assessment[14];
- Landscape Institute and ISEP: Guidelines for Landscape and Visual Impact Assessment[15];
- Landscape Institute: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment[16]

2.6 Guidance of relevance to individual technical assessments have been set out in Chapters 6-9, as well as ES Volume 2. In accordance with the EIA Regulations, this EIA has been undertaken based on the proposed development as described in ES Chapter 4: Proposed Development Description and ES Chapter 5: Demolition and Construction Description of this Volume.

EIA Process

2.7 EIA is a process that identifies the likely significant environmental effects (both beneficial and adverse) of a proposed development. The process aims to avoid, reduce and/or off-set any significant adverse environmental effects, where these are identified, and to enhance any beneficial effects. proposed developments to which EIA is applied are those that are likely to have significant effects on the environment by virtue of factors such as their nature, size or location.

2.8 The process and outcomes of the EIA are presented in an Environmental Statement (ES). The contents of an ES are prescribed by the EIA Regulations and should be a clear and concise summary of a proposed development and its likely environmental effects - including direct, indirect and cumulative effects - on the natural, built and human environments. The ES is submitted to a relevant planning authority (in the case of planning applications, to local planning authorities) to accompany an application for planning permission. In this way, the aim of EIA 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 project's likely significant effects and takes this into account in the decision making process. Alongside this, an EIA's objective is also to ensure that the public and statutory consultees are given early and effective opportunities to participate in decision-making procedures and to enable the grant of required licences.

1 Secretary of State, 2017. Town and Country Planning (Environmental Impact Assessment) Regulations 2017, London, HMSO.
2 ISEP (ISEP), 2004. Guidelines for Environmental Impact Assessment. ISEP.
3 ISEP (ISEP), 2011. Special Report into the State Environmental Impact Assessment Practice in the UK. ISEP.
4 ISEP, 2020. Demystifying Cumulative Effects. ISEP.
5 ISEP, 2022. ISEP Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition. ISEP.
6 ISEP 2020. ISEP Guide to Climate Change Resilience and Adaptation. ISEP
7 ISEP 2017. Delivering Proportionate EIA. ISEP.
8 ISEP, 2017. Health in Environmental Impact Assessment. ISEP.
9 ISEP 2015. Shaping Quality Development, November 2015. ISEP.
10 Department for Communities and Local Government, 2006. Amended Circular on Environmental Impact Assessment: A consultation paper. DCLG.
11 Department for Communities and Local Government, 2006. Environmental Impact Assessment: A guide to good practice and procedures – a consultation paper. DCLG.
12 Department for Communities and Local Government, December 2025. National Planning Policy Framework. London. HMSO.
13 Department for Communities and Local Government (Live Document) Planning Practice Guidance [online] Available: http://planningguidance.communities.gov.uk/.
14 Ministry of Housing, Communities and Local Government, 2014. Guidance for Environmental Impact Assessment. DCLG.
15 Landscape Institute and ISEP, 2013. Guidelines for Landscape and Visual Impact Assessment. Third Edition.
16 Landscape Institute, 2024. Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition

Screening

2.9 Screening is the term in the EIA Regulations used to describe the process by which the need for EIA is considered in respect of a proposed development. Some developments are automatically subject to EIA by reason of their size, nature and effects. These projects, known as Schedule 1 developments, include mainline railways, airports, waste facilities and large power stations. The proposed development is not such a project.

2.10 The need for an EIA for all other projects is determined on the basis of the following set criteria:

- The development is within one of the classes of development stated in Schedule 2 of the EIA Regulations; AND
- EITHER it meets or exceeds the size threshold for that class of development in Schedule 2; OR a part of the project is in a sensitive area; AND
- It is likely to have significant effects on the environment by virtue of factors such as its nature, size, or location.

2.11 These are known as Schedule 2 developments. Given the scale of the proposed development and the location of the Site, it is accepted by the Applicant that the proposed development has the potential to have significant effects on the environment and that it falls within the definition of Schedule 2 10(b) 'Urban Development Projects'.

Scoping and Consultation

2.12 Scoping is the term used in the EIA Regulations whereby an applicant can request a formal 'Scoping Opinion' from the relevant local planning authority on the content of an ES and the extent of the information to be considered in the assessments. The purpose of scoping is to focus the EIA on the environmental issues and potential impacts which need the most thorough attention; to identify those which are unlikely to need detailed study; and to provide a means to discuss methods of impact assessment so as to reach agreement on those that are the most appropriate.

2.13 The Applicant submitted an EIA Scoping Request Report to MCC on 17th November as part of a formal request for an EIA Scoping Opinion pursuant to Regulation 15(1) of the EIA Regulations. The EIA Scoping Request Report is presented in Technical Appendix 2.1 of ES Volume 3 and sets out a description of the then emerging proposed development; the potential key environmental impacts and likely effects to be considered as part of the EIA and ES; as well as the proposed approach that would be adopted for the EIA including the proposed scope and assessment methodologies to predict the scale of effects and to assess the significance in each case.

2.14 An EIA Scoping Opinion was issued by MCC on 8th January 2025. The EIA Scoping Opinion is presented in Technical Appendix 2.2 of ES Volume 3. MCC confirmed their general agreement to the scope of the EIA as presented in the EIA Scoping Request Report and the EIA Scoping Opinion provided general comments requesting further information on the EIA outside of what was provided within the Scoping Report. The exception of this was the request for the inclusion of the consideration of Transport and Heritage as part of the EIA. The Transport Statement is included as Technical Appendix 2.3 and the Interim Travel Plan is included as technical Appendix 2.4. Built Heritage has been considered within ES Volume 2: Built Heritage and Townscape and Visual Impact Assessment. It should be noted that Highways Manchester agreed with the outcome of the Scoping Report that Traffic and Transport would not need to be required further within the EIA, however MCC's Scoping Opinion has still requested its inclusion.

2.15 The environmental topic-specific EIA Scoping Opinion comments/requests and associated agreements reached are, however, summarised in each of the technical assessment chapters of ES Volume 1 and 2.

2.16 In accordance with Regulation 18(4)(a), the EIA has been undertaken and the ES prepared based on the EIA Scoping Opinion. Where the approach differs, full justification is provided within the technical assessment chapters, as appropriate.

2.17 As part of the EIA, technical consultations were undertaken with the:

- Greater Manchester Archaeological Advisory Service;
- Greater Manchester Ecology Unit;
- Natural England;
- United Utilities;
- Manchester City Council Neighbourhood Directorate;and
- Manchester Highways Development Control.

2.18 Details of these technical consultations are included in the relevant technical assessment, as appropriate.

Scope of EIA

Non-Significant Issues

2.19 One objective of the EIA scoping process is to ensure that the EIA is proportionate and focussed only on the likely significant environmental effects of the proposed development. Appraisals for each technical topic were undertaken as part of the EIA scoping process to determine the existing baseline conditions and the potential for likely significant effects to arise.

2.20 Accordingly, the EIA scoping process identified that the proposed development is unlikely to give rise to significant environmental effects in respect of the following environmental topics::

- Ecology;
- Water Resources and Flood Risk;
- Ground Conditions;
- Transport;
- Air quality
- Noise and Vibration;
- Materials and Waste;
- Aviation;
- Archaeology; and
- Major Accidents and Disasters.

2.21 A summary of the justification for scoping these topic areas out of the ES is provided below, with detailed justifications for scoping out presented in ES Volume 3, Technical Appendix 2.1.

2.22 Standard good practice, mitigation and enhancement measures identified during the course of preparing these documents were integrated into the proposed development as described in ES Chapter 4: Proposed Development Description and ES Chapter 5: Demolition and Construction Description.

2.23 In respect of waste, significant effects are considered unlikely when following the methods of assessment set out in the ISEP Guidance on Materials and Waste in Environmental Impact Assessment[17] and when considering the measures embedded into the proposed development design with respect to waste

17 ISEP, 2020. Materials and Waste in Environmental Impact Assessment. IEMA

minimisation. As such, a waste chapter was scoped out of the ES. The use of materials, anticipated waste arisings and management measures to be adopted are considered in Chapter 4: Proposed Development Description; and Chapter 5: Demolition and Construction Description.

2.24 Whilst significant environmental effects in respect of major accidents and disasters are considered unlikely, and is scoped out of the ES, consideration has been given to this topic in undertaking the EIA as discussed within ES Chapter 3: Alternatives and Design Evolution, Chapter 4: Proposed Development Description and Chapter 5: Demolition and Construction Description.

Potentially Significant Effects

2.25 The potentially significant environmental effects that were identified during the EIA scoping process and have been addressed within technical assessment chapters are as follows:

- Volume 1: Main Environmental Statement Report:
  - Chapter 6: Daylight, Sunlight and Overshadowing;
  - Chapter 7: Wind Microclimate;
  - Chapter 8: Socioeconomics and Human Health;
  - Chapter 9: Climate Change; and;
- Volume 2: Built Heritage and Townscape and Visual Assessment.

EIA Approach

Consideration of Alternatives

2.26 The EIA Regulations require that an applicant provides a summary description of reasonable alternatives studied and to provide a description of their specific characteristics, as well as an indication of the main reasons for selecting the preferred option, including a comparison of the environmental effects. The EIA Regulations do not define the term 'alternative' and EIA good practice tends to consider alternative design proposals and to explain the process through which the proposed development has evolved.

2.27 ES Chapter 3: Alternatives and Design Evolution presents the objectives of the proposed development and describes how the development proposals have evolved in response to environmental and planning opportunities and constraints, as well as consultation comments.

2.28 For the proposed development, the following alternatives have been considered:

- The 'Do-Nothing' alternative where the existing condition of the site remains in its underutilised state with no redevelopment; and
- Alternatives considered in the course of the design process (such as layouts and design) taking into account environmental and other relevant planning and design constraints as part of the design evolution.

Baseline

2.29 The purpose of the EIA is to predict how environmental conditions may change as a result of a proposed development. This requires that the current environmental conditions and those in the future are established. This is referred to as the 'baseline' and is usually established through a combination of desk-based research, site survey, empirical studies, projections and modelling. Together, these describe the existing and future character of a site and the value (importance) and vulnerability (sensitivity) of key environmental resources and receptors, against which any changes or effects resulting from a proposed development can be identified, understood and assessed.

Existing Baseline

2.30 The existing baseline represents the existing environmental conditions of the site and the surrounding study areas at the time of the assessments as described in ES Chapter 1: Introduction. The technical assessments in ES Volume 1 (6-9), ES Volume 2 and ES Volume 3 provide more detailed descriptions of topic specific existing baseline conditions against which the proposed development has been assessed.

Future Baseline

2.31 The future baseline represents the future on-site conditions of the site and the surrounding study areas.

2.32 A future baseline has been adopted for the following technical assessment chapters:

- Chapter 6: Daylight, Sunlight and Overshadowing – committed developments will be considered as part of the baseline where construction has meaningfully progressed.

2.33 For the climate change assessment, the methodology also considers the projected end of the design life of the development, assumed to be 60 years.

Receptors

2.34 Existing and future receptors that may be sensitive to potential environmental impacts as a result of the proposed development are summarised within ES Chapter 1: Introduction and ES Chapter 5: Demolition and Construction Description with further detail provided in respective technical assessment chapters. A summary of these potentially sensitive receptors are as follows:

- Demolition and construction workers and industry;
- Future off-site residential and non-residential users;
- Future on-site occupants, including residential occupants of the first completed residential block;
- Existing off-site and future on-site cyclists and pedestrians;
- Housing need within MCC;
- Local economy;
- Local social infrastructure, including primary and secondary schools, primary healthcare facilities and open and play space;
- Sensitive and vulnerable groups (including locations with concentrations of vulnerable users);
- Retail and recreational areas;
- Off-site amenity spaces;
- Climate;
- Existing townscape character areas; and
- Existing visual receptors and local and strategic views from publicly accessible locations such as roads, footpaths and open spaces.

Impact Assessment

Basis of EIA

2.35 The EIA and the technical assessment chapters have considered the proposed development as a whole and the site as a whole.

2.36 In accordance with the EIA Regulations, the EIA has been undertaken based on the:

- the site as presented and described in Chapter 1: Introduction, as well as the individual technical assessment chapters of this Volume (ES Chapters 6-9) and ES Volume 2 and
- proposed development as presented and described in ES Chapter 4: Proposed Development Description and Chapter 5: Demolition and Construction Description of this Volume.

2.37 The proposed development described in ES Chapters 4 and 5 includes mitigation which has been embedded through the design evolution process.

2.38 The proposed development has been assessed in the EIA, based on the following:

- Demolition and construction methods and control measures;
- Detailed planning application drawings;
- Detailed 3D model; and
- Detailed area schedule, residential unit and tenure mix.

Sources of Proposed Development Information

2.39 In addition to ES Chapters 1, 4 and 5 and the aforementioned documents, information on the proposed development has been drawn from the following application documents, as appropriate:

- Planning Statement;
- Plans and Drawings (including floor plans, elevations and landscape drawings)
- Schedule of Accommodation;
- Statement of Community Involvement;
- Design and Access Statement;
- Affordable Housing Statement
- Energy Statement;
- Environmental Standards Statement;
- Fire Statement;
- Transport Assessment;
- Flood Risk Assessment and Drainage Strategy;
- Construction Management Plan and Construction Site Waste Management Plan;
- BNG Statement and BNG Metric Tool; and
- Carbon Proforma.

Assessment Methodology

General

2.40 The aim of the EIA is not to assess the proposed development's compliance/performance against planning policy as this is considered within the Planning Statement that accompanies the application. Instead, reference has been made to national, regional and local policy to inform the scope of technical assessments, the assessment methodologies applied and the existence of any sensitive receptors to be considered.

2.41 Detailed assessment methodologies are provided within each technical assessment chapter of this ES Volume and ES Volume 2; however, in general terms, the assessments have been based upon the following approach:

- Review of the existing conditions (and defined future conditions) at the site and within the study area for the environmental topic under consideration via various sources of information, data and reports;
- Completion of desk-top studies;
- Completion of site surveys;
- Consideration of relevant legislation;
- Consideration of relevant planning policies (national, regional and local), guidance and standards;
- Consultations with consultation bodies as appropriate;
- Consideration of potentially sensitive receptors that could be affected by the proposed development;
- Use of published technical guidance and best practice (where relevant);
- Use of quantitative and qualitative assessment methods, professional judgement and expert opinion;
- Interpretation of the proposed development to identify the reasonable worst-case for assessment;
- Assessment of potential environmental impacts and likely effects, with an evaluation of their likely duration, magnitude and scale, taking into consideration embedded mitigation (where relevant); and
- Identification of additional mitigation and/or enhancement measures, followed by an assessment of the significance of the residual effects.

2.42 How the proposed development might affect the environment relies on predictions about what impact a certain action would have. Some predictions can be made using mathematical or simulation models, particularly where there are well known relationships between cause and effect. For example, the degree to which noise levels may increase as a result of additional traffic flows can be predicted using a mathematical equation. The level of air pollution from a known traffic flow can also be predicted from a computer-based simulation model. The visibility of a building can be predicted by accurately superimposing its outline and position over a photograph. Other impacts are less easy to predict in quantitative terms; for example, whilst the extent of a loss of a habitat can be measured, the effect on the abundance of individual species is more difficult to predict. In such cases, the EIA attempts to quantify the anticipated scale of impact using empirical experience, literature and professional judgement.

2.43 In all cases, the overall approach and specific methods of predicting the likely nature and magnitude of impact, as well as the scale of effect is set out in each of the technical assessments. Where used, recognised specific predictive methods are referenced. Any assumptions or limitations to knowledge are stated. In either case the thought process leading to the conclusions is based on reasonably reliable data and so is considered to be prudent and robust.

2.44 Where detailed information on the proposed development has not been available, reasonable assumptions have been made, and have been clearly set out, based on experience of developments of similar type and scale to enable assessment of likely significant effects.

2.45 The proposed development has not yet been approved so the conditional tense ('would') has been used to describe the development proposals, situations, potential impacts and likely effects that could/would arise from the introduction of the proposed development, as well as the embedded mitigation measures that would be delivered or would be required upon approval of the proposed development. This approach does not lessen the Applicant's commitment to deliver the proposed development as presented within the ES. Furthermore, each technical assessment (and in particular summary tables at the conclusion of each chapter) clearly sets out the means by which any required additional mitigation measures relied upon, are proposed to be secured.

Proposed Development Stages

2.46 Each technical assessment considers the following stages of the proposed development:

- Demolition and Construction Stage (during the redevelopment works);
- Completed Development Stage (upon completion and operation); and
- Cumulative Stage (in combination with or in addition to consented schemes).

2.47 An End-of-Life Stage has also been considered in respect of greenhouse gas emissions in ES Chapter 9: Climate Change.

2.48 The demolition and construction programme of the proposed development would be sequenced over a 140-150 week period and technical chapters the EIA has assessed and reported on the environmental effects of the completed development as a whole.

2.49 The development programme and demolition/construction methods presented in this chapter have informed the identification of on- and off-site receptors for assessment, as well as potential 'worst-case' scenarios.

Assessment Scenarios

2.50 The assessment of the development scenarios has been carried out against the existing baseline conditions or defined future baselines (as described in the Baseline Section of this chapter).

2.51 Taking into account the development stages, the following assessment scenarios have been assessed in the technical assessment chapters, unless indicated otherwise:

Demolition and Construction Stage

- **Scenario 1:** Existing Baseline/Future Baseline;
- **Scenario 2:** Existing Baseline/Future Baseline + Proposed Development.

Completed Development Stage

- **Scenario 1:** Existing Baseline/Future Baseline;
- **Scenario 2:** Existing Baseline/Future Baseline + Proposed Development.

Mitigation

2.52 Mitigation is the term used to refer to the process of avoiding where possible and, if not, reducing, controlling and/or off-setting the likely significant adverse effects of a development. Mitigation measures relate to the design stage; the demolition and construction stage; or the activities associated with the completed and operational stage.

2.53 As part of the EIA, an iterative approach has been adopted where significant environmental effects have been avoided where possible in the first instance through the design refinements and iterations, as reported upon within Chapter 3: Alternatives and Design Evolution of this ES Volume. Where adverse environmental effects were identified through early assessment work, opportunities to reduce or control impacts and effects, or in some cases, to compensate for impacts and effects, were identified and incorporated into the proposed development. In addition, opportunities to enhance the beneficial environmental effects of the proposed development have been sought and incorporated into the proposed development. These are referred to as 'embedded' mitigation.

2.54 Within each technical assessment chapter, the assessment of the effects that are likely to arise as a consequence of a potential impact or change to receptors from the proposed development is first presented. If any additional mitigation measures are required, further to that already embedded into the proposed development throughout its evolution, these are proposed, and the proposed development is reassessed to ascertain the likely residual significant environmental effects. This is reported on within each technical assessment chapter of the ES.

2.55 In all cases, mitigation measures are presented as embedded, specific commitments or statements of fact. It is anticipated that the implementation of mitigation identified throughout the ES would be secured by means of appropriately worded planning conditions, planning obligations secured pursuant to section 106 of the Town and Country Planning Act 1990, the collection of any applicable Community Infrastructure Levy (CIL) payment or through other statutory and building control regimes. Where the need for additional mitigation is identified, each assessment confirms how the mitigation is proposed to be secured.

Impacts and Effects

2.56 Unless otherwise required by published assessment guidance (e.g. air quality), the EIA has made distinction between:

- impacts: the change or action; and
- effects: the result/consequence/outcome of the change.

2.57 As a general rule, the EIA assesses the effects that are likely to arise as a consequence of a potential impact or change to receptors following the application/consideration of embedded mitigation measures.

2.58 A range of likely effects have been considered - including direct or indirect (or secondary) and cumulative:

- Direct effects are those which arise as a direct consequence of a project action, e.g. the loss of habitat or the run-off of surface water to a watercourse;
- Indirect effects include, for example, the decline in the abundance of a species as a result of the loss of habitat or the damage to aquatic vegetation as a result of water pollution. Other common examples include the effect on air quality and ambient noise as a result of increased traffic flows; and
- Intra- and inter-project cumulative effects are those that could arise concurrently (refer to Cumulative Effects section later in this chapter).

2.59 Furthermore, consideration has been given to the temporal and spatial nature of effects including permanent or temporary; reversible and irreversible; short-, medium- or long-term; local, borough, regional, national levels. In the context of the proposed development, temporary (short- and medium-term) effects are typically those associated with the demolition and construction works, and permanent (long-term) effects are typically those associated with the completed and operational development.

2.60 Typically, local effects are those affecting receptors neighbouring the Site, while effects upon receptors within the wider study area are assessed at a borough level (i.e. MCC). Regional effects are those affecting receptors within Greater Manchester. Effects upon different parts of the country, or England as a whole, are considered to be at a national level and effects across national boundaries are considered to be at an international level (albeit there are no such effects at national or international level).

Significance

2.61 The assessment of residual environmental effects is important in that it informs the determination by the relevant planning authority of the overall acceptability of a proposed development. Determining significance relies on accepted thresholds and criteria where available or, for situations in which such are not available, expert interpretations and value judgments.

2.62 Significance is usually a function of the value (or importance) and vulnerability (collectively referred to as sensitivity) of the receptor, the magnitude of the potential impact and the scale of the effect. Value or importance might be a function of international designation or local/regional relevance. Vulnerability is a function of the receptors ability and resilience to accept and accommodate the change. Thus, significance is a concept that can be applied objectively to individual effects.

2.63 Throughout the ES the same terminology has been used to describe these individual effects, unless specific alternative terminology exists in recognised topic specific guidance.

2.64 Significance has been evaluated with reference to definitive standards and accepted or published criteria and legislation, where available. Where it has not been possible to quantify potential impacts and residual effects, qualitative assessments have been carried out, based on expert knowledge and professional judgement. Where uncertainty exists, it has been noted in the relevant assessment and a prudent or conservative approach adopted so that the significance is not be underestimated.

2.65 Specific typical conventions have been developed to define significance, wherever possible, defined and structured as transparently as possible using the following criteria, unless indicated otherwise:

- The sensitivity of the receptor to the change or potential impact, based on a rating of low, medium, high;
- The magnitude of the potential impact, based on a rating of high, medium, small/low and unknown;
- The scale of the effects based on a rating of negligible, minor, moderate, major;
- The likelihood of the effect occurring, based on a rating of unlikely, likely, certain;
- The duration of the effect, based on a rating of short-, medium-, long-term;
- The geographical extent of the effect at local, borough, regional, national and international levels; and
- The reversibility of the effect, being either reversible or irreversible.

2.66 Unless indicated otherwise within a technical assessment, the duration of the effect has been defined as follows:

- Short-term: up to 5 years;
- Medium-term: 5-10 years; and
- Long-term: 10 years +.

2.67 In order to provide a consistent approach to the presentation of effects, the following terminology has been used to describe the type/nature of residual effect, unless indicated otherwise:

- **Adverse** - detrimental or negative effect to a receptor;
- **Neutral** - an effect that on balance, is neither beneficial nor adverse to a receptor OR an effect that is equally beneficial and adverse to a receptor[18]; and
- **Beneficial** - advantageous or positive effect to a receptor.

2.68 The scale of the predicted effects has been classified according to the following semantic scale, unless indicated otherwise:

- **Negligible**[19] - imperceptible effect;
- **Minor** - slight, very short or highly localised effect;
- **Moderate** - limited effect (by magnitude, duration, reversibility and sensitivity of receptor) which may be considered significant; and
- **Major** - considerable effect (by magnitude, duration, reversibility and sensitivity of receptor) which may be more than of a local significance or lead to a breach of a recognised environmental threshold, policy, legislation or standard.

2.69 There are some exceptions to the conventions and terminology described above for certain topic specific assessments. Within the townscape and visual assessment, the scale of effect and nature of effect are separate judgements; this is different to other parts of the ES, in which the scale and nature of effect are presented as a single assessment. This is because the assessment of the nature of effect for visual amenity involves judgements on qualitative matters (such as architectural quality or visual composition) which are based on professional opinion and are not necessarily related to the size of the impact. The scale and nature of effect therefore do not qualify each other and an effect that is, for example, of 'major' scale with an 'adverse' nature of effect is not necessarily 'majorly adverse', because an impact could be very large in scale but only adverse to a small degree.

2.70 This is set out in the relevant technical assessment chapters.

2.71 The scale of effects is typically determined through the use of matrices and the application of professional judgement. However, the use and interpretation of matrices rely on the judgement and discretion of the particular technical specialist. Accordingly, a generic matrix has not been adopted for the EIA as a whole.

2.72 The specific benchmarks have been established by the project team using available national, regional and local policy together with other relevant guidance, recognised best practice and expert judgement. The development of these benchmarks is explained in more detail in each assessment or technical appendix.

2.73 Throughout the ES, residual effects have been predicted as either 'significant' or 'not significant'. Significant effects are considered material to the planning decision process. Residual effects of moderate and major scale are typically considered significant, but would be dependent on the relevant technical assessment, as well as the existence of published assessment guidance. Where published assessment guidance is not definitive in respect of categorising/determining significant environmental effects, professional judgement has been applied, taking into account the duration, extent and context of the effect, to determine significant effects.

Cumulative Assessment

2.74 The EIA Regulations require that all likely significant effects of a development are taken into account, including cumulative effects.

2.75 There is no prescriptive guidance on the methodology for the assessment of cumulative effects. However, ISEP Guidance[20] identifies two types of cumulative effects:

- Type 1 - **Intra Project Effects**: Combined effects of different types of impact or 'impact interactions', for example the multiplying effects arising from noise, dust and visual impacts during the construction of the proposed development on a particular sensitive receptor; and
- Type 2 - **Inter Project Effects**: Combined or additive effects generated from the proposed development together with other planned or likely foreseeable developments and also referred to as 'in-combination effects'. These other developments may generate their own individually insignificant effects but when considered together could amount to significant cumulative effects, for example, combined transport and accessibility impacts from two or more (proposed) developments. Additive effects were considered for air quality, visual and townscape.

Intra-Project Cumulative Effects

2.76 As mentioned above, there is no established EIA methodology for assessing and quantifying the intra-project cumulative effects of individual effects on sensitive receptors. Therefore, Ramboll has developed an approach which uses the defined residual effects of the proposed development to determine the potential for effect interactions and so the potential for intra effects of individual effects.

2.77 Intra-project cumulative effects from the proposed development itself on existing off-site and future on-site sensitive receptors during the demolition and construction works and once the proposed development is completed, have been considered for the assessment.

2.78 Dependent on the relevant sensitive receptors, the assessment focusses either on key individual receptors or on groups considered to be most sensitive to potential interacting effects. The criteria for identifying those receptors which are considered to be potentially sensitive include existing land uses, proximity to the demolition and construction works and the site, and likely duration of exposure to effects.

2.79 It should be noted that only residual effects that are minor, moderate or major in scale have been considered within this assessment, as negligible effects are, by definition, imperceptible.. For technical assessment topics where alternative forms of conclusions have been reported (e.g. Not Significant or Significant), the technical specialists have applied their profession judgement to provide the nature and scale of effect (e.g. ecology, air quality, townscape and visual) to enable an intra-cumulative assessment to be undertaken.

2.80 Due to the cross-boundary and overlapping nature of these effects across various environmental topics, and the assessment approach adopted, the results of intra-project cumulative effects are holistically presented within a discrete assessment chapter (ES Chapter 11: Cumulative Effects) and not within each of the technical assessment chapters. This avoids unnecessary duplication and repetition and presents a proportionate approach.

2.81 All technical topics scoped within the ES as technical assessment chapters have been considered in this assessment, with the exception of Climate, which has been assessed within the ES Chapter 9: Climate Change, as part of the in-combination climate change impact (ICCI) assessment.

18 In respect of the TVIA it is possible for Neutral residual effects to be classed as 'significant' for situations in which the 'net equation' of beneficial and adverse impacts considered together results in an overall effect which is neither beneficial or adverse on balance (e.g. due to their guidance, a townscape and visual impact assessment can result in a 'moderate neutral' effect, which would be classed as 'significant').

19 Negligible can also be used in isolation when achieving a particular threshold, absolute value or target criteria.
20 Institute of Environmental Management and Assessment, 2011.The State of Environmental Impact Assessment Practice in the UK.

2.82 With regard to the potential for cumulative effects to occur, it is anticipated that standard mitigation measures as detailed in ES Chapter 5: Demolition and Construction Description of this ES Volume can be applied to prevent temporary significant effects from the interaction of effects occurring on-site. These would be implemented through a site-specific Construction Environmental Management Plan (CEMP), which would be secured by means of appropriately worded planning conditions.

Inter-Project Effects

2.83 The EIA Regulations require an assessment of potentially significant cumulative effects of a proposed development along with other 'existing and/or approved projects'. There are no legislative or policy requirements which set out how an inter-project cumulative impact assessment should be undertaken.

2.84 Accordingly, inter-project effects arising from the proposed development in combination with, or in addition to, cumulative schemes during the demolition and construction works and also once the proposed development is complete, have been considered in the EIA.

2.85 Each technical ES chapter presents the assessment of combined effects of the proposed development with certain other cumulative schemes. Schedule 4 of the EIA Regulations states that only schemes which are existing and/or approved should be considered, i.e. schemes built or under construction or with a planning permission.

2.86 Spatial considerations and scale of development criteria has been developed based on professional judgement to determine whether cumulative schemes have the potential for cumulative effects when combined with the proposed development's effects. The following selection criteria has been used to enable a proportionate assessment:

- Schemes which are consented or approved or have a resolution to grant or which are currently at an early stage of demolition/ construction; and
- Schemes which have a minimum total floor space area of approximately 10,000 m^2 gross external area (GEA) and/ or comprise at least approximately 150 residential units; and
- Either:
  - within 1 km of the redline boundary of the site; or
  - outside 1 km of the redline boundary of the site and are spatially linked to the site by means of the local road network; and
  - visible in protected/important views to and from the site.

2.87 As part of the EIA scoping process, a list of proposed cumulative schemes was provided in Appendix 1 of the EIA Scoping Opinion Request Report. The MCC approved the list of proposed cumulative schemes.

2.88 Fourteen cumulative scheme have been identified for consideration in the inter-project cumulative assessment of the EIA. The location of these qualifying cumulative schemes are presented in Figure 2.1.

2.89 Each of the technical assessments chapters has undertaken a topic-specific screening exercise to determine the likelihood for cumulative effects to occur together with/in addition to the proposed development. Justification for the screening out any of the cumulative schemes is provided within each of the technical assessment chapters.

2.90 The shortlisted cumulative schemes have been quantitatively assessed on a topic-by-topics basis, subject to the availability of scheme information in the public domain. Where information is not available, qualitative assessments have been undertaken based on professional judgement.

2.91 Where a cumulative scheme is subject to multiple applications, each technical assessment has considered the scheme which represents the worst-case for their topic.

2.92 Where possible, the status of cumulative schemes' construction works have been taken into account. For example, where construction has progressed to a material degree, such as to affect local views, wind microclimate, or daylight and sunlight such schemes have been considered as part of the existing baseline.

Table 2.1: Cumulative Schemes

Number	Planning Reference	Proposal Summary	Status
1	137941/FO/2023 Brewery Gardens	Residential led mixed use development for 505 apartments with commercial uses. Development comprises two buildings (one part 29, 25 and 20 storeys, one 12 storeys).	Under construction
2	132416/FO/2021 Land Bounded by the Travelodge and Surface Level Carparking to the North, Further Surface Level Carparking to the East, Manchester College to the South and Bury New Road to the West Manchester 935m from the site.	Residential led mixed use development for 461 apartments with ground floor commercial uses, comprising two buildings part 27, 20, 17 storeys and part 11 and 10 storeys.	Approved
3	122280/FO/2019 Land Bounded by Great Ducie Street and Mirabel Street Manchester M3 1PJ 550m from the site	Residential led mixed use development for 84 residential apartments comprising one ten-storey building for 45 apartments, and one 14 storey building for 84 apartments. Commercial uses on the ground floor	Approved
4	19/74205/FULEIA - Salford City Council 700m from site	A single building with two blocks (14 and 55 storeys) to include: 542 residential apartments, commercial at ground. residential apartments, commercial at ground	Approved
5	22/80890/REM (submitted pursuant to 21/78473/HYBEIA (S73 permission)) - Salford City Council Original consent 19/74465/HYBEIA 860m from the site	Phases 2 and 3 only Phase 2- 40-storey (plus ground) building containing 518 apartments, ground floor commercial space	Approved
6	118831/FO/2018 Former Boddingtons Brewery Site Dutton Street Manchester M3 1LE 935m from site	Residential led mixed use development for 536 residential units, comprising two buildings (one maximum 17 storeys and one maximum 26 storeys). Commercial floor space included.	Under construction
7	136492/FO/2023 Manchester College 415m from the site	Phase 2 of the new city centre campus for the Manchester College and UCEN Manchester 5,870 square metres educational	Completed

Table 2.1: Cumulative Schemes

Number	Planning Reference	Proposal Summary	Status
		floorspace within a 5 storey building.	
8	136812/OO/2023 136814/FO/2023 Red Bank Victoria 210m from site	Residential scheme including 4,800 units across in multiple buildings ranging from 6 to 34 storeys.	Outline / Approved
9	138696/FO/2023 Land At 33 - 41 Cheetham Hill Road Manchester M4 4FT 50m from site	p Residential led development comprising a part 17 / part 23-storey residential development comprising 237 apartments.	Approved
10	138302/FO/2023 1 Park Place Manchester M4 4EZ 110m on site	part 25 and part 15 storey residential building comprising 154 apartments	Approved
11	126944/FO/2020 Land Bound By Dantzic Street, Gould Street, Williamson Street And Bromley Street (Known As Victoria Riverside) 425 m from site	Three towers (37, 26 and 18 storeys) and podium levels (6 storey) to form 634 residential apartments and townhouse accommodation together with commercial accommodation (1222 sqm)	Under construction
12	116366/FO/2017 124120/JO/2019 Land Bounded by Dantzic Street & Aspin Lane, Land Bounded by Gould Street & Angel Meadows and Land bounded by Old Mount Street, School Street, Naples Street & Ludgate Street 480m from site	Four residential buildings (22 storey building, 17 storey building, 40 storey building and part 12, part 9 storey building) to form 756 residential apartments together with ground floor commercial uses (616 sqm)	3 Plots completed 1 Plot Approved
13	134092/FO/2022 Land At Corporation Street "New Victoria Phase 2" 475m from site	Ten storey office building with ground floor commercial unit	Approved
14	EIASCO/25/011 50-54 Red Bank 180m from site	Residential led scheme for 589 units, comprising one 43 storey and one 18 storey building.	EIA Request (pre-planning)

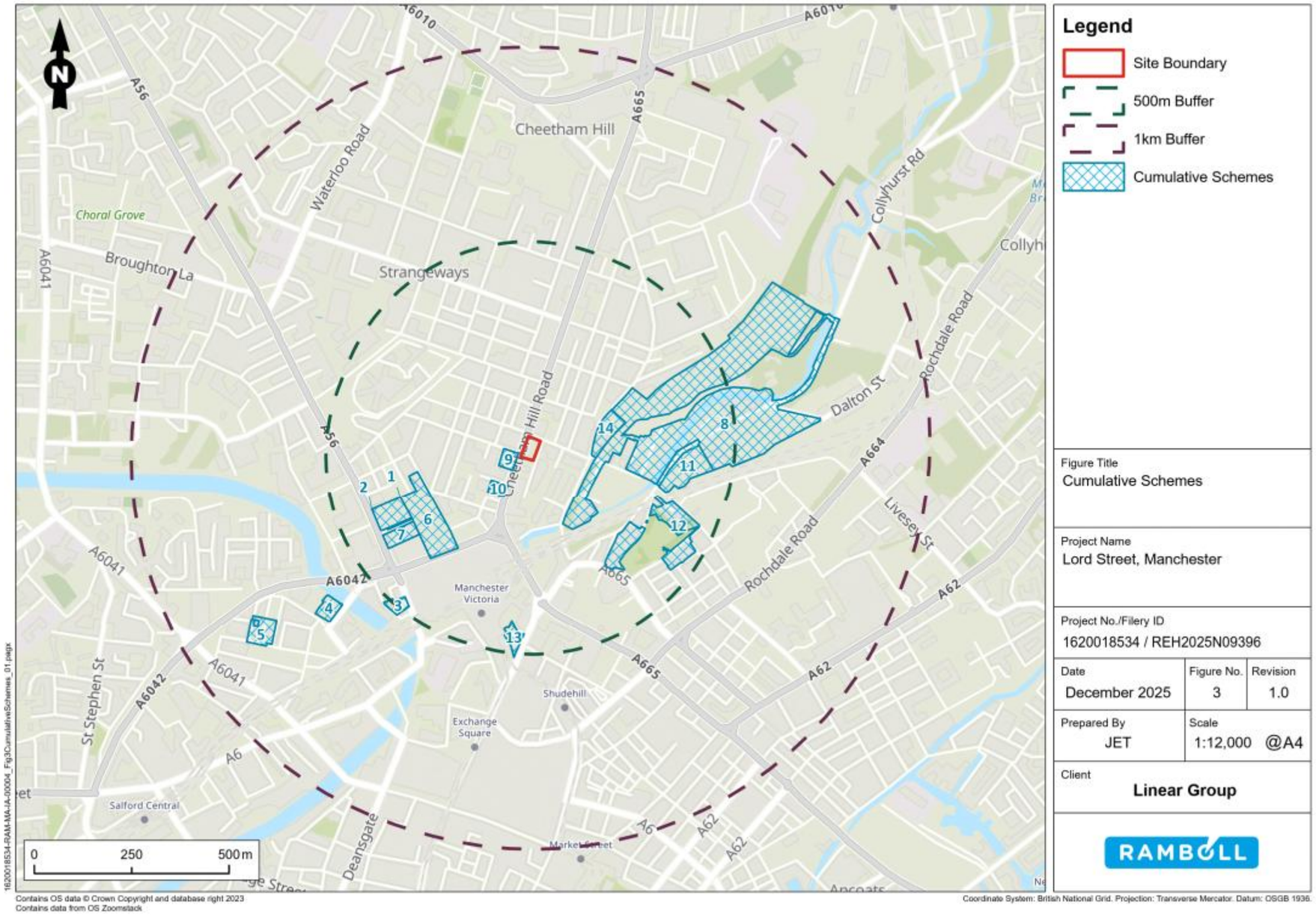


Figure 2.1: Location of Qualifying Cumulative Scheme for EIA

Assumptions and Limitations

2.93 The principal assumptions that have been made, and any limitations that have been identified, in undertaking the EIA are set out below. Assumptions specifically relevant to each environmental topic have been set out in each technical assessment of the ES.

- Baseline conditions have been established from a variety of sources, including historical data, but due to the dynamic nature of certain aspects of the environment, conditions at the site and surrounding land uses may change.
- Assessments have considered the existing baseline conditions at the time of ES preparation (2025) unless otherwise stated in the technical assessment chapter in ES Volume 1 and 2;
- The technical assessments in ES Volume 1 and ES Volume 2 are based on:
  - the current legislative and policy framework, having regard to emerging policies and legislative changes;
  - the assumption that embedded mitigation measures set out in ES Chapter 4: Proposed Development Description and ES Chapter 5: Demolition and Construction Description would be secured by planning condition, legal agreement (S106), community infrastructure levy (CIL) and regulatory regimes;
- Demolition and construction works across the site would take place substantially in accordance with the phasing and programme of works described in ES Chapter 5: Demolition and Construction Description;
- Cumulative schemes will be implemented substantially in accordance with information that is publicly available or that has been provided to the Applicant, and subject to the same regulatory regimes and good practice management controls; and
- It is assumed that information received from third parties is accurate, complete and up to date.

Technical Assessment Chapters

2.94 The following consistent approach has been adopted to the presentation of the EIA findings in each of the technical assessments:

- An explanation of the information gathering and assessment methodology, including a review of policy and legislative requirements of relevance to the specific technical area;
- A description of the baseline conditions;
- The identification and assessment of the potential impacts and likely effects arising during the demolition, construction and operation of the proposed development taking into account any embedded mitigation measures;
- A description of additional mitigation or enhancement measures required to reduce the significance of any adverse environmental effects, including the requirements for post-development monitoring;
- An assessment of the residual environmental effects and an evaluation of their significance against defined criteria; and
- An assessment of the inter-project cumulative effects.

2.95 Each environmental topic scoped within the EIA and ES has been assigned a separate technical assessment chapter in ES Volumes 1 (Chapter 6-9) and 2 TVIA. Within each technical assessment chapter the following structure has been followed, unless indicated otherwise:

- Introduction – a brief introduction to the assessment;
- Methodology – an overview and review of policy and legislative requirements of relevance to the specific technical topic, a summary of consultations undertaken, an outline of the technical, spatial and temporal scope of the assessment, a description of the methods undertaken to characterise the baseline, as well as an explanation of the approach to defining the significance of likely environmental effects;
- Baseline Conditions – a description of the baseline conditions;
- Assessment of Effects – an assessment of the likely significant effects of the proposed development and an evaluation of their significance against defined criteria taking into account embedded mitigation;
- Assessment of Residual Effects – a description of the additional mitigation, if required and then an assessment of the likely residual effects of the proposed development;
- Summary of Residual Effects;
- Cumulative Effects – cross reference to the intra-cumulative effects assessment in ES Chapter 18 and an assessment of inter-project cumulative effects; and
- Summary – a summary of the assessment.

3 ALTERNATIVES AND DESIGN EVOLUTION

Introduction

3.1 The EIA Regulations require the ES to report on the reasonable alternatives (for example in terms of design, technology, location, size and scale) studied by the Applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

3.2 This chapter of the ES therefore explores the objectives of the proposed development, its design evolution and the reasonable alternatives considered. In doing so, the chapter carries out an analysis of the site and existing environmental conditions which informed the design evolution of the Proposed Development. The 'Do Nothing' development scenario is also addressed. Throughout the design process there has been consultation with MCC and other key stakeholders. Additionally, the design process has been informed by a community engagement programme undertaken by the Applicant.

3.3 Further details can be found in the Design and Access Statement and the Statement of Community Involvement which accompanies the application.

Development Objectives

3.4 The specific development objectives for the proposed development are to deliver:

- The remediation and urban regeneration of derelict land;
- High quality new homes offering a good mix of different unit sizes and layouts that are appropriate to the local area;
- Improved permeability and accessibility across the site; and
- High quality architectural design and buildings of appropriate scale and massing for the local area.

Policy Considerations

3.5 The development considerations for the site are set out in the following planning policy and guidance documents at national, regional and local levels:

- National Planning Policy Framework (2025)[1];
- Places for Everyone – Joint Development Plan[2] (March 2024); and
- Supporting SPGs and SPDs (regional and local), guidance and standards.

3.6 Development considerations for the site are set out in these adopted and emerging planning documents and have informed the design of the proposed development.

3.7 Throughout the pre- and post-application submission design processes, which included public consultation; engagement with MCC, and other stakeholders; and consideration of formal consultation responses and representations, a range of issues were identified which influenced the final layout of the proposed development. The design process has therefore been an iterative one, as the design team has sought to respond to the issues raised. This has produced alternatives or different ways in which the development objectives could be feasibly achieved on-site.

3.8 The sections below outline some of the key environmental factors that influenced the design of the proposed development.

Site Design Considerations

3.9 The following site constraints and opportunities informed the design process:

- Existing road network has great variation in use, with Cheetham Hill Road being the busiest of these surrounding roads, with Lord Street and Fernie Street being much quieter by comparison;
- Potential for new frontages on the Cheetham Hill Road and Lord Street;
- Changes in ground level across the site;
- Existing public realm;
- Adjacent building heights and surrounding viewpoints; and
- Poor permeability on site.

Alternatives

Alternative Sites

3.10 No alternative sites have been considered by the Applicant for the following reasons:

- The site has existing planning consent;
- The Applicant is seeking to optimise the site's potential in accordance with the NPPF; and
- The site would provide a key development opportunity to contribute to the regeneration of an underutilised site, and to provide greater and more varied housing.

Alternative Land Uses

3.11 The Applicant is a residential developer and the project objectives are to deliver a residential development. Alternatives land uses have been discounted from the consideration of alternatives.

Alternative Scenario 1: Do-Nothing

3.12 The 'Do Nothing' scenario is considered as a basis for comparing the proposed development against the site continuing in its existing site use.

3.13 In the event the proposed development at the site, or any other development, did not come forward, several adverse effects and lost opportunities would result:

- The opportunity to provide a fully integrated development;
- The opportunity to deliver additional housing;
- The opportunity to maximise the productive use of the site; and
- The opportunity to deliver biodiversity net gain.

Alternative Scenario 2: Existing Consent for the Site

[1] Department for Communities and Local Government, 2025. National Planning Policy Framework. London. HMSO.

[2] Manchester City Council – Places For Everyone Joint Development Plan 2024

3.14 Planning permission was granted for the site for in 2016 under MCC Planning Reference 113914/FO/2016 for the development of the following:

"Full planning permission for the erection of a 16-storey (15 storeys with part 16th floor mezzanine) residential development consisting of 192 apartments with ground floor commercial floorspace (Use Classes A1, A2, A3 or B1), means of access, basement car parking, amenity space, landscaping and demolition of existing structures".

3.15 The proposed development is therefore similar in nature to the existing consent, with both comprising a single tall building providing residential units. The proposed development therefore represents an increase in the height and number of residential units for compared with the consented scheme, but a reduction in car parking and retail floorspace.

3.16 The proposed development was amended by application 138553/NMC/2023 to include a second staircase, reduce car parking and remove the retail floorspace.

3.17 An ES was produced to support this application, the scope of which contained the following technical topics:

- Wind Microclimate;
- Daylight, Sunlight and Overshadowing; and
- Townscape and Visual Impact.

3.18 The environmental effects of the consented scheme and the proposed development have been compared in Table 3.1.

Table 3.1 Comparison of alternatives

Topic	Effects of the consented scheme	Effects of the proposed development	Comparative summary
Townscape and Visual Impact	• Moderate adverse (not significant) effects during construction on the townscape character of Green Quarter and on views from flats in the Green Quarter, people staying in the Park Inn Hotel, pedestrians walking on the pavements of main roads, local roads and within the Green Quarter. • Minor adverse (not significant) effects during construction on the townscape character of Cheetham Hill and views from Strangeways prison (for residents), Cheetham Hill Road, New Bridge Street, Great Ducie Street, Carnarvon Street, Dutton Street, the access path between Roger street and Dantzic Street over the River Irk (for pedestrians), local cycle networks, and from Cheetham Hill Road and the Green Quarter (for local workers).	• Minor-Moderate Beneficial (not significant) effect on all Townscape Character Areas including TCA1 – Cheetham Hill Road Coordior; TCA2 – Lord Street/Fernie Street; TCA3 – Green Quarter Cluster; and TCA4 – NOMA/Victoria North. • Minor Neutral (not significant) effect on View A, anchester Fort; View F Manchester Cathedral; View I Green Quarter. • Minor-Moderate neutral (not significant) effect on View B Manchester Jewish Museum; View J Blackfriars Street, View L Angel Meadows, View N Cathedral Gardens. • Minor-Moderate beneficial (not significant) effect on View D Manchester Oratory. • Minor beneficial (not significant) effect on View E Cheetham Hill Road/Park Street. • Major Moderate Neutral (significant) effect on View C Lord Street/Strangeways. • Negligible (not significant) effect on View M Colyhurst Road.	Greater adverse effects during demolition and construction and beneficial effects during operation due to increased visibility. No effects on heritage receptors assessed.
Wind Microclimate	• Suitability of wind conditions at thoroughfares ranging from moderate beneficial to negligible (not significant). • Suitability of wind conditions at entrances ranging from moderate beneficial to negligible (not significant). • All locations safe and suitable for their intended use.	• Suitability of wind conditions across the entirety of the site and proposed development.	No change – safe and suitable conditions achieved at all locations.
Daylight, Sunlight and Overshadowing	• Minor adverse loss of daylight at Jefferson Place, 1 Fernie Street; Barton Place, 3 Hornbeam Way; Melia House, 2 Hornbeam Way. • Moderate adverse loss of daylight to Britton House, Lord Street. • Minor adverse loss of sunlight to Britton House, Lord Street and Melia House, 2 Hornbeam Way.	• Increased height • Moderate Adverse (significant) loss of daylight at Jefferson Place and Barton Place. • Minor Adverse (not significant) loss of daylight at Britton House, The Hallmark, Melia House, Masson Place and Britton House. • Minor adverse (not significant) loss of sunlight on Britton House.	Greater loss of daylight and sunlight due to increased height.

Table 3.1 Comparison of alternatives			
Socioeconomics and human health	• Not assessed – none anticipated	• Minor beneficial (not significant) effect on employment creation, spending in the local economy and increased housing supply. • Minor adverse effect (not significant) effect on the demand for open and play space. • Moderate adverse (significant) effect on existing and future residents in changes to daylight and sunlight amenity.	Greater beneficial effect on human health and communities through increased housing provision. Greater demand for open space and play space. Significant effect on daylight and sunlight amenity as noted in the DSO assessment.
Climate change	• Not assessed – minor adverse effects on the global climate anticipated. Previous energy strategy also all-electric heating with air source heat pumps, however no photovoltaic panels were proposed. Car parking proposed.	• Minor adverse (not significant) effects also anticipated with the updated scheme in respect to the global climate	Greater overall emissions but comparable emissions per residential unit, or improvements given the car-free nature of the proposed development.

Alternative Layouts, Designs and Design Evolution

3.19 The design evolution for the proposed development started with the consented scheme as amended in 2023. On review of the consented scheme opportunities for an increased number of dwellings and a new pedestrian link between Cheetham Hill Road and Fernie Street, as well as requirements of building regulations.

3.20 The design evolved following pre-application meetings with Manchester City Council. MCC feedback focused on the need to create a slender form by increasing the height-to-width ratio and reducing the level of the terrace. Figure 3.1 shows how the proposed development changed from the scheme presented at the September pre-application meeting to the proposed development massing.

3.21 Other comments raised by MCC including simplifying the materiality and colour palette and to pay close attention to window details. This has resulted in the single red brick tone and the metal fretwork by the windows, as set out in Chapter 4 of this ES.

3.22 Public consultation on the proposed development ran from November 2025 to December 2025 and included a website as well as an event on Tuesday 2nd December 2025.

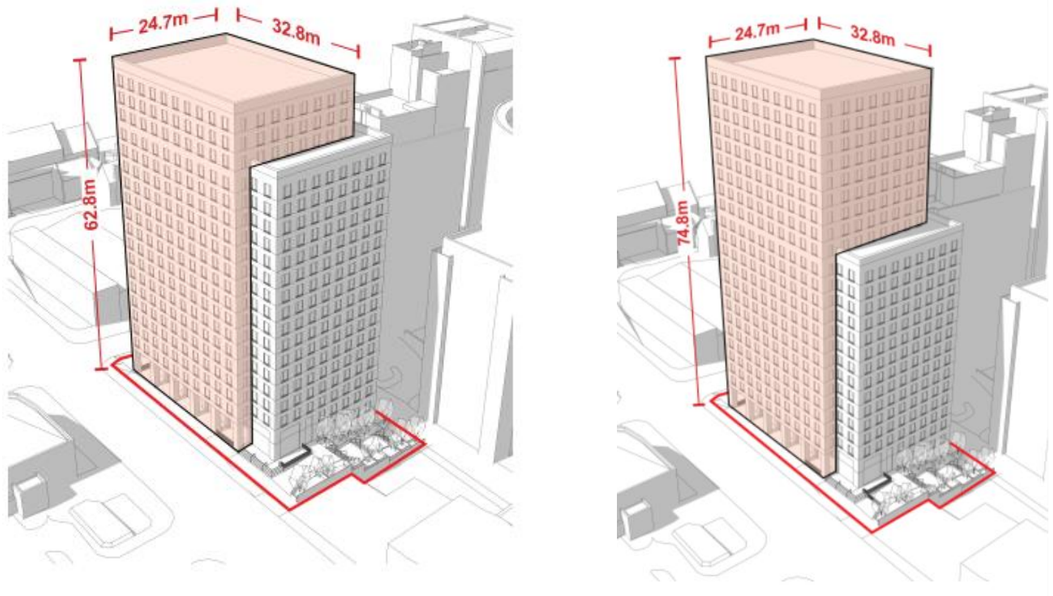


Figure 3.1 - Increasing height of the proposed development and lowering the terrace level – comparison between September 2025 iteration (left) and proposed development (right)

Comparison of Environmental Effects

3.23 In line the EIA Regulations, a comparison of the main alternatives have been undertaken and is presented in Table 3.1.

Conclusion

3.24 The site benefits from existing planning consent for a 16-storey residential development. The proposed development would represent an increase in residential units and building massing, and a reduction in car parking, when compared to the consented scheme.

3.25 Compared with the existing consent the Proposed Development leads to greater scale effects for townscape, visual impact, daylight and sunlight. While climate change and socioeconomic and human health effects were not assessed in the previous ES, climate change effects are likely to be comparable and the proposed development provides additional benefit from the increase in homes.

3.26 The design processes has taken into consideration comments from the pre-application consultation processes, leading to a refinement of massing, layout and façade options.

4 PROPOSED DEVELOPMENT DESCRIPTION

Introduction

4.1 This chapter of the ES provides a description of the proposed development for the purposes of identifying and assessing the potential environmental impacts and likely environmental effects of the proposed development in the technical assessments of ES Volume 1 (Chapters 6-9) and ES Volume 2.

4.2 In accordance with the EIA Regulations, this chapter sets out the physical characteristics of the built development including the proposed access and egress arrangements; the landscape strategy; utilities; and estimated emissions, residues and waste arisings as part of the proposed development.

Planning Application

4.3 As indicated in ES Chapter 1: Introduction, the Applicant is submitting a full planning application for the proposed development, described as follows in the application form:

"Demolition of existing structures and erection of a residential apartment development comprising 251 dwellings (Use Class C3) with landscaping and associated works."

Proposed Development Description

Land Use

Overview

4.4 The proposed development comprises a single 24 storey residential building.

4.5 The building form will be set back at ground level to create a colonnade along Cheetham Hill Road and Lord Street. There will be an area of public realm to the west of the building. The main entrance to the building is from Cheetham Hill Road. There are four duplex (two-storey) townhouses fronting Lord Street; there is residential amenity space at ground floor and all other floorspace comprises residential apartments. The ground floor plan is shown in Figure 4.1.

4.6 A basement would extend to a maximum depth of 5.025m below the ground level. This accommodates the cycle and refuse stores and back of house functions, and is accessed from Fernie Street. The internal basement layout is arranged across several levels, with sloped or ramped connections accommodating the changes in height. The plan for this is shown in Figure 4.2.

Figure 4.1: Ground Floor Plan Layout

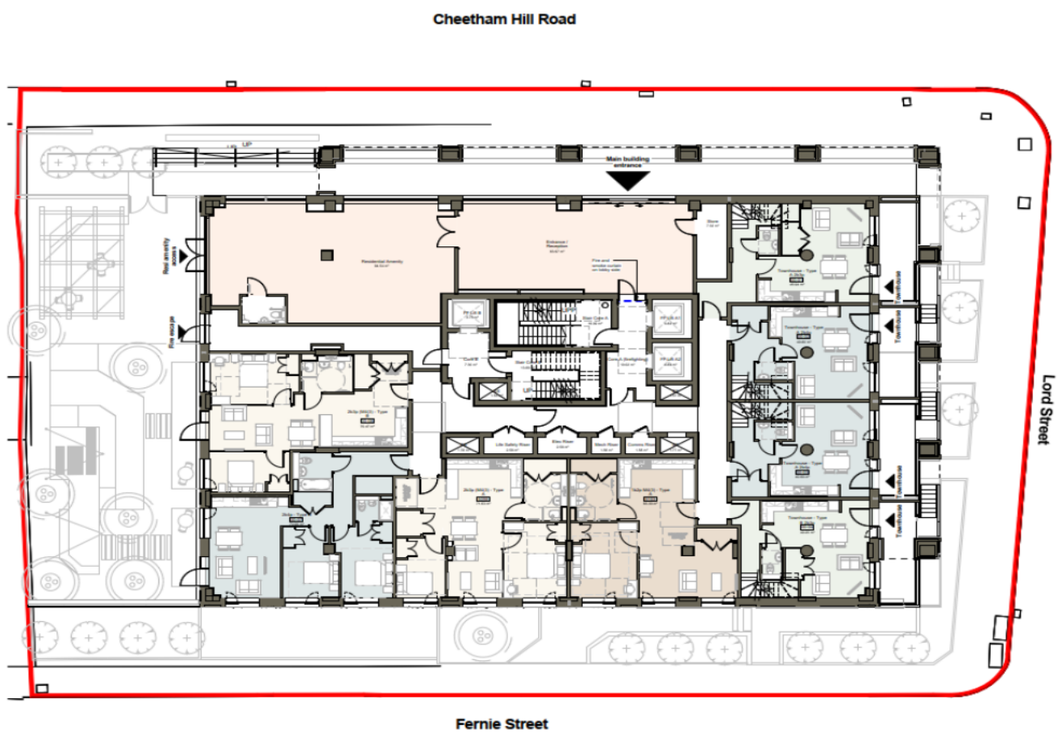




Figure 4.2 Basement Plan Layout

Area Schedule

4.7 The proposed development would provide 251 residential units (use class C3). Within the residential use class, uses would be sub-divided across:

- Residential homes;
- Residential amenity; and
- Ancillary uses, including cycle storage and waste storage.

4.8 A summary of the floorspace schedule for the proposed development is presented in Table 4.1.

Table 4.1: Proposed Area Schedule

Use Class	Gross Internal Area (GIA) m²	Net Internal Area (NIA) m²
Residential (Use Class C3) - 251 units including ancillary residential uses	22,203	16,046
Total	**22,203**	**16,046**

4.9 All homes will be for private (market) sale.

4.10 The unit mix of the proposed development consists entirely of 1 and 2 bedroom flats,with 83 1-bed flats and 168 2-bed flats.

Roof Levels

4.11 As shown in Figure 4.3, the 24th level roof will accommodate solar photovoltaic panels and mechanical and electrical plant equipment.

4.12 The 15th floor level comprises external amenity area for residents.

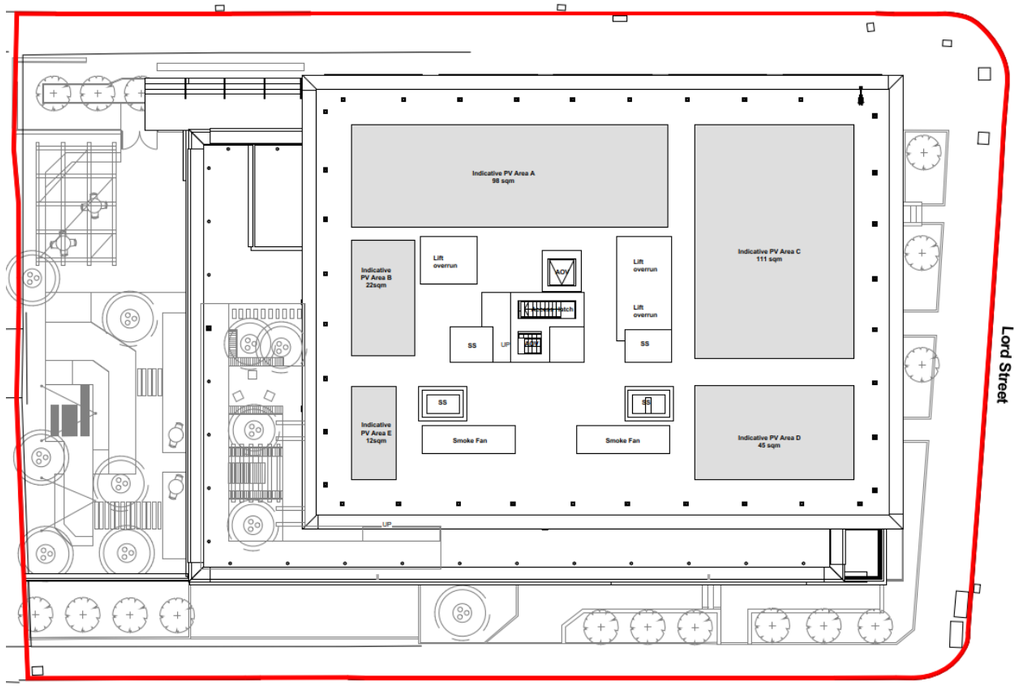


Figure 4.3 Roof Plan Layout

Built Form, Height and Massing

4.13 The proposed development building reaches a height of 73.9 m above ground level (AGL) across 24 above ground storeys. This tallest extent is located along Lord Street to the north of the site. On the southern and eastern side, the building steps in at the 15th floor (46.05m AGL) to provide an external roof terrace for residents as shown on the 15th floor plan in Figure 4.4. Elevations are provided in figure 4.5 showing the ground and first floor colonnades and the step-back at the 15th floor.

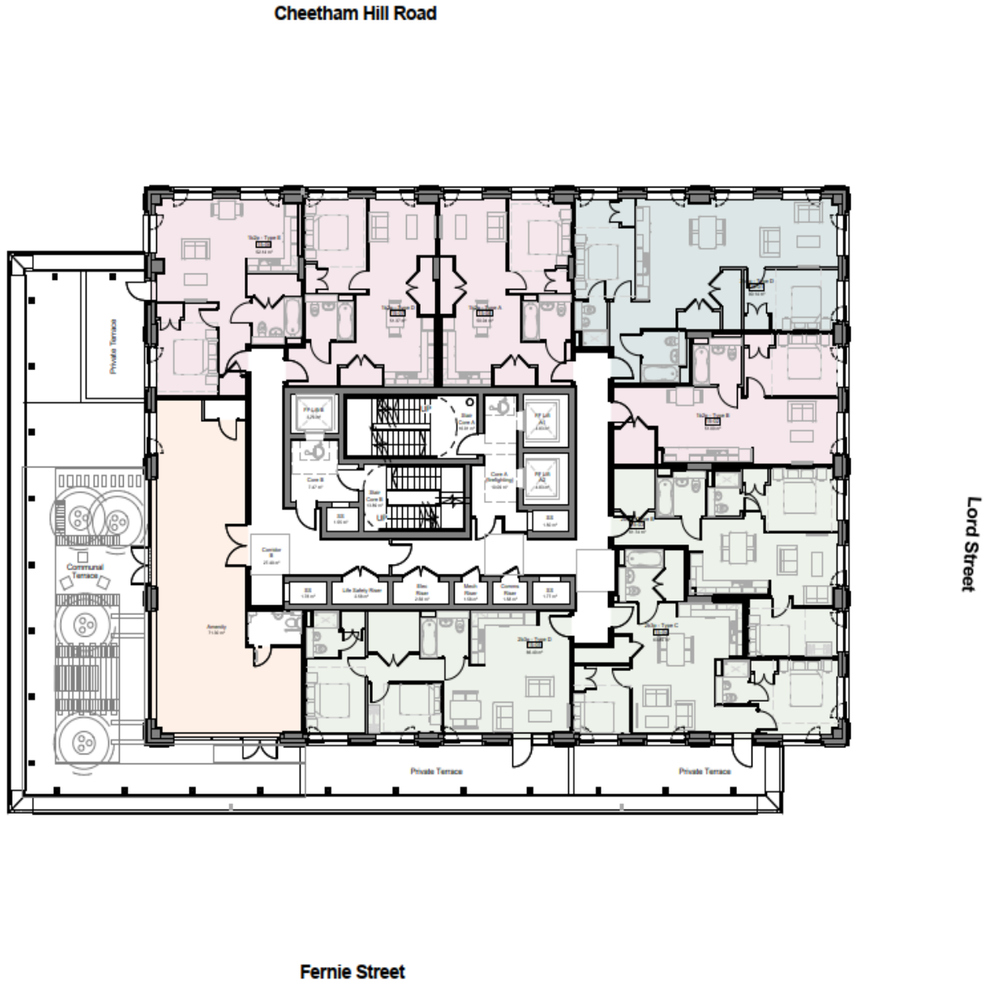


Figure 4.4 15th Floor Plan Layout

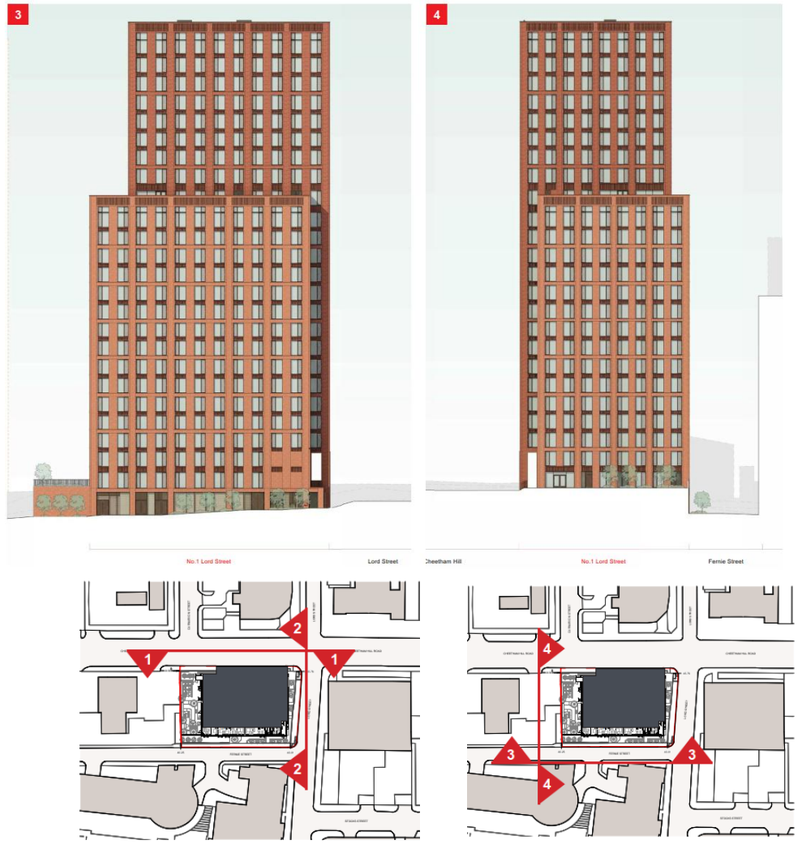


Figure 4.5 Building Elevations

Material Palette and Façade Detailing

4.14 As shown in the elevations in Figure 4.5 above, the facade material pallette comprises predominantly red brick. Details (as shown in Figure 4.6) include:

- Square brick columns to form the colonnade;
- A floral window fretwork pattern drawing inspiration from the from the stone floral motifs found on the former Free Library located nearby; and
- Sawtooth brick detailing at the top of the building.



Figure 4.6 - Facade details

Realm and Open Space Network

4.15 Table 4.6 provides a breakdown of the public realm, private amenity and open space to be delivered across the proposed development.

Table 4.6: Public Realm and Communal Amenity Areas

Deliverable	Area (m^2)
Open space	605
Public realm	350
Private amenity	490

Amenity Space

4.16 The amenity space on-site would the 15th storey roof terraces for use by residents alongside a small amount of indoor amenity space also contained on the 15th storey. This is shown above in Figure 4.4.

Public Realm

4.17 This comprises space along the western side of the site boundary outside of the building footprint, which will provide a small amount of seating, planting and updated entrances to the proposed development.

Play Space

4.18 No formal play space will be provided on-site.

Hard Landscaping

4.19 Hard landscaping material selection has been informed by the local context and would be of a high quality. They have been chosen to ensure the palette utilises a limited range of materials, integrating seamlessly with the proposed development character areas.

4.20 Hard landscaping is set to comprise tree and shrub planting at the ground level along with a stepped colonnade to the entrance of the proposed development located along Cheetham Hill Road.

Biodiversity Enhancements

4.21 Biodiversity enhancement is a fundamental element of the proposed development design package, focusing on retaining and enhancing existing habitats, increasing tree cover, and integrating ecological features throughout the scheme.

4.22 The existing biodiversity habitat on site is very limited, with the site being filled primarily with overgrown vegetation which will be removed as part of the proposed development. However, the loss of vegetation is still something that needs to be considered in regards to meeting the Biodiversity Net Gain Requirements for the proposed development, which would require a 10% biodiversity net gain.

4.23 A Biodiversity Net Gain Assessment has been undertaken for the proposed development which has quantified the level of change in biodiversity from the existing site to the proposed development as minus 41.66% (-41.66%). These losses will be compensated by onsite planting at the ground and roof terrace levels, alongside an off-site compensation strategy to reach the 10% requirement.

Lighting Strategy

4.24 The detailed lighting design would be prepared by a specialist consultant in conjunction with an ecologist and in accordance with the Bat Conservation Trust's Guidance Note 08/23 'Bats and Artificial Lighting at Night.' This would be submitted as part of the planning application.

Parking

Cycle Parking

4.25 A breakdown of cycle parking provision is displayed in Table 4.7.

Table 4.7: Proposed Cycle Parking Spaces

Cycle Space Type	Standard	Non-Standard	Total
Residential	239	12	**251**

4.26 The cycle strategy has been developed in line with MCC guidelines, providing 1 cycle space per apartment. All cycle spaces are located within the basement, with resident access from the central circulation core. The strategy also allows for 5% non-standard cycle spaces (12no. in total) to accommodate larger adapted cycles as described in LTN1/20. Additionally, a dedicated cycle cleaning and maintenance area is provided in the store.

Car Parking

4.27 The proposed development is car free – no car parking is proposed.

4.28 There are opportunities for on-street parking within the immediate vicinity of the site with a number of free parking spaces up to 2 hours along Lord Street, Stocks Street, Stocks Street East, St Chads Street or Stanley Street.

Waste, Deliveries and Servicing

Deliveries and Servicing Management

4.29 Waste will be collected from Fernie Street, via a proposed 2.7 x 12.5m loading servicing bay.

Waste Management

4.30 An Operational Waste Management Plan has been produced to accompany the application and provides detailed information. A summary is provided in the sections below.

Operational Waste Arisings

4.31 The total estimated residential waste arising for the proposed development is expected to be in line with a development of its size and there is furthermore no expectation that any hazardous waste would arise from the operational proposed development.

Waste Facilities

4.32 It is proposed that residents within the development would be provided with four bins. One for general non-recyclable waste, one for mixed dry recyclables, another one for glass and a small receptacle for organic recycling (food).

4.33 The residents would store and segregate waste into four main streams internally before taking it to 'Refuse 1 (drop-off)', located at the northwestern corner of the basement. Future residents are expected to utilise the lifts provided to access this area, before correctly disposing of their waste in the relevant streams .On-site operatives or a relevant management company will be responsible for m for dragging bins to the envisaged collection point to the rear of the Fernie Street footway.

4.34 It is anticipated that waste collection would be provided by Manchester City Council collections (i.e. fortnightly collections) for the four waste streams

Plant, Energy Utilities and Drainage

Heating and Cooling

4.35 Air Source Heat Pumps will provide hot water to the proposed development, with individual electric panel space heaters providing heating.

4.36 The combined estimated energy demand for heating and hot water is estimated at 828.18 kWh per year.

4.37 The carbon content of the delivered heat is as follows:

- Heating (electric panel heaters) 177 gCO2/kWh - based on the current carbon intensity of the electricity grid; and
- Hot water (heat pump) 58.61 gCO2/kWh.

Ventilation

4.38 The apartments and townhouses will benefit from whole house balanced mechanical ventilation with heat recovery.

4.39 Purge ventilation is provided through openable windows.

Renewable Electricity

4.40 339 m^2 of solar photovoltaic panels will be installed on the roof.

Energy Efficiency

4.41 Energy efficiency measures employed in the proposed development are as follows:

- High performance thermal insulation;
- Low air permeability;
- Sophisticated heating controls;

- 100% LED lighting;
- Appliances and white goods specified will be highly energy efficient; and,
- Each dwelling will be specified with a smart meter to enable occupant to effectively monitor and manage their energy consumption.

Potable Water

4.42 Potable water would be supplied to the proposed buildings by United Utilitiesachieved through the establishment of a dedicated on-site water network.

4.43 Proposed water saving features are as follows:

- Water efficient sanitary fittings such as low flush WCs and low flow taps and showers with flow regulators would be installed in the dwellings; and
- A daily water consumption of 105 l/ person/ day would be targeted for the dwellings to be achieved through the provision of low flow sanitary fixtures and fittings.

Foul Water

4.44 Foul water drainage will be conveyed via a new below-ground pipe network and discharged from the site to the existing combined sewer located in the northeastern corner of the site. It is proposed that the foul water from the development will discharge to the United Utilities combined water sewer in Fernie Street.

Surface Water

4.45 The proposed development will meet greenfield run-off rates, providing attenuation to accommodate flows up to the 1 in 100-year event with a climate change allowance of 45%. Stormwater storage will be provided by an attenuation storage tank located within the building footprint below the basement slab. Discharge will be to the combined water sewer running along Fernie Street

Summary of Embedded Mitigation Measures

4.46 As set out in Chapter 2: EIA Process and Methodology, the aim of an EIA is to develop measures to avoid, offset or reduce the significant adverse environmental effects of a project and to enhance any beneficial effects.

4.47 As part of the EIA, an iterative approach has been adopted where significant environmental effects have been avoided where possible in the first instance through the design refinements and iterations. Where adverse environmental effects were identified through early assessment work, opportunities to reduce or control impacts and effects, or in some cases, to compensate for impacts and effects, were identified and incorporated into the Proposed Development. In addition, opportunities to enhance the beneficial environmental effects of the Proposed Development have been sought and incorporated into the Proposed Development. An example include:

- No car parking spaces are provided at the proposed development;
- Cycle parking spaces;
- Surface water drainage strategy achieving greenfield run off rates;
- Photovoltaic panels, air source heat pumps for hot water and all-electric heating strategy;
- A building design and material palette which has been informed by the context and identity of the surrounding area; and
- Provision of landscaped public realm.

5 DEMOLITION AND CONSTRUCTION DESCRIPTION

Introduction

5.1 This chapter of the ES provides a description of the demolition and construction works associated with the proposed development for the purposes of identifying and assessing the potential environmental impacts and likely environment effects of the demolition and construction stage in the technical assessments of ES Volume 1 (Chapters 6-9), ES Volume 2 and discrete reports in ES Volume 3.

5.2 In accordance with the EIA Regulations, the chapter describes the demolition and construction stage of the proposed development and the key activities that would be undertaken during these works. The chapter also describes the management controls that form part of the proposed development that would be implemented to avoid and where possible, minimise and mitigate the magnitude of potential environmental impacts.

5.3 It is not possible to predict in detail the specific environmental impacts and effects that may arise from the works as detailed demolition and construction method statements and specifications have not yet been prepared and sub-contractors not yet appointed. However, it is possible to establish the potential environmental impacts associated with the works and to determine a framework for the management of these impacts to ensure that significant environmental effects are avoided and where not possible, mitigated.

5.4 The demolition and construction management framework which has been developed for the proposed development as part of the iterative design process is set out within this chapter and would form the basis for a Construction Management Plan (CMP) to be implemented during the demolition and construction works. An initial CMP has been submitted with the planning application, prepared in accordance with standard best practice and regulatory requirements. The CMP would define relevant policies, legislative requirements, thresholds, limits, procedures and roles and responsibilities for the implementation of environmental and management controls for the duration of the works.

5.5 An outline of all the anticipated environmental impacts and necessary management controls that would be covered within the CMP is provided within this chapter.

5.6 It is important to note that this chapter does not assess the magnitude of potential impacts, nor the scale of likely environmental effects during the demolition and construction stage, as this is dealt with in individual technical assessments within ES Volume 1 (Chapters 6-9), ES Volume 2 and ES Volume 3. Management controls set out in this chapter are considered as embedded mitigation within each of the technical assessments as the controls:

- Are standard industry measures applied at construction sites;
- Are tried and tested measures and therefore benefit from a high degree of certainty in respect of effectiveness to avoid, mitigate and/or mitigate likely effects; and
- Have been committed to by the Applicant and would form part of the proposed development's CMP, which would be secured by means of an appropriately worded planning condition.

Development Programme

5.7 A detailed development programme has not yet been finalised. However, to enable assessment of likely environmental impacts and their effects within the EIA, an indicative, but feasible, programme has been developed by the Applicant based on a number of assumptions. These assumptions have been informed by an understanding of current and future projected market conditions, logistical arrangements, technical considerations and professional experience, all of which are considered to be reliable.

5.8 The indicative development programme is shown in Table 5.1.

Table 5.1: Indicative Proposed Development Programme

Work Stage	Duration (weeks)	Start Date	Completion Date
Enabling Works and sub-structure	60	Q4 2026	Q1 2028
Superstructure, Facade, Fit out and Landscaping	90	Q1 2028	Q4 2029

5.9 For the purpose of this EIA, based on commencement of works in Q4 2026, the development works are anticipated to be undertaken over a continuous 150-week period, with completion targeted for Q4 2029.

Interface with Key Stakeholders

5.10 Early discussions would be held with MCC and other relevant statutory consultees, such as TfGM. These discussions would include site logistics, management, access and egress and hoarding arrangements.

5.11 Prior to work starting on-site, the CMP would be produced and agreed with MCC. This would include roles and responsibilities, details on the control measures and actions to be taken to minimise the potential environmental impacts of the proposed development. Monitoring and record-keeping requirements would also be addressed in the CMP.

Enabling and Demolition Works

Site Enabling Works

Pre-Commencement Surveys, Investigations, Consents and Licenses

5.12 Concurrent with the discharge of planning conditions, any remaining surveys and investigations would be undertaken prior to the commencement of works on-site. In addition, various consents and licences would need to be granted.

5.13 All statutory consents and licences required to commence on-site activity would be obtained ahead of works commencing, giving the appropriate notice period. These would include:

- Notices and agreements for works on the highway in accordance with the Highways Acts 1980 and Road Traffic Act 1988;
- Temporary Traffic Orders and parking bay suspensions;
- Hoarding and Scaffold licences;
- Details of pedestrian route diversions;
- Crane over sail licences;
- Connections to existing statutory services and mains sewer;
- Licence for discharge of water from the site into the public sewer;
- Approval of CEMP, including any specific agreements relating to the control and monitoring of demolition and construction noise, e.g., Section 61 of the Control of Pollution Act 1974 for noise; and
- Construction Notice (Health and Safety Executive F10 notice).

Site Offices/Welfare Facilities and General Site Access

5.14 Construction compounds, including welfare facilities for construction staff would be constructed at the site.

5.15 Facilities are intended to be provided off-site in a local existing building. This location is subject to availability and will be agreed upon early within the commencement of the site works and will remain throughout the duration of the works. Initial site works will be supported by a self-contained welfare unit located on the site footprint.

Utility Diversions and Removals

5.16 UKPN would be contacted at the earliest opportunity to ensure that the works are acceptable to all parties and completed in a timely manner.

5.17 Prior to any demolition works taking place, the location of services would be identified and marked on-site using utilities record drawings and on-site investigation techniques such as hand dug trial holes and scanning using a cable avoidance tool.

Earthworks, Piling, Excavation and Construction Works

5.18 The length of the piles would vary, depending on whether they are to support superstructure column loads, but it is anticipated that the piles would largely be between 10 m to 21.5 m in length. Where large loads are transferred from the superstructure, longer piles may be used. A piling method statement would likely be conditioned for future discharge or approval prior to commencement of works.

Cores

5.19 There will be a single core located within the centre of the building and would incorporate the lifts, stairs and service risers and would be designed to provide the main lateral stability system for the buildings.

5.20 The concrete walls would be constructed from reinforced concrete using either slip-form construction or jump-formed techniques. Concrete would be pumped and a hydraulic placing boom used to assist concrete placement. Tower cranes would be positioned to suit the site logistics and used to lift reinforcement cages for the cores. Stairs would be installed once the cores are complete. In the meantime external hoists and temporary stairs will be provided for the use by frame contractor operatives and will be supplemented by the introduction of a passenger host car which will be installed in stages as the building climbs vertically.

Superstructure Works

5.21 The construction of the superstructure of each block would involve the erection of reinforced concrete cores (to provide for the overall stability of the structure), followed by the formation of reinforced concrete columns and slabs, to roof level.

5.22 The cores would be constructed from reinforced concrete using either slip-form construction or jump-formed techniques.

5.23 Also, the use of concrete would be selected to provide adequate sound insulation within each block and to comply with fire protection requirements. Cement replacement content and secondary or recycled aggregate content would be considered once the sub-contractors have been appointed, to minimise environment impacts.

5.24 Construction (sub- and superstructure) waste volumes have been estimated based on Building Research Establishment (BRE) Benchmarks. It is anticipated that all construction waste material would be removed off-site. However, as the Applicant's company policy is to divert 90 % of construction, demolition and excavation waste from landfill through re-use or recycling, it is conservatively expected that 70% by volume of non-demolition construction waste material would be recycled off-site in addition to the recycling and re-use of demolition and excavation waste volumes as discussed earlier.

Envelope and Fit out Works

5.25 It is envisaged the tower cranes would remain in location until the hoist has been removed and hoist infill panels installed.

5.26 Internal fit out of the proposed residential units would be undertaken.

Public Realm and Landscaping Works

5.27 Landscaping would be delivered following completion of the building envelope. Landscaping works will include tree and shrub planting alongside hard landscaping to for covered and uncovered seating areas for use by the future residents of the proposed development and the public.

Highways Works

5.28 Highway works would be limited to amendments to Fernie Road to accommodate the servicing bay.

Construction Vehicles and Plant

Construction HGV Trips and Access Arrangements

5.29 The exact number of trips anticipated to be generated by the construction of the proposed development is currently not know and is subject to the specific construction phasing and timings, which will be determined by the principal contractor. It is considered that the construction traffic generated is likely to be similar to that of associated developments within the area, resulting in a total of 30 2-way Heavy Goods Vehicle (HGVs) trips during peak construction time.

5.30 Construction traffic is expected to reach the site via Cheetham Hill Road before turning onto Lord Street. This will be agreed with local highways authority and will furthermore be included within the Construction Management Plan. Consultation has begun with a local traffic management company to help develop the traffic solution to service the project whilst being sympathetic to the local area and beyond.

5.31 The primary construction access to the site would be from Lord Street, with vehicles then travelling via Cheetham Hill Road.

Typical Construction Plant and Machinery

5.32 The types of plant and machinery that are likely to be used on-site per development works activity are provided in Table 5.2.

Table 5.2: Likely Plant and Machinery

High Level Work Phase	Specific Work Phase	Plant Required
Enabling Works and Substructure	Mobilisation	Delivery vehicles
	Site Preparation	Delivery vehicles; excavator; forklift
	Piling	Piling rig; excavator; concrete pump; dumper trucks; muck away wagons;

Table 5.2: Likely Plant and Machinery

High Level Work Phase	Specific Work Phase	Plant Required
		delivery vehicles; concrete bowsers
	Groundworks/Substructure/Waterproofing	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; mobile crane
	Below ground drainage incl. connections	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
Superstructure, Facade, Fit out and Landscaping	Structural Frame	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; mobile crane; tower crane; goods hoist; passenger hoist
	Building Envelope	Delivery vehicles; mobile crane; tower crane; goods hoist; passenger hoist; mast climbers
	Roof	Delivery vehicles; tower crane; goods hoist; passenger hoist;
	Incoming Utilities	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
	Mechanical & Electrical	Delivery vehicles; tower crane; scissor lift; MEWPS
	Plumbing, Sprinklers & Drainage	Delivery vehicles; tower crane; scissor lift; MEWPS
	Vertical Transportation (Lifts)	Delivery vehicles; scissor lift
	Ceiling and Partitions	Delivery vehicles; scissor lift
	Internal fit-out	Delivery vehicles; scissor lift
	Communal Spaces	Delivery vehicles; scissor lift
	Externals	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
	Test & Commissioning	Specialist testing equipment

Construction and Contracting Strategy

5.33 The Applicant would be the main contractor and would be responsible for a number of sub-contractors (e.g., piling, concrete, cladding) and ultimately for environmental management during the construction process.

Construction Employment

5.34 The project is forecast to sustain approximately 120–140 full-time roles (internal and supply chain), with a peak on-site workforce of around 130–150 personnel during the superstructure and fit-out stages. In addition to direct on-site employment, the scheme will support an estimated 200–280 indirect roles within the wider supply chain, including materials manufacturing, logistics, and professional services.

Hours of Work

5.35 Working hours would be agreed with MCC but are expected to be:

- 08:00 to 18:00 hours Monday to Friday;
- 08:00 to 13:00 hours Saturday; and
- No working on Sundays or Bank Holidays.

5.36 All work which is intended outside of these hours, excluding emergencies, would be subject to prior agreement and reasonable notice to MCC in terms of Section 61 (S61) of the Control of Pollution Act 1974[1].

Health and Safety

5.37 All works on-site would be undertaken in accordance with the provisions of the Construction (Design and Management) (CDM) Regulations 2007[2]. A CDM Principal Designer would be appointed by the Applicant and would work with the Project Team to ensure compliance with these Regulations.

5.38 All method statements would incorporate regulatory safety matters and a Health and Safety File would be maintained on-site for inspection by the Health and Safety Executive, MCC and others as appropriate.

[1] Secretary of State, 1974. Control of Pollution Act, HMSO.

[2] Secretary of State, 2015. Health and Safety, The Construction (Design and Management) Regulations 2015. HMSO.

Consultation

5.39 The Applicant would engage with and inform the local community and local stakeholders of particular construction tasks and indicative timelines across the individual construction phases and would ensure that both parties are fully involved in any such dialogue.

5.40 Matters for public consultation during the bulk excavation and piling works would be brought to the public's attention through staging drop-in exhibitions and the circulation of bespoke newsletters within the established catchment area. Local stakeholders would be engaged in direct communication with the Applicant, design team and other such consultants as required from time to time through the established Resident's and Community Liaison Groups. These groups would be open to new members as and when required and would be run in accordance with the stipulations of MCC.

5.41 The Applicant's procedures would allow for:

- A clear point of contact for the public to make enquiries and to submit complaints;
- Details of how enquiries would be registered and progressed;
- Advising the intended timescale for responding to the matter raised;
- Records of any responses given, and to whom; and
- Escalation procedures if the response is not satisfactory.

Materials and Waste Management

Materials

5.42 Construction materials would be selected following the Building Research Establishment (BRE) 'Green Guide to Specification'. These include:

- Minimising embodied energy content (the energy used in manufacture);
- Using recyclable materials where they have high embodied energy; and
- Maximising the recycled content of the material, ease of maintenance, appropriate sourcing of materials and totally excluding deleterious and hazardous materials.

5.43 Key materials required for the proposed development are envisaged to include those indicated in Table 5.4. The total embodied carbon of the building materials is estimated to be 11,011,788.51 KgCO2e.

Table 5.3: Indicative Key Construction Materials

Materials	Materials Required For
Concrete	Foundations, substructure, superstructure (including concrete piling), cores, stairs and shear walls
Steelwork	Foundations, superstructures, minor structural elements
Brick, blockwork and stonework	External Envelope, External and Internal walls
Cladding	External Envelope
Glazing	External Envelope (windows)
Partitioning (gypsum board)	Internal walls

Storage and Handling

5.44 The sustainability of raw materials would be considered during the procurement process. All construction materials would be appropriately stored on-site to minimise damage by vehicles, vandals, weather or theft.

5.45 Where possible, prefabricated elements would be lifted directly into position from delivery vehicles. This would assist in reducing on-site storage and labour requirements and construction noise levels, thereby reducing potential nuisances to the surrounding receptors.

Potential Environmental Impacts

5.46 A review of the potential environmental impacts associated with the demolition and construction works has been undertaken to proactively inform the development proposals and inform appropriate mitigation measures. Potential impacts can arise from day-to-day works or from individual instances of accidents, poor operation or management. However, these impacts are largely dependent on the implementation of effective controls e.g., the employment of dust suppression methods, use of a well-trained workforce and properly maintained plant.

5.47 A summary of the potentially environmental impacts that could arise during the demolition and construction works and the mitigation measures which are integral to the development proposals are provided in Table 5.4. Further detail and assessment of these likely impacts are provided in ES Volume 1 Chapters 6-9 and in ES Volume 2.

5.48 Construction plant specifications have been defined allowing noise and other implications to be assessed. Potential impacts in many areas are largely dependent on attention to management control (e.g. watering to control dust, use of noise attenuated plant), which would be under the control of the Applicant and sub-contractors required, by tender requirements, to adhere to management controls and measures detailed in the CMP.

Table 5.4: Summary of Potential Environmental Impacts during Demolition and Construction

Receptor	Potential Impacts	CEMP Mitigation
Short, medium and long distance views to and from site	• Temporary impact in views looking out at the site and views looking towards the site	• Installation of site hoarding • Standard, good on-site housekeeping • On-site wheel washing facilities • Dust management
Townscape	• Temporary impact to townscape character	• Installation of site hoarding • Standard, good on-site housekeeping • On-site wheel washing facilities • Dust management

Mitigation and Scope of Environmental Management Controls

5.49 The following mitigation controls would be committed to and delivered pursuant to either planning conditions, obligations contained in a legal agreement (under Section 106 of the Town and Country Planning Act, 1990) and supported as necessary by contract obligation between the Applicant and relevant sub-contractors or regulatory provisions in force from time-to-time.

Construction Environmental Management Plan

5.50 A CMP would be prepared submitted for review and approval by the appropriate local authorities prior to commencement of works on-site. It would include the following:

- A commitment to environmental protection (all consultants and trade contractors would be invited to declare their support for this at tender stage);
- Documentation of measures to comply with environmental aspects of any planning conditions;

- Detailed control measures and activities to be undertaken to minimise likely environmental impacts, as well as associated roles and responsibilities;
- Target criteria for environmental issues, where practical, such as water and energy consumption;
- Any requirements for monitoring and record keeping;
- Proposed noise, vibration and dust monitoring levels to be agreed by MCC
- A dedicated point of contact during normal working hours and in emergencies with responsibility to deal with environmental issues if they arise; and
- A review and monitoring regime of on-site performance against the CMP provisions by the project team and regular environmental audits of its implementation.

5.51 The CMP would provide the necessary level of management and control of demolition and construction practices. This includes advance notice of operations and duration of work that may cause noise, disruption to access, or other effects.

5.52 The CMP would form part of tender documentation and contractors would be required to demonstrate how they would work within these provisions, identify communication channels for exchange of information and set out programmes for monitoring and auditing of environmental control systems.

5.53 Where departures from the CMP are inevitable, prior identification is required, such that other mitigation measures can be considered.

Considerate Constructors

5.54 The principal contractor would be required to register the site under the Considerate Constructors Scheme.

Principal Contractor and Management of Sub Contractors

5.55 All contractors would have responsibility for monitoring any sub-contractors' environmental performance; acting as a point of contact for consultation and feedback and for developing mechanisms to solve on-site issues as and when required.

Neighbourhood and Public Liaison

5.56 The Applicant would be expected to nominate a manager who would act as the Project Environmental Manager (PEM), who would be named at all site entrances, with a contact telephone number. The contact name and details would be provided to all the relevant stakeholders by the Applicant prior to the start of the demolition and construction works.

5.57 The PEM would have primary responsibility for dealing with the appropriate local authorities and other stakeholders on environmental matters, and all key stakeholders would be notified whenever a change of responsibility occurs for the PEM role. The PEM would keep neighbours, local authorities and other relevant parties informed of the nature of the ongoing works, their duration and programme to establish and maintain good relationships with them.

5.58 It is anticipated that meetings would take place between the PEM and key stakeholder groups to review progress and to agree any necessary actions. The PEM would also deal with enquiries from the general public, including any complaints. Any complaints would be logged and reported to the relevant individual within MCC (and *vice versa*) as soon as practicable.

5.59 The PEM would coordinate responses to queries and address issues in a timely and satisfactory manner.

Monitoring, Inspection and Auditing

5.60 The CMP would define responsibilities and procedures for the management of the potential impacts on the environment arising during demolition, enabling and construction. A monitoring programme of the environmental effects of demolition and construction would be implemented to agreed the relevant authority requirements. This programme would:

- Evaluate the effectiveness of environmental mitigation, and identify environmental problems and appropriate responses at an early stage;
- Ensure that the works are carried out in accordance with the provisions of the CMP; and
- Identify and implement any environmental improvements that would contribute to the overall environmental performance of the proposed development.

5.61 The Applicant would wish to reassure itself that the CMP is being adhered to by all sub-contractors. To this end, site inspections and more formal audits would be undertaken and a checklist pro-forma, which would cover the environmental issues addressed in the CMP, used.

5.62 Where a problem is identified, corrective action would be identified and implemented in conjunction with the Applicant, Site Manager and sub-contractors.

5.63 It is envisaged that there would be a requirement for regular reporting of monitoring and auditing to relevant local authorities, who would be asked to review implementation of the protective measures as necessary during demolition and construction, and would have direct access to the monitoring representative to ensure that any non-compliances with the requirements of the CMP are speedily rectified.

Emergencies and Environmental Incidences

5.64 Protocols to be implemented on-site in instances of emergencies and environmental incidences would be set out within the CMP for approval by MCC.

Housekeeping and General Site Management

5.65 Hoardings would be erected around the site to provide a clear and secure demarcation between operational activities and other areas and to provide information regarding the proposed development and its progress. Particular attention would be paid to locations supporting high volumes of pedestrian movement demolition and construction routes, access gates and security arrangements.

5.66 A clean site policy would be maintained and contractors and their sub-contractors would be expected to maintain a tidy site. A street sweeper would be employed as required during the demolition, piling and excavation periods of the construction programme to make sure that the streets around the site would be kept clean during the works.

5.67 Hoardings would be lit from half an hour after sunset to half an hour before sunrise. Prior to the erection of any external floodlighting details would be agreed with MCC. On-site floodlights would be fixed to the tower cranes and on the hoarding or lighting poles. Emergency escape lighting would identify the escape route.

Residential and Open Space Amenity

5.68 The following mitigation and environmental controls would collectively limit potential visual, noise, vibration, traffic and dust impacts associated with the proposed development's construction works at the site:

- Maintaining aesthetically appropriate site hoardings;
- Agreeing working hours with MCC;
- Undertaking regular road sweeping;
- Arranging and locating potentially high impact site activities and plant away from neighbouring residential receptors;
- Selecting quiet plant and regularly maintaining plant;
- Implementing good site housekeeping measures;

- Directing site lighting away from sensitive receptors;
- Turning site lighting off outside of normal working hours;
- Screening scaffolding and active construction activities above hoarding levels, where practical;
- Implementing construction traffic management measures as agreed with MCC;
- Implementing and monitoring dust management measures;
- Implementing and monitoring noise and vibration measures; and
- Using temporary acoustic barriers around potentially noisy activities.

Unexploded Ordnance

5.69 A working method statement will be prepared by the construction contractor and will identify safe working practices and response mechanisms should UXO be encountered on the site. This will be managed as part of the Construction Management Plan.

Wind

5.70 Windstorms could cause the wind gust conditions and damage or disrupt on-site crane operation. Wind storms could also cause wind gust conditions and result in damage to hoarding.

5.71 Mitigation in place to reduce the likelihood of these potential effects would include:

5.72 Measures for operating tall cranes during high winds would be considered within the detailed CMP alongside the requirement for the main contractor to implement all relevant conditions on operating procedures, and other commitments relevant. A crane strategy could also be developed which outlines procedures to be undertaken in high winds (e.g., stopping work).

5.73 Specification of hoardings would indicate resilience to windstorms and strong gusts, and it would be ensured that these could be erected/ removed safely.

Transport

5.74 A Construction Logistics Plan (CLP) would be followed which takes into account legislative requirements (e.g., Highways Act 19803, the New Roads and Street Works Act 1991[4], Town and Country Planning Act 1990[5], Traffic Management Act 2004[6]); Police, Fire Authority and HSE Guidance; Local Authority Transport Schemes; and Neighbourhood Lorry Restrictions. The CLP would include details of the following:

- Agreed demolition and construction traffic routing and site access points;
- Road cleaning facility provisioning;
- Temporary traffic control measures;
- Temporary and permanent access to the works - for personnel and vehicles;
- Off-loading and storage areas;
- Traffic management procedures for waste disposal vehicles;
- Personnel and vehicle segregation;
- Equipment e.g. temporary fencing and signage;
- Temporary and permanent closures and diversions of footpaths;
- Street furniture removal, if required; and
- Site inductions.

[3] Secretary of State, 1980. Highways Act. HMSO.
[4] Secretary of State, 1991. New Roads and Street Works, 1991. HMSO.
[5] Secretary of State, 1990. Town and Country Planning Act 1990. HMSO.

5.75 Wheel cleaning facilities with adjoining hard standings would be located at the access and egress points of the site. These wheel cleaning facilities would be supplemented by regular road cleaning during the excavation and would have appropriate catchment areas.

5.76 The outline CLP would be updated upon confirmation of the detailed development programme and would form part of the proposed development's CMP.

Vehicle Routing and Traffic Management

5.77 Vehicles making deliveries to the site or removing spoil or demolition material would travel via designated routes which would be agreed with MCC and the police as required. The Applicant would liaise with the local authorities to provide directional signage on the principal routes on the highway network surrounding the site, if required, in order to improve navigation.

5.78 Demolition and construction traffic movements are likely to take place on the local and wider highway network between 08:00 and 18:00 hours from Monday to Friday and 08:00 to 13:00 hours on Saturdays unless the times are constrained by planning conditions. Where possible vehicle movements would be scheduled out of peak hours.

5.79 The demolition and construction sequence for the site would be programmed to minimise the need for road closures. However, there may be instances when they are unavoidable. Where this is the case, road closures would be requested 6 to 12 weeks in advance, and authorised by TfGM, the local authorities and the police.

5.80 The Applicant would co-ordinate all deliveries and collections to/from the site, and ensure that as far as possible that:

- All delivery and collection vehicles are aware of the proposed routing;
- Prior to a delivery or collection, haulers would notify the relevant authorities (TfGM, Police, Highways Authority) in accordance with the Road Vehicles (Authorisation of Special Types) (General) Order 2003[7] if required; and
- Liaison would be undertaken with occupants of adjacent buildings to avoid delays to service deliveries due to construction vehicles.

5.150 Larger vehicle movements would be scheduled to avoid peak hours on the local road network if at all possible. If an alternative construction traffic route is required this would first be agreed with MCC.

5.151 All deliveries would be made to the designated areas within the site. If for any reason it is necessary to load and unload outside site boundaries, the details and procedure for this would be agreed in advance with MCC and occupants of neighbouring properties.

HGV Management

5.81 It is anticipated that construction HGV movements would generally take place out of peak hours when congestion on the local road network is lower.

5.82 Loading and unloading of vehicles, dismantling of equipment such as scaffolding or moving equipment or materials around the site would be conducted in such a manner as to minimise noise impacts to existing surrounding residential properties.

Parking Management and Staff Travel

5.83 Demolition and construction workers would be encouraged to access the site by public transport with limited parking provision provided on-site. Information would be provided on the local bus, and rail to ensure workers are aware of the choices available to them.

[6] Secretary of State, 2004. Traffic Management Act. HMSO.
[7] Secretary of State, 2003. Road Vehicles (Authorisation of Special Types) (General) Order. HMSO.

5.84 Where practicable all loading and unloading of contractors' vehicles would be within the site boundary. Contractors would avoid parking vehicles on the public highway and vehicle movements would be staggered to avoid queuing outside the site access points.

Contamination

5.85 all on-site enabling and construction activities will be undertaken in line with Construction Design Management Regulations (CDM), CL:AIRE Development Industry Code of Practice, as well as best practice measures.

Ecology

5.86 Where vegetation requires removal, it should be checked for the presence of mammals, amphibians and birds prior to removal.

Noise and Vibration

5.87 Effective coordination and time management of demolition and construction activities would be used to avoid noise and vibration nuisance to surrounding uses. Early and helpful communications with the surrounding and on-site receptors would assist in managing any complaints arising during the demolition and construction works of the proposed development.

5.88 Contractors would be required to ensure that works are carried out in accordance with best practicable means as stipulated in the Control of Pollution Act 1974[8]. A full explanation of measures to control construction noise would be incorporated within the CMP and detailed in all construction method statements. All work intended outside of working hours, presented earlier in this chapter, would be subject to prior agreement and reasonable notice to MCC in terms of a Section 61 consent.

Noise Emissions

5.89 The precise scope of noise control cannot be specified until detailed construction method statements are complete. However, the following standard best practice would be implemented as a minimum for the proposed development:

- Planning deliveries and removals out of peak hours;
- Parking construction traffic off the public highway;
- Controlling the discharge of trucks from site to avoid congestion;
- Implementing traffic management systems at the entrances to the site at all times to control the traffic into the site;
- Maintaining the site hoarding around the site boundary to screen noise from low level sources and/or street level receptors;
- Agreeing working hours with MCC;
- Using 'silenced' plant and equipment wherever possible and maintaining plant on a regular basis;
- Selecting electrically driven equipment where possible in preference to internal combustion powered; hydraulic power in preference to pneumatic; and wheeled in lieu of tracked plant;
- Regularly maintaining plant;
- Operating plant at low speeds where possible and incorporating automatic low speed idling;
- Siting noisy activities away from sensitive receptors, where possible;
- Temporarily screening or enclosing static noisy plant to reduce noise emissions and certifying plant to meet relevant standards;
- Implementing noise monitoring to accord with maximum levels set out in the ES;
- Minimising disturbance from reversing bleepers through measures such as site layout, provision of screening or use of broadband sound emitting reversing alarms;
- Switching off vehicle engines where vehicles are standing for an extended period of time;
- Lowering materials whenever practicable rather than dropping; and
- Making all contractors familiar with the guidance in BS 5228[9] which would form a pre-requisite of their appointment.

Vibration

5.90 The following measures would be included within the CMP for the proposed development:

- Carrying out vibration monitoring during early piling works, away from any affected property or buried utilities, to quantify the levels of vibration likely to be attained; and
- Compiling an appropriate action plan for incorporation into the CMP to ensure that the adverse effects of subsequent piling work, if identified, are minimised at all works.

5.91 BS 5228 Part 2 contains historic vibration measurement data for piling works, including the CFA method proposed for the proposed development. Historic data presented in Table D.6 4 of BS 5228 suggest that vibration levels would fall to below 1 mm/s within 10 m of the piling works. Vibration of less than 1 mm/s is unlikely to generate complaints from those living within nearby off-site sensitive properties. The historic data suggests that this method of piling is unlikely to lead to vibration that would cause damage to buildings, even cosmetic damage.

Air Quality

5.92 Dust and emission control and mitigation at the site would be particularly important during earthworks and dry weather periods. The site located within the MCC wide Air Quality Management Area (AQMA).

5.93 A Dust Management Plan (DMP) would be prepared for the site. The IAQM[10] guidance measures for high-risk sites that would be adopted at the site, are summarised in Table 5.5.

Table 5.5: Dust Mitigation Measures for High-Risk Sites

Phase	Mitigation Measure
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager • Display the head or regional office contact information • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority.
Site management	• Record all dust and air quality complaints, identify cause(s), take

[8] Secretary of State, 1974. Control of Pollution Act. HMSO.
[9] British Standards Institution, 2009 and 2014. British Standard 5228: 2009+A: 2014 Code of practice for noise and vibration control on construction and open sites. BSI.

[10] Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Table 5.5: Dust Mitigation Measures for High-Risk Sites

Phase	Mitigation Measure
	appropriate measures to reduce emissions in a timely manner, and record the measures taken • Make the complaints log available to the LA upon request • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book • Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are coordinated and dust and particulate matter emissions are minimised
Monitoring	Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the LA when asked • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the LA upon request • Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
Preparing and maintaining the site	Located away from receptors, as far as is possible • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site • Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period • Avoid site runoff of water or mud • Keep site fencing, barriers and scaffolding clean using wet methods • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below • Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle, machinery and sustainable travel	Ensure all vehicles switch off engines when stationary - no idling vehicles • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and material Ensure vehicles switch of engines when stationary.
Operations	• Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques • Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate • Use enclosed chutes and conveyors and covered skips • Minimise drop heights and use fine water sprays wherever appropriate • Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods
Waste management	Avoid bonfires or burning of waste materials
Demolition	• Ensure effective water suppression is used during demolition operations • Avoid explosive blasting, using appropriate manual or mechanical alternatives • Bag and remove any biological debris or damp down such material before demolition
Measures specific to construction activities	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out • Avoid scabbling (roughening of concrete surfaces) if possible • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery
Measures specific to trackout	Avoid dry sweeping of large areas • Ensure vehicles entering and leaving site are covered to prevent escape of materials

5.94 Mitigation measures would be incorporated into demolition and construction working practices to reduce the likelihood of significant adverse dust effects form the demolition and construction works.

Non-Road Mobile Machinery

5.95 Demolition and construction plant emissions are considered to be a small, insignificant and temporary emission source relative to ambient conditions. The proposed development would apply suitable best practice mitigation measures for site plant would be adhered to as follows to reduce the likelihood of significant adverse air quality effects from Non-Road Mobile Machinery (NRMM) throughout the demolition and construction works:

- NRMM would be modern and well maintained. Should any emissions of dark smoke occur (except during start-up) then the relevant machinery would be stopped immediately and any problem rectified before being used again;
- Engines and exhaust systems would be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits/opacity tests;
- Plant would be located away from the boundaries close to residential areas;
- Use of diesel or petrol powered generators would be avoided by using mains electricity or battery powered equipment where feasible and if safety concerns can be overcome; and
- A CLP would be implemented to manage the sustainable delivery of goods and materials.

5.96 In addition, construction plant emissions on-site would be minimised by means of the following controls:

- Keeping site plant and equipment in good order and maintained in accordance with the manufacturer's specifications;
- Ensuring plant is not left running when not in use;
- Locating stationary construction plant away from the site boundaries and pedestrian walkways as far as possible;
- Using plant with dust arrestment equipment where practicable; and
- Employing cleaner fuels for construction plant, where practicable.

5.97 The Applicant would give detailed dust control protocols as part of their contracts for the site.

Aviation

5.98 During the construction works, crane operators would comply with the recommendations of BS 7121:2012[11]. In addition, the provision of medium intensity steady red obstacle lighting to the completed tower buildings to provide 360-degree visibility and to the temporary construction cranage when operating above 100 m AOD, to be agreed with the relevant stakeholders before work starts on-site.

Waste Management

5.99 As a principal waste mitigation measure during the proposed development's construction works, the Applicant has prepared a Construction Waste Management Plan (CWMP) which has been submitted as part of the planning application, the basis of which would be implemented on-site.

5.100 The scope of the CWMP would include the following:

- Identification of the likely types and quantities of waste generated (including waste acceptance criteria testing to assist in confirming appropriate waste disposal options for any contaminated materials);
- Identification of waste management options in consideration of the waste hierarchy, on- and off-site options, and the arrangements for identifying and managing any hazardous wastes produced;
- A plan for efficient materials and waste handling in consideration of constraints imposed;
- Targets for the diversion of waste from landfill;
- Identification of waste management sites and contractors for all wastes, ensuring that contracts are in place and emphasising compliance with legal responsibilities; and
- A commitment to undertaking waste audits to monitor the amount and type of waste generated and to determine if the targets set out in the CWMP have been achieved. Targets would be reviewed and where necessary, amended. All results would be communicated to the staff.

5.101 In particular, the following measures would be proposed in the CWMP to minimise waste generation on-site:

- Ordering the quantity of materials required for the job, thus reducing over-ordering;
- Determining when and where materials are required and requesting 'just in time' deliveries;
- Materials would be specified to reduce the embodied carbon of the development;
- The recycled content of material, ease of maintenance, appropriate sourcing of materials and exclusion of hazardous material would be maximised;
- Returning damaged goods or incomplete deliveries;
- Where possible and appropriate to do so, using prefabricated elements would be lifted directly into position from delivery vehicles;
- Having appropriate storage areas ready - these should be covered to protect against rain and ideally have a hard standing surface;

5.102 Any waste that is not re-used on-site and therefore requires off-site disposal would be dealt with in accordance with the Waste Hierarchy, the requirements of the EA and in line with relevant legislation.

Recycling

5.103 Segregation (on-site or off-site) and recycling of cardboard, timber, metal, plastics, plasterboard and gypsum-based products would be strongly encouraged by the Applicant and project team. The segregation of polythene film waste from other plastics would also be considered and local collections investigated.

5.104 It is proposed that waste would be segregated and stored for collection on-site, through the use of a series of clearly labelled skips and potentially equipped with compactors to take different materials. Wheelie bins would be placed at appropriate locations for each material type for manual loading. These bins would be transferred to the relevant skip storage location.

5.105 Where on-site segregation of waste is not deemed possible due to spatial constraints at the site, the waste carriers would be required to ensure off-site segregation for waste and diversion from landfill is undertaken.

Disposal

5.106 All construction materials that cannot be re-used or recycled or are classified as 'hazardous', following the Waste Acceptance Criteria testing, would be disposed of at appropriately licensed disposal facilities. The destination of all waste or other materials from the site would be notified to the relevant authority for approval. Deposition would be in accordance with the requirements of the:

- Environment Agency;
- Environmental Protection Act 1990[12];
- Controlled Waste (Amended) Regulations 2012[13];
- Waste Regulations 2011[14];

[11] British Standards Institution, 2012. BS 7121:2012 Code of Practice for Safe Use of Cranes. BSI.
[12] Security of State, 1990. Environmental Protection Act 1990. London. HMSO.
[13] Department of the Environment, Food and Rural Affairs (DEFRA), 2012. Controlled Waste (Amended) Regulations 2012. London. HMSO.
[14] Security of State, 2011. The Waste (England and Wales) Regulations. London. HMSO.

- Hazardous Waste (England and Wales) Regulations 2005[15];
- Duty of Care (Amended) Regulations 2003[16]; and
- Environmental Permitting (Amended) Regulations 2015[17].

5.107 To provide evidence of licensed tipping and to prevent the likelihood of fly tipping, a docket system would be used. The Applicant and sub-contractors would operate a sequential numbered docket system to confirm that each load has been received at the approved disposal site. Copies of these dockets would be kept at the site and would be available for inspection.

5.108 No burning of construction waste would take place on-site.

Summary

5.109 The development programme for the proposed development as a whole is projected to be completed by Q4 2029.

5.110 The proposed demolition and construction works would have the potential to cause environmental impacts. Mitigation and management measures have been developed during the course of the iterative EIA process.

5.111 The information contained in this chapter would inform the framework for the CMP; a draft version has been submitted with the planning application and the final version is to be secured by an appropriately worded planning condition and/or obligations by means of a Section 106 legal agreement.

5.112 The CMP would be developed and agreed with MCC and other relevant authorities, prior to the commencement of works and would comply with the mitigation measures set out within this chapter. In addition, works would be delivered under the Considerate Constructors Scheme.

5.113 The implementation of mitigation and management measures set out in appropriate documents and relevant chapters of this ES, in conjunction with periodic monitoring to ensure the implementation and effectiveness of proposed measures, would assist in avoiding significant effects from demolition and construction works and in controlling residual effects.

5.114 The framework presented within this chapter is embedded mitigation and has formed the basis for the technical impact assessments presented in ES Volume 1 Chapters 6-9 and ES Volume 2.

[15] Department of the Environment, Food and Rural Affairs (DEFRA), 2005. Hazardous Waste (England and Wales) Regulations, 2005. London. HMSO.
[16] Department of the Environment, Food and Rural Affairs (DEFRA), 2003. The Environmental Protection (Duty of Care) (England) (Amendment) Regulations 2003, London. HMSO.
[17] Security of State, 2015. Environmental Permitting (England and Wales) (Amended) Regulations, London. HMSO.

6 DAYLIGHT, SUNLIGHT AND OVERSHADOWING

Introduction

6.1 This chapter of the ES reports on the likely significant Daylight, Sunlight and Overshadowing effects to arise from the demolition and construction stage and the completed development stage of the proposed development.

6.2 The chapter describes the Daylight, Sunlight and Overshadowing policy context; the methods used to assess the potential impacts and likely effects; the baseline conditions at the site and within the study area; the effects taking into consideration embedded mitigation; the need for additional mitigation and enhancement; the significance of residual effects; and inter-project cumulative effects.

6.3 The chapter is supported by the following technical appendices in ES Volume 3:

- Technical Appendix 6.1: BRE Guidance & Assessment Methodology;
- Technical Appendix 6.2: Baseline and Proposed Massing Images
- Technical Appendix 6.3: Tabulated VSC Results (Baseline vs Proposed)
- Technical Appendix 6.4: Tabulated No Skyline ("NSL") Results & NSL Contour Plots (Baseline vs Proposed)
- Technical Appendix 6.5: Time in Sun Plots (Baseline vs Proposed)
- Technical Appendix 6.6: Baseline & Proposed + Cumulative Massing Images
- Technical Appendix 6.7: Tabulated VSC Results (Baseline vs Proposed + Cumulative)
- Technical Appendix 6.8: Tabulated NSL Results & NSL Contour Plots (Baseline vs Proposed + Cumulative)
- Technical Appendix 6.9: Tabulated APSH Results (Baseline vs Proposed + Cumulative) and
- Technical Appendix 6.10: Time in Sun Plots (Baseline vs Proposed + Cumulative).

Methodology

6.4 The assessment has been informed by the following legislation, policies and published guidance:

- International Legislation:
  - N/A
- National Legislation, Policy and Guidance:
  - National Planning Policy Framework ("NPPF") 2025
- Regional Policy and Guidance:
  - Places for Everyone Joint Development Plan (2024)
- Local Policy and Guidance:
  - Manchester City Council Local Development Framework, Core Strategy, July 2012
  - Guide to Development in Manchester Supplementary Planning Document
- Topic Specific Guidance and Industry Standards:
  - Building Research Establishment (BRE) Guidance Note Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice (2022) ("the BRE Guidance")

6.5 The above acknowledge that town and city centres, and other locations with proximity to transport links, are appropriate locations for higher density of development. Planning policy and the BRE Guidance acknowledge that guidelines regarding daylight and sunlight should be applied flexibly in such locations.

Consultation

6.6 Table 6.1 summarises the consultation that has been undertaken with respect to the (topic chapter) assessment.

Table 6.1: Summary of Consultation

Consultee and Form/Date of Consultation	Summary of Comments	Where in this Chapter Comments are addressed
EIA Scoping Opinion		
	Scoping Opinion notes that the comments (regarding receptors) are acceptable.	N/A
Other Consultation		
None	N/A	N/A

6.7 Following a site inspection, additional receptors are identified as worthy of impact appraisal. These buildings are included in the list of buildings noted below in the Technical Scope section.

Assessment Scope

6.8 The assessment of daylight, sunlight and overshadowing amenity impacts has been undertaken in accordance with the provisions of the BRE Guidance, cited above.

6.9 Professional judgement and experience have been employed in the identification of sensitive receptors and the interpretation of technical analysis results.

Technical Scope

6.10 The assessment of impacts on the daylight and sunlight amenity of the buildings above has been made with reference to the following:

- Vertical Sky Component ("VSC") – a measure of sky visibility (from which daylight is derived) and daylighting potential, calculated at the midpoint of a window
- The measurement of the 'No Sky Line' ("NSL") – a contour line separating those parts of a room that receive direct skylight from that part which does not
- Probable Sunlight Hours received by neighbouring habitable rooms, measured both annually ("APSH") and during the Winter months ("WPSH");
- Time in Sun – the extent to which an external amenity area receives 2 hours of direct sunlight on 21 March. Used to determine whether an external amenity space would appear to adequately sunlit throughout the year and be substantially free of permanent shade.

Spatial Scope

6.11 In identifying the Study Area, the BRE Guidance has been used.

6.12 The Guidance emphasises the assessment of residential accommodation, specifically habitable rooms within residential buildings. A non-residential building may be assessed if there is a reasonable expectation of daylight and sunlight, such as hospitals or schools. Commercial office buildings are not typically considered to be daylight and sunlight receptors requiring impact assessment.

6.13 The appropriate study area has been defined following a Site inspection and research to identify neighbouring buildings of residential use, with the application of professional judgement to consider which neighbouring buildings within 250m of the site rely on the site for the receipt of daylight and sunlight, warranting further technical appraisal.

6.14 The technical scope of the assessment has considered the following neighbouring receptors:

- Britton House, 21 Lord Street, Manchester M4 4FN;
- Jefferson Place, 1 Fernie Street, Manchester M4 4AZ;
- The Hallmark, 6 Cheetham Hill Road, Manchester M4 4GA;
- Melia House, 19 Lord Street, Manchester, M4 4AX;
- Barton Place, 3 Hornbeam Way, Manchester, M4 4AT
- Masson Place, 1 Hornbeam Way, Manchester M4 4AJ
- St. Chad's Presbytery, Stocks Street, Manchester, M8 8GG
- Area of lawn associated with Britton House
- Garden and landscaping associated with St Chad's Presbytery

6.15 Rooms within the above buildings that are understood to be of non-habitable use (based on site inspection or room layout research) are excluded from the assessment.

Temporal Scope

6.16 The assessment has considered only those impacts arising from the completed development stage which would be expected to be permanent and long-term in nature (i.e. more than 10 years).

6.17 Demolition and construction stage impacts on daylight and sunlight amenity have not been assessed, on the basis that they are temporary. Impacts are progressive, in that they evolve as the proposed development is constructed towards the completed development stage impacts identified.

Baseline Characterisation Method

Desk Study

6.18 To establish baseline conditions in the study area, relevant data was reviewed and assessed. Data was obtained from the following sources:

- Point Cloud survey
- Photogrammetric model of the site and surroundings
- 3D AutoCAD model of the proposed development

Field Study

6.19 Site inspection was undertaken to identify the daylight and sunlight receptors assessed as part of this Chapter.

Assessment Method

Demolition and Construction Stage

6.20 As any potential daylight and sunlight effects relating to Demolition and Construction stages will gradually increase to the potential effects identified for the completed proposed development, the interim construction effects have not been assessed, as it is considered that the completed proposed development represents the worst-case assessment in terms of likely daylight and sunlight impacts.

6.21 During the construction phase, the daylight and sunlight effects will gradually change from the baseline condition to those impacts (where present) with the proposed development in place, which is described below in the operational phase.

Completed Development Stage

6.22 The assessment has been undertaken in accordance with the provisions of the BRE Guidance document Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice.

6.23 Where appropriate, a technical analysis exercise has been undertaken and the daylight and sunlight conditions, as existing and proposed, have been assessed with reference to the following tests:

- Vertical Sky Component ("VSC")
- The No Sky Line ("NSL")
- Annual Probable Sunlight Hours ("APSH") and Winter Probable Sunlight Hours ("WPSH")
- External Amenity Space Time in Sun

6.24 The BRE Guidance sets out numerical targets for each of the above.

6.25 The BRE Guidance states that these numerical targets are not, however, mandatory and that Alternative Targets may be set to reflect the City Centre context of the Site.

6.26 It is the opinion of Proximity that Alternative VSC, APSH and WPSH targets can be set for this site, applying BRE principles. Further information on how alternative daylight and sunlight targets have been set is included at Appendix 6.1.

6.27 The unmodified BRE targets for daylight and sunlight are set out below, along with the Alternative Targets established for areas of current and future high density, established through application of BRE principles.

Table 6.2: Daylight and Sunlight Targets

Metric	BRE Target - Unmodified	Alternative Target for High Density Environments
VSC	27%	21.6%
NSL	At least 0.8x baseline	n/a
APSH	25%	20%
WPSH	5%	4%
Time in Sun	2 Hours	N/a

Cumulative Stage

6.28 For impact assessment in the Cumulative Condition, the same criteria will be assessed as the Completed Development Stage, with the massing of the relevant cumulative developments included.

Assessment Criteria

6.29 The criteria used to assess if an effect is significant or not, is set out in subsequent sub-sections. This is determined by consideration of the sensitivity of the receptor, magnitude of impact and scale of the effect. In considering the significance of an effect, consideration has been given to the duration of the effect, the geographical extent of the effect and the application of professional judgement.

Receptor Sensitivity/Value Criteria

6.30 Having identified the relevant receptors, it is necessary to consider their sensitivity to reductions in daylight and sunlight. The general methodology that Proximity has adopted for determining sensitivity to a measured magnitude of change is tabulated below.

Table 6.3: Receptor Sensitivity Criteria	
Sensitivity	**Criteria**
Low	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Medium	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
High	The receptor/resource is tolerant of change without detriment to its character, is of low or no local importance.

6.31 The BRE Guidance emphasises the availability of daylight and sunlight to living rooms and daylight to bedrooms and family kitchens.

6.32 The BRE does not impose a hierarchy of habitable rooms, i.e., confirm whether one habitable room should receive more light than another, but in real terms, such a hierarchy does exist and that hierarchy should be borne in mind when considering and evaluating the impact that the proposed development might have on the availability of light in a City Centre environment.

6.33 The above general methodology has been developed further below to establish the following window sensitivity matrix, informed in part by the BRE Guidance, and, based on the function or use of the rooms behind each of the windows that have been assessed.

Table 6.4: Receptor Sensitivity Criteria		
Room Use	**Daylight Sensitivity**	**Sunlight Sensitivity**
Living Room / Combined Living, Kitchen & Dining ("LKD")	High	High
Kitchen / Dining	Medium	Low
Bedrooms	Medium / Low	Low
Student Accommodation	Low	Low
Communal Kitchens	Low	Low
Circulation Space	n/a	n/a
Toilets / Bathrooms	n/a	n/a
Commercial Uses	n/a	n/a

Impact Magnitude Criteria

6.34 It is possible to reduce the amount of daylight and / or sunlight that a window currently receives without that reduction amounting to a material / significant or adverse impact on the existing amenity enjoyed. The following has been used as a methodology for determining the magnitude of impact in evaluating the results of the technical study.

6.35 Magnitudes of change are defined below

Table 6.5: Impact Magnitude Criteria	
Magnitude of Impact	**Criteria**
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.
	From a measurement perspective this will include any reduction in amenity of up to 20% less than the existing or baseline values. i.e., retained values in the Proposed condition will be at least 0.8x baseline values.
Low	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstance/situation. From a measurement perspective this will include any reduction in amenity of between 20-30% of the existing or baseline values.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed. From a measurement perspective this will include any reduction in amenity of between 30-40% of the existing or baseline values.
High	Total loss or major/substantial alteration to key element/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed. From a measurement perspective this will include any reduction in amenity of in excess of 40% of the existing or baseline values.

Scale of Effect Criteria

.Impacts have been assessed based on the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 6.6.

Table 6.6: Scale of Effect Criteria			
Magnitude of Impact	**Sensitivity of Receptors**		
	Low	**Medium**	**High**
Low	Negligible Adverse - Minor	Negligible Adverse - Minor	Minor
Medium	Negligible Adverse - Minor	Minor	Moderate
High	Minor	Moderate	Major

6.36 Based on professional judgement, moderate and major effects are considered significant in EIA terms.

6.37 In determining the significance of reported effects, consideration has been given to the type of effect i.e. direct, indirect or secondary, the geographical extent of the effect and the duration of the effect i.e. temporary which is considered to be either short term (up to five years) or medium term (5-10 years) or permanent (10 years or more).

6.38 All effects identified in this chapter are permanent, long term and direct. Each impact identified will confirm the significance of the effect and whether it is Negligible, Minor, Moderate or Major.

Application of the BRE Guidance in Environmental Impact Assessment

6.39 Appendix H of the BRE Guidance outlines how the guidelines within can be applied in the context of Environmental Impact Assessment.

6.40 It notes several factors that tend towards a minor adverse impact, including only a small number of windows are affected; loss of light is marginally outside of the guidelines; a receptor has a low-level requirement for daylight or sunlight; other reasons, such as a window standing unusually close to a boundary.

6.41 The BRE Guidance also notes factors tending towards a major adverse impact. Such factors include a large number of windows being affected; loss of light is substantially outside of the guidelines; all the windows in a particular property are affected.

6.42 Notwithstanding the above generalisation of an impact, a reduction in daylight and sunlight amenity will at all times be subject to the BRE general compliance criteria, as follows:

- If the BRE targets are met in the Proposed condition, then any reduction in daylight and sunlight will not be considered significant.
- Where the BRE targets are not achieved in the Baseline condition, a retention of 0.8x baseline values in the Proposed Condition will not be considered significant. In accordance with the BRE Guidance, such a reduction is unlikely to be noticed by the room occupants.
- A 20% reduction of the measured baseline NSL value (i.e., retention of 0.8x baseline value) will not have a material impact, on the grounds that such a reduction would not be noticed by the room occupants.
- As confirmed earlier in this Chapter, it is the professional opinion of Proximity that a VSC of 21.6% is within an acceptable tolerance of the BRE targets, given the City Centre context of the Site.

6.43 As confirmed earlier in this Chapter, it is the professional opinion of Proximity that a 4% winter and 20% annual APSH result is within an acceptable tolerance of the BRE targets, given the City Centre context of the site.

Nature of Effect Criteria

6.44 The nature of the effect has been described as either adverse, neutral or beneficial as follows:

- Beneficial – An advantageous effect to a receptor;
- Neutral – An effect that on balance, is neither beneficial nor adverse to a receptor or is equally beneficial and adverse to a receptor; or
- Adverse – A detrimental effect to a receptor.

Assumptions and Limitations

6.45 Proximity has inspected the site and its surroundings to identify the window provision of the neighbouring buildings that overlook the site (to the extent that such windows are capable of being observed from the adjacent public highways). This has been supplemented with Google Earth Imagery.

6.46 The interior of the neighbouring buildings considered as part of Chapter have not been inspected. It has, therefore, been necessary to make assumptions regarding the arrangement of the neighbouring rooms. These assumptions have, where possible, been informed by information available from Manchester City Council's Public Access Planning Portal, as well as other online sources available in the public domain including Land Registry plans and sales particulars, noted below:

- Britton House – MCC Ref. 82191/FO/2007/N1
- Jefferson Place – Leaseplans available from Land Registry

6.47 The height between the internal floor level and the windowsill in each room of the neighbouring buildings will influence the position of the working plane, which is the level at which the internal distribution of skylight is measured. The position of the working plane has been assumed.

6.48 On the basis that the neighbouring buildings have not been inspected, assumptions have also been made to their use and function. Assumptions have been primarily influenced by observations made during the Site inspection. Neighbouring buildings of residential use have also been identified by reference to Valuation Office Agency records – neighbouring buildings with a Council Tax Band being of residential use.

Baseline Conditions

Existing Baseline

6.49 The site is currently an open parcel of land, bounded by Fernie, Street, Lord Street, Cheetham Hill Road and the neighbouring petrol station.

6.50 The daylight and sunlight amenity of a given receptor is influenced by the massing of land, buildings and structures surrounding it

6.51 On the basis that it is free of any massing, there are no obstructions on the site to daylight and sunlight amenity of the neighbouring buildings.

6.52 The area to the west and north of the site is characterised by low-rise, low-density buildings of commercial use. To the east and south of the site are tall buildings, built in close proximity to one another. These buildings have a limiting effect on daylight and sunlight amenity of the area generally due to their height and the density of the local environment.

6.53 The measured daylight and sunlight amenity of the neighbouring receptors in the baseline condition is tabulated below:

Table 6.7: Daylight Amenity in Baseline Condition

Receptors	Windows (%) which achieve VSC target	Windows (%) below VSC target
Britton House	114 windows (43%)	149 windows (57%)
Jefferson Place	258 windows (36%)	458 windows (64%)
The Hallmark	45 windows (24%)	142 windows (76%)
Melia House	0 windows (0%)	75 windows (100%)
Barton Place	2 windows (2%)	95 windows (98%)
Masson Place	3 windows (10%)	27 windows (90%)
St. Chad's Presbytery	23 windows (92%)	2 windows (8%)

6.54 Sunlight amenity of the neighbouring receptors in the Baseline Condition is tabulated below:

Table 6.8: Sunlight Amenity in Baseline Condition

Receptors	Rooms (%) which achieve APSH and WPSH targets	Rooms (%) which do not achieve APSH and WPSH targets
Britton House	117 rooms (79%)	32 rooms (21%)
Jefferson Place	n/a	n/a
The Hallmark	n/a	n/a
Melia House	n/a	n/a

Table 6.8: Sunlight Amenity in Baseline Condition		
Receptors	**Rooms (%) which achieve APSH and WPSH targets**	**Rooms (%) which do not achieve APSH and WPSH targets**
Barton Place	n/a	n/a
Masson Place	n/a	n/a
St. Chad's Presbytery	6 rooms (100%)	0 rooms (0%)

Future Baseline

6.55 No separate impact assessment has been undertaken for a Future Baseline Condition.

6.56 Where neighbouring developments have commenced on site and are not remote from the site, and therefore an influence on daylight and sunlight amenity, their massing has been included within the Baseline Condition.

6.57 This on the basis that any such buildings will have been constructed before the proposed development..

6.58 Planning approved developments that are close enough to the site to be relevant, but of which construction is yet to commence, are included as massing in the Cumulative impact assessment, covered later in this chapter.

Sensitive Receptors

6.59 The receptors identified as sensitive to the construction of the proposed development, and which have been 'scoped-in' to the assessment, are the Living Rooms, Living-Kitchen-Dining ("LKD") rooms and bedrooms of the neighbouring building summarised in Table 6.9.

Table 6.9: Summary of Sensitive Receptors	
Receptor	**Sensitivity**
Britton House	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
Jefferson Place	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
The Hallmark	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
Melia House,	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
Barton Place	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
Masson Place	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
St. Chad's Presbytery	LKDs - Daylight and Sunlight – High Sensitivity Bedrooms – Low Sensitivity
External Amenity areas of Britton House and St Chad's Presbytery	High – Sunlight only

6.60 Based on our professional judgement, no other buildings in the vicinity merit impact assessment. This is on the basis that they are either not of residential use or, where residential rooms are present, their spatial relationship with the site means that the proposed development will have a Negligible impact on daylight and sunlight amenity.

Assessment of Effects

Demolition and Construction Effects

6.61 As any potential daylight and sunlight effects relating to Demolition and Construction stages will gradually increase to the potential effects identified for the completed proposed development, the interim construction effects have not been assessed, as it is considered that the completed proposed development represents the worst-case assessment in terms of likely daylight and sunlight.

6.62 During the construction phase, the daylight and sunlight effects will gradually change from the baseline condition to those impacts (where present) with the proposed development in place, which is described below in the operational phase.

Completed Development Effects - Daylight

6.63 Impacts on daylight amenity of St Chad's Presbytery are considered to be Negligible Adverse and Not Significant. All rooms would achieve the VSC target; all rooms would pass the NSL test.

6.64 Impacts on daylight amenity that merit a more in-depth review and consideration have been identified to the following neighbouring buildings:

- Britton House
- Jefferson Place
- The Hallmark
- Melia House
- Barton Place
- Masson Place

6.65 Impacts on daylight amenity of these neighbouring buildings are explained in greater detail below.

Britton House

6.66 In the Baseline Condition, 114 windows (43%) would achieve the BRE's VSC target of 27%. 149 windows (57%) would not achieve the 27% VSC target. Those windows which do not achieve the target in the Baseline Condition are limited in VSC by the massing of the adjacent Jefferson Place and Barton Place buildings.

6.67 In the Proposed Condition, 154 windows (59%) achieve the VSC target, or retain VSC values that are at least 0.8x baseline values.

6.68 A further 3 windows (1%) would achieve VSCs of at least 21.6% and therefore achieve the Acceptable Tolerance Alternative Target set with reference to the City Centre / City Centre Fringe location.

6.69 106 windows (40%) would not achieve the Acceptable Tolerance Target of 21.6%. The majority of these windows (81 of 106 windows) would experience Major magnitudes of change. These windows typically serve two bedrooms and two LKD rooms located in that part of Britton House directly overlooking the site. Regarding these impacts:

6.70 Given the site is free of any massing, major magnitudes of change are reasonably contemplated and likely unavoidable in any redevelopment of the site in keeping with the adjacent buildings.

- Bedrooms are a low sensitivity daylight receptor and even major magnitudes of change to low sensitivity receptors are considered a to be of a Minor Adverse Significance of Impact.

6.71 All LKD rooms are also served by other windows which do not overlook the site and which receive daylight from other directions. All of these LKD rooms, bar one, pass the NSL test. The LKD which does not experiences only a low magnitude of change in NSL.

- Impacts on these LKD rooms (a high sensitivity daylight receptor) are considered to be Minor Adverse.

6.72 Of the 192 rooms appraised in Britton House, 163 rooms (85% of rooms appraised) would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.73 Of the 29 rooms which do not pass the NSL test:

- one is an LKD room which experiences a low magnitude of change.
- 28 are bedrooms. 14 of these experience a low magnitude of change, 14 would experience a major magnitude of change.
- On the basis that bedrooms which are a low sensitivity receptor 53 rooms (26% of rooms appraised) would experience major magnitudes of change in NSL.

6.74 Overall, given the localised nature of the impacts, which are predominantly present to bedrooms (a low sensitivity receptor), the proposed development will result in a **Minor Adverse** effect on the daylight amenity of Britton House.

Jefferson Place

6.75 In the Baseline Condition, 258 windows (36%) would achieve the BRE's VSC target of 27%. 458 windows (64%) would not achieve the 27% VSC target. The VSC of those windows which do not achieve the target in the Baseline Condition are limited by:

- the massing of the adjacent Britton House buildings; and
- projecting parts of its own massing and the presence of balconies both of which reduce sky visibility and therefore VSC in the baseline condition.

6.76 In the Proposed Condition, 487 windows (68%) achieve the VSC target, or retain VSC values that are at least 0.8x baseline values.

6.77 A further 48 windows (7%) would achieve VSCs of at least 21.6% and therefore achieve the Acceptable Tolerance Alternative Target, set with reference to the City Centre / City Centre Fringe location.

6.78 181 windows (25%) would not achieve the Acceptable Tolerance Target of 21.6%. Of these 181 windows:

- 49 would experience low magnitudes of change;
- 38 would experience moderate magnitudes of change;
- 94 would experience a high magnitudes of change.

6.79 Of the 401 rooms appraised in Jefferson Place, 374 rooms (93% of rooms appraised) would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.80 Of the 27 rooms which do not pass the NSL test:

- 15 would experience a low magnitude of impact.
- 12 would experience a medium magnitude of impact.

6.81 The impact on the majority of this neighbouring building, being those parts which do not overlook the site directly, is either of Negligible or Minor Adverse significance.

6.82 There are impacts on rooms in Jefferson Place that are of a moderate and major Scale of Effect, typically localised to those parts closest the site.

6.83 Whilst these rooms are a minority of the building as a whole, when considered with reference to the BRE Guidance, these rooms:

- Are more than a 'small number' of windows and rooms; and
- Would experience high magnitudes of impact are 'substantially outside of the guidelines'.

6.84 On that basis, it is considered that the effect on Jefferson Place is **Moderate Adverse** and therefore significant.

The Hallmark

6.85 In the Baseline Condition, 45 windows (24%) would achieve the BRE's VSC target of 27%. 142 windows (76%) would not achieve the 27% VSC target. Those windows which do not achieve the target in the Baseline Condition are limited in VSC by the massing of the adjacent Jefferson Place and projecting parts of its own massing adjacent to windows. This adjacent massing limits sky visibility and therefore VSC values in the Baseline Condition.

6.86 In the Proposed Condition, 166 windows (89%) achieve the VSC target, or retain VSC values that are at least 0.8x baseline values.

6.87 21 windows (11%) would not achieve the 27% VSC target, nor the Acceptable Tolerance Target of 21.6%. Of these:

- 11 would experience low magnitudes of impact;
- 3 would experience moderate magnitudes of impact;
- 7 would experience a high magnitudes of impact.

6.88 All 127 rooms appraised (100%) in The Hallmark, would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.89 Overall, the effect on The Hallmark is **Minor Adverse** and therefore Not Significant. Impacts, where present, are to a small number of rooms and of those only a small portion are of medium and high magnitude of impact. Given the small number of windows affected, in accordance with the BRE Guidance these effects are considered to be a 'tending towards a minor adverse impact'.

Melia House

6.90 In the Baseline Condition, none of the 75 windows appraised (100%) achieve the BRE's VSC target of 27%. These windows are limited in VSC by the massing of the adjacent Britton House, Jefferson Place and adjacent projecting parts of Melia House's own massing. This adjacent massing limits sky visibility and therefore VSC values in the Baseline Condition.

6.91 In the Proposed Condition, 66 windows (88%) would retain VSC values that are at least 0.8x baseline values.

6.92 9 windows (12%) would not achieve the VSC target of 27% nor the Acceptable Tolerance Target of 21.6%. Of these 9 windows

- All 9 of these serve rooms also served by another window which retains a high proportion of Baseline VSC.
- 8 serve rooms that experience only a low magnitude of impact in NSL (i.e. daylight distribution within the room).
- Reductions in VSC are, in real terms, small and between 1% and 5%.

6.93 43 rooms of 55 appraised (78%) in Melia House, would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.94 Of the remaining 12 rooms, 11 would experience only low magnitudes of impact in NSL; one would experience a medium magnitude of impact.

6.95 Overall:

- These rooms assessed are a minority of Melia House rooms as a whole;
- Effects on VSC and NSL are predominantly of low magnitude of impact, or are to rooms served by more than one window

6.96 In accordance with the BRE Guidance, these factors tend towards a minor adverse impact. The Scale of Effect on daylight amenity of Melia House is therefore **Minor Adverse** and not significant.

Barton Place

6.97 The majority of windows and rooms in Barton Place would have no view of the proposed development. Impacts assessment of Barton Place focusses on those window and rooms which will see the proposed development between Jefferson Place and Britton House.

6.98 In the Baseline Condition, 2 windows (2%) would achieve the BRE's VSC target of 27%. 95 windows (98%) would not achieve the 27% VSC target. Those windows which do not achieve the target in the Baseline Condition are limited in VSC by the massing of the adjacent Jefferson Place, Britton House and Melia House. These adjacent buildings limit sky visibility and therefore VSC values to windows of Barton Place in the Baseline Condition.

6.99 In the Proposed Condition, 67 windows (69%) either achieve the VSC target, or retain VSC values that are at least 0.8x baseline values.

6.100 30 windows (11%) would not achieve the 27% VSC target, nor the Acceptable Tolerance Target of 21.6%. Of these:

- 14 would experience low magnitudes of impact;
- 7 would experience moderate magnitudes of impact; and

6.101 9 would experience a high magnitude of impact.

6.102 All windows experiencing a high magnitude of change in VSC have low to very low baseline VSC values (2% to 10%). This means that even small, 'real terms' reduction in VSC appear proportionally more significant. Reductions in VSC of these windows is generally small (less than 5%). Further, the rooms served by these windows (bar one) are each served by at least one other window.

6.103 33 rooms of 78 rooms appraised in Barton Place (42%), would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.104 45 rooms (58%) would not pass the NSL test, experiencing reductions that could be noticeable to the occupants.

6.105 Of these 45 rooms which do not pass the NSL test:

- 8 would experience a low magnitude of impact.
- 11 would experience a medium magnitude of impact.
- 26 would experience a high magnitude of impact.

6.106 Overall, the Scale of Effect of the proposed development on daylight amenity of Barton Place is considered to be **Moderate Adverse.** Whilst the majority of this neighbouring building will experience Negligible or No adverse impact on daylight amenity, impacts of up to medium and major significance will be experienced by a small but significant minority of its rooms.

Masson Place

6.107 The majority of windows and rooms in Masson Place would have no view of the proposed development. Impacts assessment of Masson Place focusses on those window and rooms which will see the proposed development past Barton Place and between Jefferson Place, Britton House.

6.108 In the Baseline Condition, 3 windows (10%) of the 30 appraised would achieve the BRE's VSC target of 27%. 27 windows (90%) would not achieve the 27% VSC target. Those windows which do not achieve the target in the Baseline Condition are limited in VSC by the massing of the adjacent Barton Place and Melia House and, to a lesser extent, Britton House. These adjacent buildings limit sky visibility and therefore VSC values to windows of Masson Place in the Baseline Condition.

6.109 In the Proposed Condition, 26 windows (87%) either achieve the VSC target, or retain VSC values that are at least 0.8x baseline values.

6.110 4 windows (13%) would not achieve the 27% VSC target, nor the Acceptable Tolerance Target of 21.6%. Of these:

- 3 would experience low magnitudes of impact.
- 1 would experience moderate magnitude of impact.

6.111 All four of these windows achieve very low VSC levels in the Baseline Condition. As a result of the proposed development, VSC reductions to each of these four windows is less than 1% VSC. In real terms such small reductions in VSC are unlikely to be noticeable to room occupants.

6.112 4 rooms of 10 rooms appraised in Masson Place (40%), would pass the NSL test, experiencing negligible reductions in NSL which are unlikely to be noticeable to the room occupants.

6.113 6 rooms (60%) would not pass the NSL test, experiencing reductions that could be noticeable to the occupants.

6.114 Of these 6 rooms which do not pass the NSL test:

- 1 would experience a low magnitude of impact.
- 2 would experience a medium magnitude of impact.
- 3 would experience a high magnitude of impact.

6.115 Overall, the Scale of Impact of the proposed development on daylight amenity of Masson Place is considered to be **Minor Adverse** and not significant.

6.116 The significant majority of this neighbouring building will experience Negligible or No adverse impact on daylight amenity, and of those parts where impacts are present these impacts are, in real terms, small.

Completed Development Effects – Sunlight to Buildings

6.117 In accordance with the BRE Guidance, windows serving habitable rooms have only been appraised if they face within 90 degrees of due south.

6.118 Windows that are more than 90 degrees from due south (i.e., north-west, north and north-east facing) have a limited expectation of direct sunlight due to their orientation, and do therefore not merit sunlight amenity impact appraisal.

6.119 In accordance with the BRE Guidance, where the proposed development is wholly to the north (i.e. more than 90 degrees from due south) of neighbouring main window, the proposed massing will have no impact on sunlight amenity.

6.120 Britton House and St Chad's Presbytery are the only receptors that have rooms served by south facing windows that merit impact appraisal.

6.121 The windows of all other receptors are either:

6.122 Located to the south of the site, meaning that they do not receive direct sunlight over the site; or

- are oriented more than 90 degrees from due south, meaning that they have limited capacity to receive direct sunlight and, in accordance with the BRE Guidance, do not require impact assessment.

6.123 The effect on the proposed development on the sunlight amenity of these neighbouring receptors is therefore **Negligible Neutral** and Not Significant.

6.124 St Chad's Presbytery and Britton House are assessed in more detail below.

St Chad's Presbytery

6.125 In the baseline condition, all 6 rooms (100%) would achieve both the annual and winter sunlight targets.

6.126 In the Proposed Condition, all 6 rooms (100%) would continue to achieve the Winter and Annual sunlight targets. The effect of the proposed development on sunlight amenity of the rooms of this building are **Negligible Adverse** and therefore Not Significant.

Britton House

6.127 In the Baseline Condition, 117 rooms (79%) of 149 appraised would achieve both the annual and winter sunlight targets. 21 rooms (14%) would achieve either the annual or winter sunlight target, but not the other. 11 rooms (7%) would achieve neither sunlight target.

6.128 In the Proposed Condition, 138 rooms (93%) would achieve the Annual sunlight targets or retain at least 0.8x baseline sunlight values. 10 of these remaining rooms are LKD rooms experiencing high magnitudes of impact; one is a bedroom experiencing low magnitude of impact. Of these 11 rooms:

- Two LKDs and one bedroom achieve APSH values of 21% - a figure that is within a perceived 'Acceptable Tolerance' of the BRE target of 25%, given the high density City Centre environment.
- The remaining 8 LKD rooms are served by multiple windows. The only south facing window to each of these rooms is, however, located immediately adjacent to a projecting 'stepped out' part of Britton House with a balcony present to each floor level. These design features of Britton House are an obstruction to direct sunlight and they place an inherent limitation on the receipt of direct sunlight for part of the day (and therefore the sunlight amenity of these rooms).

6.129 On the basis that the site is currently an open parcel of land, it is reasonably foreseeable that any development of the site will result in the presence of High magnitudes of impact.

6.130 All 148 rooms appraised (100%) would achieve the Winter sunlight targets or retain at least 0.8x baseline winter sunlight values.

6.131 Overall, as a result of the construction of the proposed development, the Scale of Effect on the sunlight amenity of Britton House in **Minor Adverse** and therefore not significant.

6.132 The proposed development will have an effect on sunlight amenity of a small number of rooms, and in accordance with the BRE Guidance, this tends towards a minor adverse impact.

Completed Development Effects Sunlight to External Amenity Spaces

6.133 The gardens associated with St Chad's Presbytery and the areas of lawn associated with Britton House are identified as external amenity spaces in the vicinity of the site worthy of Time in Sun Impact assessment.

6.134 In the Baseline Condition both spaces are well sunlit, achieving 2 Hours Time in Sun to 100% of their respective areas.

6.135 In the Proposed Condition, neither space will experience any reduction in the extent to which they achieve 2 Hours Time in Sun. Effects of the proposed development on the sunlight amenity of these external spaces is **Negligible Neutral** and not significant.

Assessment of Residual Effects

Additional Mitigation

Demolition and Construction Stage

6.136 No additional mitigation measures have been developed for the demolition and construction stage of the proposed development.

Completed Development Stage

6.137 None proposed.

Enhancement Measures

6.138 No enhancement measures are proposed in respect of Daylight, Sunlight and Overshadowing.

Demolition and Construction Residual Effects

6.139 Not applicable.

Completed Development Residual Effects

6.140 As no additional mitigation is contemplated, the residual completed development effects remain as reported in the assessment of effects section.

Summary of Residual Effects

6.141 Table 6.10 provides a tabulated summary of the outcomes of the assessment of the proposed development.

Table 6.10: Summary of Residual Effects

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ +/- -	D I	P T	R IR	St Mt Lt
Demolition and Construction								
N/A								
Completed Development								
St Chad's Presbytery	Reduction in daylight amenity	None proposed	Negligible Adverse	**+/-**	D	P	IR	Lt
Britton House	Reduction in daylight amenity	None proposed	Minor Adverse	-	D	P	IR	LT
Jefferson Place	Reduction in daylight amenity	None proposed	Moderate Adverse	-	D	P	IR	LT
The Hallmark	Reduction in daylight amenity	None proposed	Minor Adverse	-	D	P	IR	LT
Melia House	Reduction in daylight amenity	None proposed	Minor Adverse	-	D	P	IR	LT
Barton Place	Reduction in daylight amenity	None proposed	Moderate Adverse	-	D	P	IR	LT
Masson Place	Reduction in daylight amenity	None proposed	Minor Adverse	-	D	P	IR	LT
Britton House	Reduction in sunlight amenity	None proposed	Minor Adverse	+/-	D	P	IR	LT
St Chad's Presbytery	Reduction in sunlight amenity	None proposed	Negligible Adverse	+/-	D	P	IR	LT

Table 6.10: Summary of Residual Effects

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ +/- -	D I	P T	R IR	St Mt Lt
Britton House – Lawn	Reduction in sunlight amenity	None proposed	Negligible Neutral	+/-	D	P	IR	LT
St Chad's Presbytery - Gardens	Reduction in sunlight amenity	None proposed	Negligible Neutral	+/-	D	P	IR	LT

Notes:
* - = Adverse/ + = Beneficial/ +/- = Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R = Reversible/ IR = Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term.
**Negligible/Minor/Moderate/Major

6.142 In general terms, the proposed development aligns with the broader principle of high density found in the immediate vicinity of the Site. The neighbouring buildings of the Green Quarter, clustered between Cheetham Hill Road to the west and Redbank to the east, are also of high density and low spacing to height ratio.

6.143 It is therefore reasonably contemplated that any redevelopment of the site with buildings of comparable scale to the other buildings of the Green Quarter is likely to result in adverse impacts on daylight amenity. Per planning policy and the BRE Guidance, guidelines for daylight and sunlight amenity should be flexibly applied in such circumstance.

Cumulative Effects

Intra-Project Effects

6.144 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 10: Cumulative Effects.

Inter-Project Effects

6.145 Table 6.11 provides a summary of the likely cumulative effects resulting from the proposed development and the cumulative developments within the study radius for daylight and sunlight.

Table 6.11: Inter-Project Cumulative Effects

Cumulative Development	Completed Development	
	Cumulative Effects Likely?	Reason
No.1 Park Place	Yes	Massing may affect daylight and sunlight to some of the same windows and rooms as the proposed development. There is however a limited or no view of this proposed building from many of the receptor windows.
33-41 Cheetham Hill Road	Yes	This proposed building is directly overlooked by the windows of Jefferson Place and seen through windows of Hallmark and Britton House. Its massing and the proposed development massing will together affect daylight amenity of these buildings

Table 6.11: Inter-Project Cumulative Effects

Cumulative Development	Completed Development	
	Cumulative Effects Likely?	Reason
Red Bank Victoria	No	The majority of windows through which the proposed development will be seen have either limited or no view of the massing of this Cumulative development.

6.146 All other planning approved developments in the vicinity are either too far away from the identified receptors, or will not be seen due to other massing, meaning that they have no material influence on the Cumulative Assessment.

Demolition and Construction Cumulative Effects

6.147 As above, effects of the Demolition and Construction Stages have not been considered.

Completed Development Cumulative Effects - Daylight

The overall proportion of windows and rooms which achieve the BRE targets is compared below. From this it can be seen where cumulative effects are present. Table 6.12: Proposed vs Cumulative Condition – Windows which achieve BRE targets.

Receptors	Windows (%) which achieve VSC target	Cumulative Windows (%) below VSC target	Possible Cumulative Impact on VSC (Y/N)
Britton House	154 windows (59%)	113 windows (43%)	Yes
Jefferson Place	487 windows (68%)	205 windows (29%)	Yes
The Hallmark	166 windows (89%)	91 windows (49%)	Yes
Melia House	66 windows (88%)	59 windows (79%)	Yes
Barton Place	67 windows (69%)	67 windows (69%)	No
Masson Place	26 windows (87%)	26 windows (87%)	No
St. Chad's Presbytery	25 windows (100%)	23 windows (92%)	Yes – Minor

6.148 A summary of the NSL results is tabulated below:

Table 6.13: Proposed vs Cumulative Condition – Windows which achieve BRE targets.

Receptors	Proposed Rooms (%) which pass NSL test	Cumulative Rooms (%) which pass NSL test	Possible Cumulative Impact on NSL (Y/N)
Britton House	163 rooms (85%)	162 rooms (84%)	No – Negligible change
Jefferson Place	374 rooms (93%)	297 rooms (74%)	Yes
The Hallmark	127 rooms (100%)	127 rooms (100%)	No
Melia House	43 rooms (78%)	37 rooms (67%)	Yes
Barton Place	33 rooms (42%)	33 rooms (42%)	No
Masson Place	4 rooms (40%)	4 rooms (40%)	No
St. Chad's Presbytery	6 rooms (100%)	6 rooms (100%)	No

6.149 Based on the above, Cumulative Effects on daylight amenity will be experienced by Britton House, Jefferson Place, The Hallmark and Melia House. Overall, there would be no uplift in Effect on the daylight amenity of Britton House, the Hallmark and Melia House. In general terms the change in results does not warrant an uplift in the Residual Effect overall.

6.150 In the Cumulative Condition there is an uplift in effect on daylight on Jefferson Place. This building would experience an increase in the number of windows and rooms, including high sensitivity Living Rooms, which do not achieve the BRE targets.

6.151 The localised Moderate and Major adverse effects resulting from the proposed development would, in the Cumulative Condition, be experienced by a greater proportion of this neighbouring building. The Cumulative Impact on daylight amenity is therefore **Major Adverse**.

6.152 This uplift is principally due to addition of the massing at 33-41 Cheetham Hill Road, which the windows of Jefferson Place look towards.

6.153 The windows of Jefferson Place overlook parcels of land with single storey structures. This means that any redevelopment of these lands with buildings of high density, as at 33-41 Cheetham Hill Road, will result in elevated magnitudes of impact compared to the baseline condition, and therefore an elevated adverse effect.

Completed Development Cumulative Effects – Sunlight to Buildings

6.154 The overall proportion of windows and rooms which achieve the BRE's Annual and Winter sunlight targets is compared below. From this it can be seen where cumulative effects are present

Table 6.14: Proposed vs Cumulative Condition – Rooms which achieve Annual sunlight targets.

Receptors	Rooms (%) which achieve APSH target	Cumulative Rooms (%) which achieve APSH target	Possible Cumulative Impact on APSH (Y/N)
Britton House	138 rooms (93%)	135 rooms (91%)	No
St. Chad's Presbytery	6 rooms (100%)	6 rooms (100%)	No

Table 6.15: Proposed vs Cumulative Condition – Rooms which achieve Winter sunlight targets.

Receptors	Rooms (%) which achieve WPSH target	Cumulative Rooms (%) which achieve WPSH target	Possible Cumulative Impact on WPSH (Y/N)
Britton House	149 rooms (100%)	139 rooms (93%)	No
St. Chad's Presbytery	6 rooms (100%)	6 rooms (100%)	No

6.155 In the Cumulative condition there is no uplift in Effect on sunlight amenity of the neighbouring buildings.

Completed Development Cumulative Effects – Sunlight to External Amenity Spaces

6.156 There is no cumulative effect on sunlight amenity of external amenity spaces appraised. Both the Britton House lawn and the St Chad's Presbytery gardens will remain well sunlit in the Cumulative Condition, with the entirety of each area continuing to achieve 2 Hours Time in Sun on 21 March.

Summary of Assessment (NTS)

Background

6.157 This chapter has detailed the potential Daylight, Sunlight and Overshadowing effects due to the construction and completed development stages of the proposed development. The assessment of construction and completed development stages has been undertaken taking into account the relevant national and local guidance and regulations.

6.158 The assessment has been undertaken with reference to provisions contained within the BRE Guidance[1]. This document is the industry standard guidance for assessment of daylight and sunlight amenity impacts.

6.159 The impact of the proposed development on the daylight and sunlight amenity of the following neighbouring buildings assessed:

- Britton House, 21 Lord Street, Manchester M4 4FN;
- Jefferson Place, 1 Fernie Street, Manchester M4 4AZ;
- The Hallmark, 6 Cheetham Hill Road, Manchester M4 4GA;
- Melia House, 19 Lord Street, Manchester, M4 4AX;
- Barton Place, 3 Hornbeam Way, Manchester, M4 4AT
- Masson Place, 1 Hornbeam Way, Manchester M4 4AJ
- St. Chad's Presbytery, Stocks Street, Manchester, M8 8GG
- Area of lawn associated with Britton House
- Garden and landscaping associated with St Chad's Presbytery

6.160 The focus of the BRE Guidance is on assessment of habitable rooms, such as bedrooms, kitchens and living rooms within neighbouring buildings. In accordance with the BRE Guidance, rooms within neighbouring buildings above that are not of habitable use (for example circulation spaces, WCs), or other neighbouring buildings of commercial use, have not been impact assessed.

Demolition and Construction Effects

6.161 As any potential daylight and sunlight effects relating to Demolition and Construction stages will gradually increase to the potential effects identified for the completed proposed development, the interim construction effects have not been assessed, as it is considered that the completed proposed development represents the worst-case assessment in terms of likely daylight and sunlight.

6.162 During the construction phase, the daylight and sunlight effects will gradually change from the baseline condition to those impacts (where present) with the proposed development in place, which is described below in the operational phase.

Completed Development Effects – Daylight

6.163 Construction of the proposed development will result in reduced daylight and sunlight over the Site to windows and rooms of the neighbouring buildings.

6.164 The Scale of Effect on the daylight amenity of Jefferson Place and Barton Place is Moderate Adverse. Parts of these neighbouring buildings will experience a reduction in daylight and in accordance the BRE Guidance this would tend towards a Significant Impact.

6.165 The Scale of Effect on the other neighbouring buildings are not significant, on the basis that

[1] Building Research Establishment (BRE) Guidance Note Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice (2022)

- the windows and rooms continue to achieve the respective daylight targets;
- where reductions are present, they are of Minor Adverse effect; or
- adverse effects are to a localised and small minority of the neighbouring building.

6.166 In accordance with the BRE Guidance and its application to Environmental Impact Assessment, these impacts are considered to be either Negligible or Minor Adverse and therefore not significant.

Completed Development Effects – Sunlight

6.167 St Chad's Presbytery and Britton House have been sunlight impact appraised.

6.168 Windows of the other neighbouring building are either

6.169 south of the site, meaning that they do not receive direct sunlight over it; or

- oriented north-west, north or north-east facing, meaning that these windows and the rooms they serve have limited capacity to receive direct sunlight.

6.170 In accordance with the BRE Guidance, rooms fulfilling the above criteria need not be impact assessed, on the basis that construction of the proposed development will have no significant impact on sunlight amenity.

6.171 Impacts on sunlight amenity of St Chad's Presbytery are Negligible Neutral. Impacts on sunlight amenity of Britton House are, overall, Minor Adverse. On that basis the impact of the proposed development on the sunlight amenity of these buildings is not significant.

6.172 Overall, it is considered that the completed proposed development would result in adverse effects on the Daylight and Sunlight amenity of the identified receptors, and as such would give rise to the significant effects on daylight, sunlight and overshadowing covered in more detail above.

Cumulative Effects

6.173 There would be cumulative impacts on the daylight amenity of the following buildings:

- Britton House
- Jefferson Place
- The Hallmark
- Melia House
- St. Chad's Presbytery

6.174 Effects on all buildings apart from Jefferson Place in the cumulative scenario will be as stated for the proposed development in isolation. i.e. there would be no cumulative uplift in effect.

6.175 In the Cumulative condition the impact on Jefferson Place would be Major Adverse. This is due to an increase in the prevalence of moderate and major adverse effects, compared to those identified for the proposed development alone. The increased prevalence of adverse impacts is principally due to inclusion of the proposed massing at 33-41 Cheetham Hill Road, which the windows of Jefferson Place face directly.

6.176 There are no Significant Cumulative effects on the sunlight amenity of Britton House, St Chad's Presbytery or either of the external amenity spaces associated with these neighbouring buildings.

7 WIND MICROCLIMATE

Introduction

7.1 This chapter of the ES reports on the likely significant wind microclimate effects to arise from the demolition and construction stage and the completed development stage of the proposed development.

7.2 The chapter describes the wind microclimate policy context; the methods used to assess the potential impacts and likely effects; the baseline conditions at the site and within the study area; the effects taking into consideration embedded mitigation; the need for additional mitigation and enhancement; the significance of residual effects; and inter-project cumulative effects.

7.3 The chapter is supported by the following technical appendices in ES Volume 3:

- Technical Appendix 7.1: One Lord Street – Wind Microclimate Assessment.

Methodology

7.4 The assessment has been informed by the following legislation, policies and published guidance:

- International Legislation:

– There is no international legislation relating to wind microclimate.

- National Legislation, Policy and Guidance:

– Environment Act (2021)[1]

There is no specific legislation relating to the assessment of environmental wind flows in the built environment.

– National Planning Policy Framework, NPPF (2025)[2]

There is no specific planning policy guidance dealing with microclimate in terms of pedestrian comfort set out in the NPPF.

– Planning Practice Guidance, PPG (2024)[3]

The national PPG 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."

The PPG states, under 'Consider scale', that:

"Account should be taken of local climatic conditions, including daylight and sunlight, wind, temperature and frost pockets."

- Regional Policy and Guidance:

– Greater Manchester Combined Authority's (GMCA's) Places For Everyone Joint Development Plan Document, 2024

Within the Greater Manchester Combined Authority's (GMCA's) Places For Everyone Joint Development Plan Document, 20244, under Policy JP-P1 Sustainable Places, it is stated:

"…the following key attributes that all development, wherever appropriate, should be consistent with:

15. Comfortable and inviting, with indoor and outdoor environments:

A. Offering a high level of amenity that minimises exposure to pollution; and

B. Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter."

Furthermore, under Policy JP-C5: Streets for All, it is stated:

"The design and management of streets will follow a Streets for All approach, including by:

……

h. Offering shelter from wind and rain, and shade from the sun;"

– Sustainable Design and Construction SPG (2014)

Section 2.3.7 states the following:

"Large buildings have the ability to alter their local environment and affect the microclimate. For example, […] tall buildings […] can influence how wind travels across a site, potentially making it unpleasant at ground level or limiting the potential to naturally ventilate buildings. One way to assess the impact of large buildings on the comfort of the street environment is the Lawson Comfort Criteria. This tool sets out a scale for assessing the suitability of wind conditions in the urban environment based upon threshold values of wind speeds and frequency of occurrence. It sets out a range of pedestrian activities from sitting through to crossing the road and for each activity defines a wind speed and frequency of occurrence. Where a proposed development is significantly taller than its surrounding environment, developers should carry out an assessment of its potential impact on the conditions at ground level and ensure the resulting design of the development provides suitable conditions for the intended use."

The SPG also advises using the Lawson Comfort Criteria to assess the impact of a large building on the comfort of the street environment, which sets out a scale for assessing the suitability of wind conditions in the urban environment.

- Local Policy and Guidance:

– There are no local policies and guidance relating to wind microclimate.

- Topic Specific Guidance and Industry Standards:

– The industry standard criteria for wind microclimate assessments are commonly referred to as the Lawson criteria and emerged during a period of substantial research on the subject. Professor Tom Lawson[5] presented what has become the 'University of Bristol' variant of the Lawson criteria in 1973, prior to a collaborative initiative that produced the London Docklands Development Corporation (LDDC) variant of the Lawson criteria.

The LDDC variant applies a single percentage probability of exceedance of a range of wind speeds and associates each wind speed to a common pedestrian use such as sitting, standing and walking for comfort, with higher wind speed thresholds for the assessment of safety. The de-facto standard for wind microclimate assessments in the UK is the Lawson criteria, predominantly the LDDC variant.

Consultation

7.5 Table 7.1 summarises the consultation that has been undertaken with respect to wind microclimate assessment.

[1] Environment Act, 2021. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted [Accessed 03/09/2025].

[2] Department for Levelling Up, Housing and Communities, 2025. National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 [Accessed 03/09/2025].

[3] Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, 2024. Planning Practice Guidance. Available at: https://www.gov.uk/government/collections/planning-practice-guidance [Accessed 03/09/2025].

[4] Places For Everyone Joint Development Plan Document, Greater Manchester Combined Authority (GMCA), 2024

[5] Lawson, T.V, 2001. Building Aerodynamics. Imperial College Press.

Table 7.1: Summary of Consultation		
Consultee and Form/Date of Consultation	**Summary of Comments**	**Where in this Chapter Comments are addressed**
EIA Scoping Opinion		
Manchester City Council	The formal scoping opinion dated 5th January 2025 confirmed wind microclimate should be included within the scope of the EIA.	Chapter 7 wind microclimate presents the assessment as proposed in the EIA Scoping Report.
Other Consultation		
N/A	N/A	N/A

Assessment Scope

7.6 The wind microclimate of the site was assessed through a computational fluid dynamics (CFD) study based on the LDDC variant of the Lawson criteria which is the de-facto standard for wind microclimate assessments in the UK.

Technical Scope

7.7 The assessment considers the potential impacts and likely effects of the proposed development during the demolition and construction stage and the completed development stage within the context of existing surrounding buildings, as well as future surrounding buildings.

7.8 The technical scope of the wind microclimate assessment considers the expected wind microclimate in areas that would be accessible to pedestrians and future occupiers of the proposed development at various locations, including ground and terrace levels, throughfares and at entrances. There will be no pedestrian or amenity uses proposed at the roof level. There is one terrace at level 15. The wind conditions have been categorised using the Lawson Comfort Criteria to determine the suitability of the proposed development for different pedestrian activities. In addition, consideration has been given to strong winds which may pose a safety concern.

7.9 A qualitative assessment of wind conditions has been undertaken for the demolition and construction stage using the measured wind conditions at the existing site in combination with the professional judgement of an experienced wind engineer.

7.10 A quantitative assessment of wind conditions has been undertaken for the completed development stage by means of a CFD study.

7.11 Existing pedestrian receptors around the site and study area have been assessed for wind conditions against both their current use and against the baseline wind conditions. New pedestrian receptors introduced by the proposed development have been assessed against their intended use.

7.12 For both existing and new receptors, a scale of effect has been assigned based on the wind conditions measured, the intended usage of the receptor area and (where relevant, for existing receptors) any potential change in wind conditions from the baseline.

Spatial Scope

7.13 The study area has been determined by means of professional experience and industry standard and covers an area of 450 metres (m) from the site boundary. This is equivalent to approximately 400 m from the edge of this built centre and exceeds the 250 m minimum radius specified within ASCE/SEI 49-12[6] guidance and the 300 m minimum radius specified within AWES-QAM-1-2019[7] guidance, the relevant wind engineering guidelines that cover the spatial extent of physical or digital proximity models.

7.14 This built centre of one residential tower is bordered by Lord Street to the north which is fronted by retail units. To the east lies Fernie Street, beyond which the Britton House and Jefferson Place apartment buildings are situated approximately 50–60 m from the site. A Texaco petrol station borders the southern border, while Cheetham Hill Road forms the western boundary and is fronted by a tiling shop located about 50 m away.

7.15 The study has captured all relevant built structures within the proposed development that may alter wind patterns within the study area. Moreover, it has also captured nearby spaces and properties that would be expected to be influenced by the introduction of the built element of the proposed development.

7.16 The study area incorporates new and existing sensitive receptors located with the site and study area. Moreover, it has also captured nearby spaces and properties – albeit distant and limited in number – that would be expected to be influenced by the introduction of the built element of the proposed development.

Temporal Scope

7.17 The assessment has considered impacts arising during the demolition and construction stage which would be of expected to be temporary and short to medium-term (5-10 years) in nature and from the completed development stage which would be expected to be permanent and long-term in nature (i.e. more than 10 years).

7.18 The assessment has considered the following scenarios:

- Configuration 1: Existing site within existing surrounds (the baseline scenario);
- Configuration 2: The proposed development within existing surrounds; and
- Configuration 3: The proposed development within cumulative surrounds.

Baseline Characterisation Method

Desk Study

7.19 No desk study was carried out for the baseline scenario.

Field Study

7.20 Field study/data collection was not required at the site as the data provided by other sources was deemed to be adequate and representative of the site conditions.

Modelling

7.21 The existing baseline conditions at the site and study area have been established through CFD modelling.

Assessment Method

Methodology

7.22 The microclimate of any development is 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. This assessment has considered the wind conditions that would result upon the introduction of the proposed development into the study area. This assessment has further considered the cumulative impact following the introduction of relevant consented schemes within the study area.

7.23 The assessment has predicted the proportion of time a receptor location would experience wind speeds in excess of threshold values for safety, as well as typical activities such as walking, waiting and outdoor sitting. It can therefore be demonstrated within the various parts of a new development and the adjacent schemes, whether wind conditions are suitable or unsuitable, and whether design adjustment or mitigation measures are required.

[6] American Society of Civil Engineers, 2012, Wind Tunnel Testing for Buildings and Other Structures.

[7] Australasian Wind Engineering Society, 2019, Quality Assurance Manual: Wind Engineering Studies of Buildings.

7.24 The CFD modelling has employed a steady-state Reynolds Averaged Navier Stokes (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. Further details of this approach are provided within Technical Appendix 7.1, ES Volume 3. Salient highlights of this approach are as follows:

- The Shear Stress Transport k-ω turbulence model has been employed;
- Architectural features of 0.5 m or more have been captured within the geometry modelled;
- Cell sizes of as small as 0.2 m were utilised to capture flow behaviour in critical locations; and
- The region of interest closest to the ground (1.5 m) incorporated five layers of cells.

7.25 A 3D model of the site and surrounds has been assessed to determine wind conditions within three configurations:

- Configuration 1: Existing site within existing surrounds;
- Configuration 2: Proposed development within existing surrounds; and
- Configuration 3: Proposed development within cumulative surrounds.

7.26 Proposed on-site pedestrian activities have been informed by review of the general arrangement plans (location of entrances and communal terraces) and landscape plans (seating areas and thoroughfares).

Site and Study Area Wind Climate

7.27 Wind environment studies require that wind speed data obtained from a measurement station be transposed to the site of interest. The measurement station of choice for this assessment is that at Manchester Airport.

7.28 The wind speed history, provided by weather organisations such as the UK Met Office or the National Oceanic and Atmospheric Administration, is reformatted into the number of observations of wind speeds within each of several wind speed ranges, for each wind direction and for each month of the year. The months are grouped into seasons and a Weibull distribution is fitted to the wind speed distribution for each wind direction, for each season. The resulting weather centre wind data are transposed to open country terrain at sea-level, accounting for upwind terrain. The open country wind data are then transposed to reference height at the site.

Lawson Comfort Criteria

7.29 The industry standard criteria for wind microclimate assessments are commonly referred to in the UK as the Lawson Comfort Criteria, after one of their main authors. As with most other leading practitioners undertaking wind microclimate assessments, the LLDC variant of the Lawson Comfort Criteria has been used in this assessment.

7.30 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.

7.31 A wind speed of 15 metre per second (m/s) occurring once per year is rated as unsuitable, in terms of safety, with the potential to de-stabilise the less able members of the public including the elderly, cyclists and children.

7.32 The LDDC variant of the Lawson Comfort 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.

7.33 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. The LDDC Comfort Criteria threshold wind speed values are presented in Table 7.2.

Table 7.2: Lawson Comfort Criteria

Threshold Wind Speed (m/s)	Comfort Rating / Activity		Qualifying Comments
4	C4	Long-term sitting	Reading a newspaper and eating and drinking.
6	C3	Short-term standing/sitting	Appropriate for bus stops, window shopping and building entrances.
8	C2	Strolling	General areas of walking and sightseeing.
10	C1	Walking	Local areas around tall buildings where people are not likely to linger.
>10	C0	Uncomfortable	Uncomfortable for all uses

7.34 The assessment takes full account of seasonal variations in wind conditions and pedestrian activities. For example, conditions for recreational activities focus on summer (June, July, August), but also consider spring (March, April, May) and autumn (September, October, November), while conditions for pedestrian thoroughfare, access or waiting (e.g. bus stops) consider all seasons, with winter (December, January, February) usually being the critical season. The assessment is summarised in terms of suitability for various activities. The activities considered and their relation to the Lawson Comfort Criteria are summarised in Table 7.3.

Table 7.3: Suitability Assessment

Suitability	Lawson Comfort Criteria
For passage in areas where tolerance of less comfortable windy conditions is expected, e.g. in substantially built-up areas of commerce where transit from A to B is often prompt, with pedestrians unlikely to linger.	Walking in all seasons.
For access to and passage through the proposed development and study area.	Strolling in all seasons.
For leisure uses such as a park, children's play area or other general recreational spaces.	Standing or short-term sitting from spring to autumn.
For pedestrian ingress or egress (entrances) at a building entrance, or short periods of sitting or standing such as at a bus stop, taxi rank, or a meeting point.	Standing or short-term sitting in all seasons.
For long periods of sitting such as for an outdoor café.	Long-term sitting in summer.

Demolition and Construction Stage

7.35 The wind conditions for the demolition and construction stage have been assessed qualitatively based on experience as standard within the industry.

7.36 During demolition and construction, conditions are expected to transition gradually from those experienced in the existing condition to those for the completed proposed development.

Completed Development Stage

7.37 With the introduction of the proposed development, the massing of the proposed development is expected to affect wind conditions within the site and immediate surrounding area by potentially increasing occurrences of downdraughts and subsequent acceleration of wind around corners.

Cumulative Stage

7.38 The introduction of the cumulative schemes could affect wind conditions within the site and immediate surrounding area by increasing occurrences of downdraughts and subsequent acceleration of wind around corners.

Assessment Criteria

7.39 The criteria used to assess if an effect is significant or not, is set out in subsequent sub-sections. This is determined by consideration of the sensitivity of the receptor, magnitude of impact and scale of the effect. In considering the significance of an effect, consideration has been given to the duration of the effect, the geographical extent of the effect and the application of professional judgement.

Receptor Sensitivity/Value Criteria

7.40 During the demolition and construction stage, receptors are defined to be pedestrians and cyclists on the roads in the study area and demolition and construction workers within the site. During this stage, sensitivity to wind is typically reduced as receptors, such as members of the public, would not visit the site which will be closed off for access. All receptors are considered to be of medium sensitivity to the local wind microclimate conditions and are given an equal weighting.

7.41 For the completed development stage with the proposed development in place, receptors are defined to be persons on foot, seated or travelling by bicycle within the proposed development and study area. All receptors are equally sensitive to the presence or absence of an acceptable wind microclimate. An unacceptable microclimate exists when either an exceedance of the safety criteria exists, or when the comfort criteria is not met for the existing/planned use at a receptor. All receptors are considered to be highly sensitive to the local wind microclimate conditions and are given an equal weighting.

7.42 The sensitivity of receptors has been classified as low, medium or high, in accordance with the criteria set out in Table 7.4.

Table 7.4: Receptor Sensitivity Criteria

Sensitivity	Criteria
Low	N/A.
Medium	Demolition and construction workers and other site operatives during the demolition and construction stage of the proposed development.
High	Pedestrians within the site during the completed development stage. Pedestrians and any cyclists with the study area.

Impact Magnitude Criteria

7.43 The magnitude of impact is defined by the severity of the deviation from the standards set out by the Lawson criteria. Exceedances of the safety criteria are deemed to be the most critical, given their potential effect on pedestrians' wellbeing, i.e. they may be unduly exposed to the potential for harm. Such effects are thus deemed to have a high impact magnitude. Where the comfort criteria are not met, i.e. where the conditions are too windy for a particular receptor to be sufficiently comfortable for existing or planned pedestrian uses and thus inconvenient but not unsafe, such effects are deemed to be of medium impact magnitude. Where the comfort criteria are marginally exceeded, to the extent that the exceedance is expected to be perceptible, but tolerable, such effects are deemed to be of low impact magnitude.

7.44 The magnitude of impact has been classified as low, medium or high, in accordance with the criteria set out in Table 7.5.

Table 7.5: Impact Magnitude Criteria

Magnitude of Impact	Criteria
Negligible	The comfort criteria are met and any effect does not alter the suitability of existing and future wind conditions with respect to existing and/or planned activities
Low	The comfort criteria are marginally exceeded, to the extent that the exceedance is expected to be perceptible, but tolerable.
Medium	The comfort criteria are not met, i.e. where the conditions are too windy for a particular receptor to be sufficiently comfortable for existing and/or planned pedestrian uses and thus inconvenient but not unsafe.
High	Exceedances of safety criteria are deemed to be the most critical, given their potential effect on pedestrians' wellbeing, i.e. they may be unduly exposed to the potential for harm.

7.45 On this basis, therefore, exceedances of the safety criteria are considered to be of high magnitude, while exceedances of the comfort criteria are considered to be of medium or low magnitude.

Scale of Effect Criteria

7.46 Impacts have been assessed on the basis of the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 7.6.

Table 7.6: Scale of Effect Criteria

Magnitude of Impact	Sensitivity of Receptors		
	Low	Medium	High
Negligible	Negligible	Negligible	Negligible
Low	Minor	Minor	Minor
Medium	Minor	Moderate	Moderate
High	Moderate	Major	Major

7.47 Based on professional judgement, moderate and major effects are considered significant in EIA terms. In determining the significance of reported effects, consideration has been given to the type of effect i.e. direct, indirect or secondary, the geographical extent of the effect and the duration of the effect i.e. temporary which is considered to be either short term (up to five years) or medium term (5-10 years) or permanent (10 years or more).

7.48 Duration of effect has been described as short-, medium- or long-term-, in accordance with the criteria set out in Table 7.7.

Table 7.7: Duration of Effects Criteria

Duration	Criteria
Short	Up to 5 years
Medium	5-10 years
Long	10 years

Nature of Effect Criteria

7.49 The nature of the effect has been described as either adverse, neutral or beneficial as follows:

- Beneficial – An advantageous effect to a receptor;

- Neutral – An effect that on balance, is neither beneficial nor adverse to a receptor or is equally beneficial and adverse to a receptor; or
- Adverse – A detrimental effect to a receptor.

7.50 The following are the significance criteria used to assess likely wind conditions as a result of the proposed development on high sensitivity receptors and are applicable to wind conditions both on and off-site (within the study area):

- Major Beneficial: Any effect on wind conditions which is expected to improve pedestrian safety, namely an improvement in conditions from being considered unsafe to being considered safe;
- Moderate Beneficial: Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to suitable for existing or planned activities;
- Minor Beneficial: Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to marginal or tolerable for planned activities, or from marginal or tolerable to suitable for existing and planned activities;
- Negligible Neutral: Any effect that does not alter the suitability of existing wind conditions and any effect on future wind conditions that would be suitable with respect to existing and planned activities;
- Minor Adverse: Any effect on wind conditions which worsens pedestrian comfort from suitable to marginal or tolerable for planned activities, or from marginal or tolerable to unsuitable for planned and existing activities;
- Moderate Adverse: Any effect on wind conditions that worsens pedestrian comfort from suitable to unsuitable for existing and planned activities; and
- Major Adverse: Any effect on wind conditions adversely affecting pedestrian safety, namely a deterioration in conditions from being considered safe to being considered unsafe.

Assumptions and Limitations

7.51 The assessment has relied on wind climate data provided by Manchester Airport. It has been assumed that these data sets have been reported correctly.

7.52 The assessment has been carried out using CFD methods. The method adopted 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. The assessor conducts regular validation of proprietary CFD processes against experimental results.

Baseline Conditions

Existing Baseline

7.53 The site comprises a vacant plot of derelict hardstanding land colonised by overgrown vegetation.

7.54 Meteorological data for the site shows prevailing winds from the south throughout the year with a secondary peak from the west, mainly during the summer months.

7.55 Wind conditions within the study area satisfy the criteria for pedestrian safety.

7.56 Within the existing site and study area, wind conditions are suitable for at least short-term standing or better throughout the year, with a small area of strolling conditions present to the north-east of the site. Overall, wind conditions are comfortable for pedestrian movement and access at building entrances throughout the study area.

7.57 Figures 7.1, 7.2 and 7.3 present the existing site conditions from the CFD analysis.

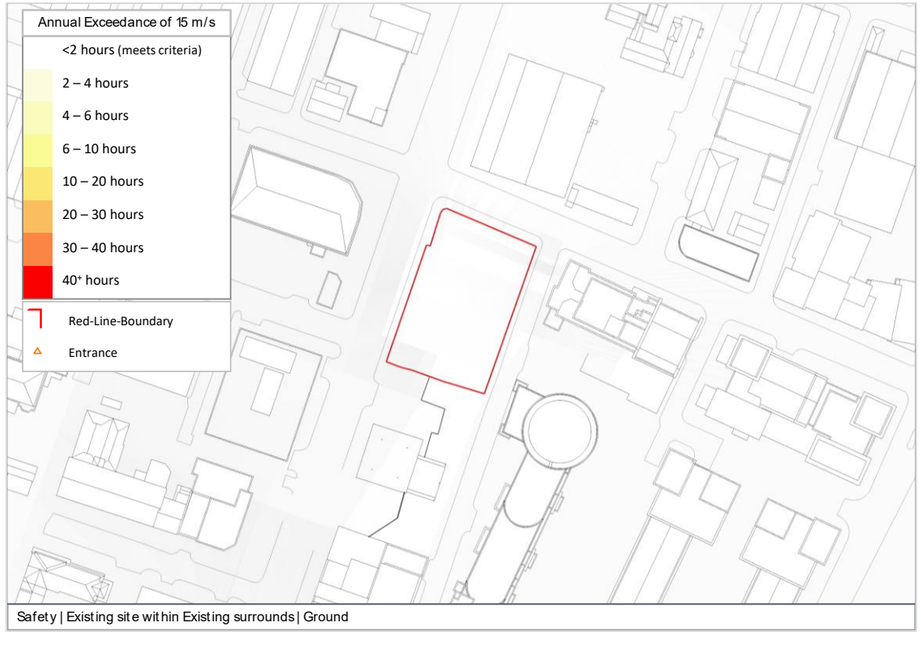


Figure 7.1: Configuration 1 - Existing site within existing surrounds – Safety – Ground



Figure 7.2: Configuration 1 - Existing site within existing surrounds – Comfort – Worst seasonal



Figure 7.3: Configuration 1 - Existing site within existing surrounds – Comfort – Summer season

Future Baseline

7.58 The future baseline conditions were assessed qualitatively. The cumulative schemes are located such that they are not expected to influence or be influenced by the prevailing wind direction, and have negligible effects within the study area. Thus wind conditions are expected to remain as described in the existing baseline scenario.

Sensitive Receptors

7.59 The receptors identified as sensitive to the proposed development and which have been 'scoped-in' to the assessment are summarised in Table 7.8.

Table 7.8: Summary of Sensitive Receptors

Receptor	Sensitivity
Demolition and construction workers and other site operatives during the demolition and construction of the proposed development.	Medium
Pedestrians within the site during the completed development stage. Pedestrian users and cyclists within the study area during the completed development stage.	High

Assessment of Effects

Demolition and Construction Effects

7.60 During the demolition and construction stage, there would be potential for wind to blow into and across any open areas of the site. However, the construction site would be occupied only by site workers, whose sensitivity to windy conditions would be less than members of the public.

7.61 Construction activity 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 development 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.

7.62 In terms of comfort, therefore, there would generally be temporary, short-term, **Negligible** (not significant) effects during the demolition and construction stage. Conditions are expected to transition gradually from those experienced under existing conditions to those for the completed development.

Completed Development Effects

7.63 Figures 7.4, 7.5, 7.6, 7.7 and 7.8 present the proposed development within existing surrounds conditions from the CFD analysis.

7.64 Following the introduction of the proposed development, safety criteria are predicted to be met within the study area. This would represent a permanent, long-term, **Negligible** (not significant) effect.

7.65 Wind conditions on the throughfares within the site are suitable for short-term standing / sitting or better throughout the year and thus comfortable for pedestrian movement. This would represent a permanent, long-term, **Negligible** (not significant) effect.

7.66 Wind conditions at entrances throughout the site are suitable for short-term standing or better throughout the year and are thus comfortable for pedestrian ingress and egress. This would represent a permanent, long-term, **Negligible** (not significant) effect.

7.67 Wind conditions at the elevated terrace are suitable for at least short-term sitting, with extensive areas also appropriate for long-term standing / sitting during summer, with a small, localised area near the south-east corner that is suitable for strolling in summer. Overall, the terrace is considered comfortable for general recreational use. This would represent a permanent, long-term, **Negligible Adverse** (not significant) effect.

7.68 Within the wider study area, wind conditions are suitable for at least strolling or better throughout the year. This would represent a permanent, long-term, **Negligible** (not significant) effect.

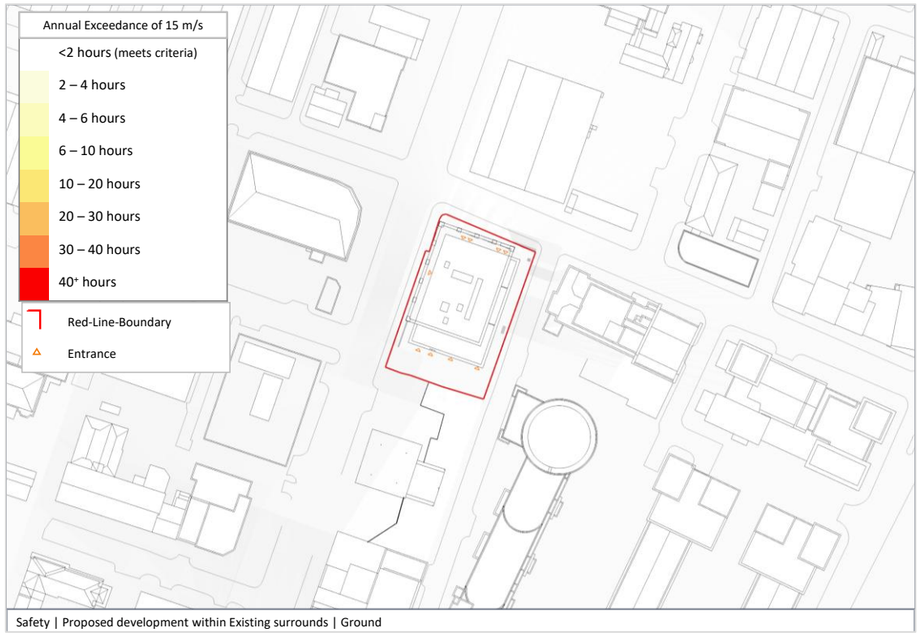


Figure 7.4: Configuration 2 - Proposed development within existing surrounds – Safety – Ground

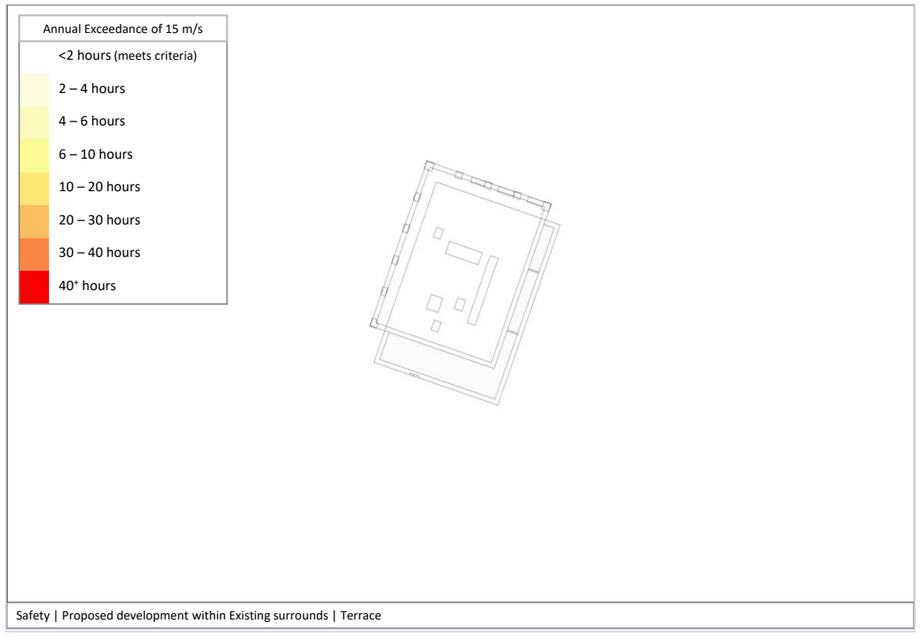


Figure 7.5: Configuration 2 - Proposed development within existing surrounds – Safety – Terrace

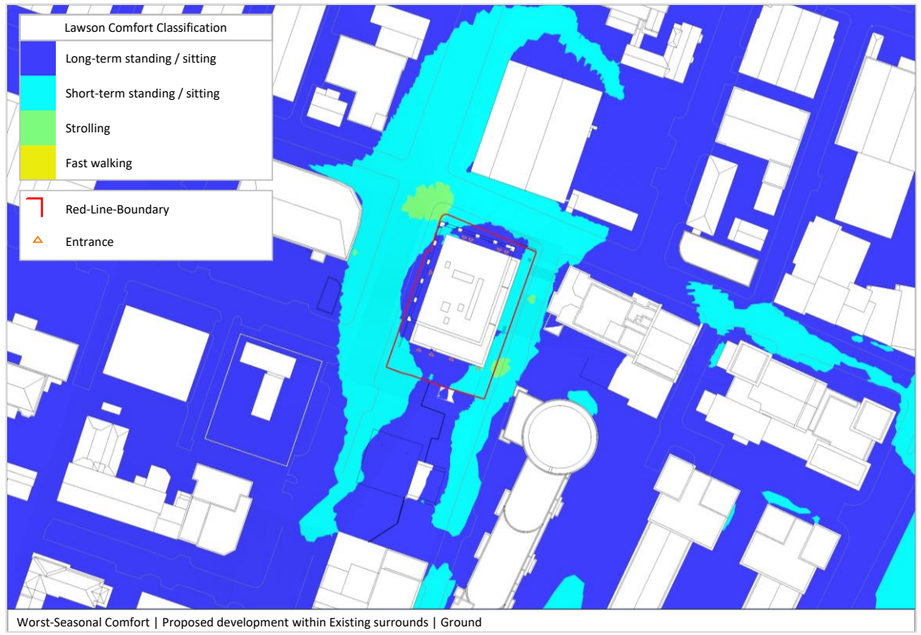


Figure 7.6: Configuration 2 - Proposed development within existing surrounds – Comfort – Worst seasonal

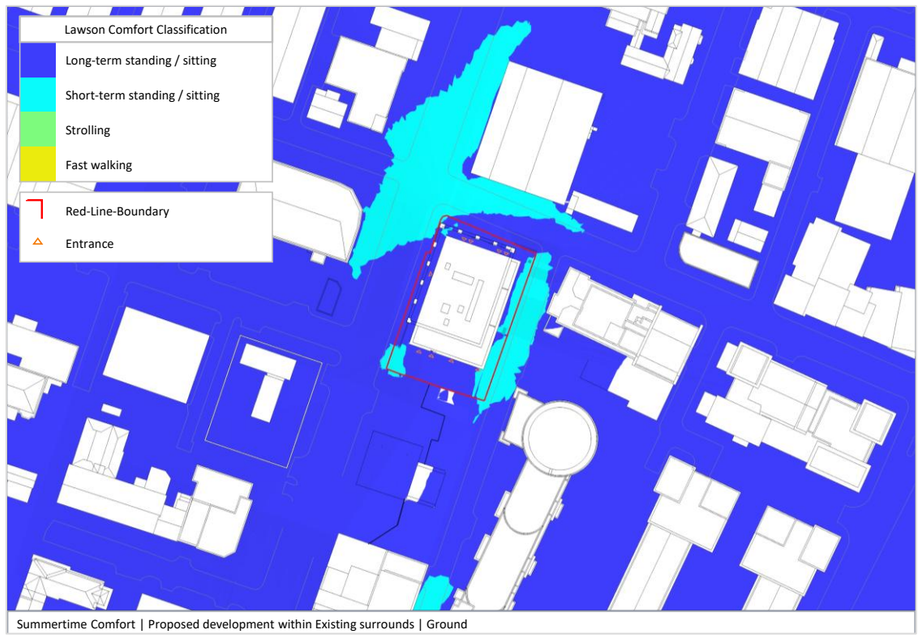


Figure 7.7: Configuration 2 - Proposed development within existing surrounds – Comfort – Summer season – Ground

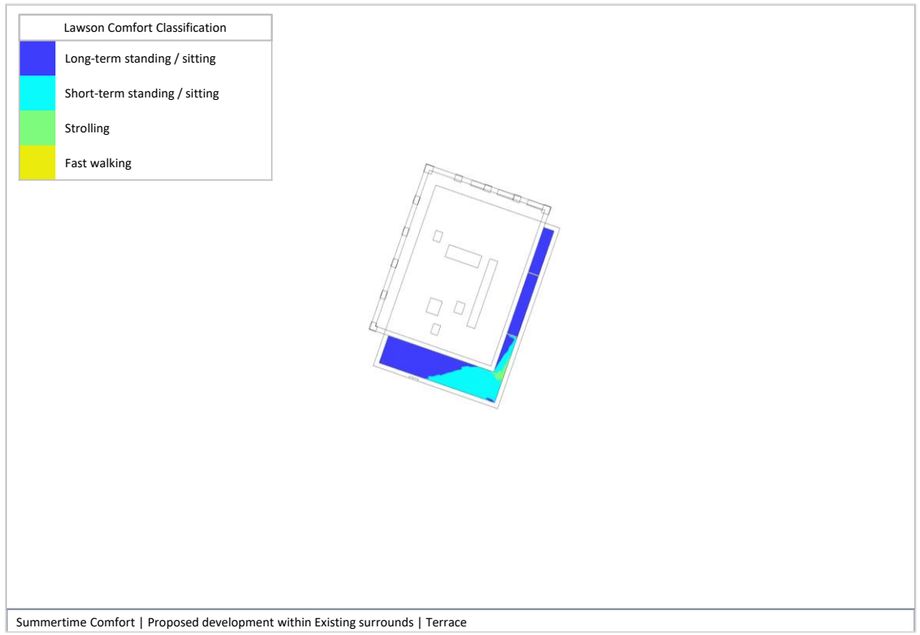


Figure 7.8: Configuration 2 - Proposed development within existing surrounds – Summer season – Terrace

Assessment of Residual Effects

Additional Mitigation

7.69 No additional mitigation measures are required as part of the design.

Demolition and Construction Stage

7.70 No significant effects are predicted and consequently no additional mitigation is required.

Completed Development Stage

7.71 No significant effects are predicted and consequently no additional mitigation is required.

Enhancement Measures

7.72 There would be no likely significant adverse environmental effects in relation to wind microclimate; therefore, no additional enhancement or mitigation measures are required.

Demolition and Construction Residual Effects

7.73 As no additional mitigation measures would be required, the residual demolition and construction effects remain as reported in the Demolition and Construction Effects section.

Completed Development Residual Effects

7.74 As no additional mitigation measures would be required, the residual completed development effects remain as reported in the Completed Development Effects section.

Summary of Residual Effects

7.75 Table 7.9 provides a tabulated summary of the outcomes of the assessment of the proposed development.

Table 7.9: Summary of Residual Effects

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ +/- -	D I	P T	R IR	St Mt Lt
Demolition and Construction								
Off-site pedestrians and demolition and construction workers	Wind conditions meeting safety standard criteria of wind conditions.	None required	Negligible (Not Significant)	+/-	D	T	R	St
Completed Development								
Off- and on-site Pedestrians	Safety - Effect on pedestrian safety at the site and study area caused by wind conditions.	None required	Negligible (Not Significant)	+/-	D	P	IR	Lt
	Throughfares - Wind conditions at all site throughfares are suitable for at least short-term standing conditions throughout the year	None required	Negligible (Not Significant)	+/-	D	P	IR	Lt
	Entrances - Wind conditions at all site entrances are suitable for at least short-term standing condition throughout the year	None required	Negligible (Not Significant)	+/-	D	P	IR	Lt
	Terraces - Wind conditions at all site terraces are suitable for at least short-term standing throughout the year	None required	Negligible Adverse(Not Significant)	+/-	D	P	IR	Lt
	Surrounding areas - wind conditions are suitable for existing pedestrian activities	None required	Negligible Neutral (Not Significant)	+/-	D	P	IR	Lt

Notes:

* - = Adverse/ + = Beneficial/ +/- = Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R = Reversible/ IR = Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term.

**Negligible/Minor/Moderate/Major

Cumulative Effects

Intra-Project Effects

7.76 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 10: Cumulative Effects.

Inter-Project Effects

7.77 Table 7.10 provides a summary of the likely cumulative effects resulting from the proposed development and the cumulative developments.

Table 7.10: Inter-Project Cumulative Effects

Cumulative Development	Demolition and Construction		Completed Development	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
Brewery Gardens	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.
Land Bounded by The Travelodge and Surface Level Carparking to the North, Further Surface Level Carparking to The East, Manchester College to The South and Bury New Road to the West Manchester	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.
Land Bounded by Great Ducie Street and Mirabel Street Manchester M3 1PJ	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.
Salford City Council	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.

Table 7.10: Inter-Project Cumulative Effects

Cumulative Development	Demolition and Construction		Completed Development	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
		is located outside the study area.		
Former Boddingtons Brewery Site Dutton Street Manchester M3 1LE	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.
Manchester College	No	No significant changes to the wind microclimate are expected as the scheme is already complete and has been treated as part of the existing environment.	No	No significant changes to the wind microclimate are expected as the scheme is already complete and has been treated as part of the existing environment.
Red Bank Victoria	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.
Land At 33 - 41 Cheetham Hill Road Manchester M4 4FT	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.
1 Park Place Manchester M4 4EZ	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.
Land Bound by Dantzic Street, Gould Street, Williamson Street and Bromley Street (Known as Victoria Riverside)	No	No significant changes to the wind microclimate are expected as the scheme is under construction and has been treated as part of the existing environment.	No	No significant changes to the wind microclimate are expected as the scheme is under construction and has been treated as part of the existing environment.

Table 7.10: Inter-Project Cumulative Effects

Cumulative Development	Demolition and Construction		Completed Development	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
Land Bounded by Dantzic Street & Aspin Lane, Land Bounded by Gould Street & Angel Meadows and Land bounded by Old Mount Street, School Street, Naples Street & Ludgate Street	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.	No	No significant changes to the wind microclimate are expected, given that the development is not located within pathways of the prevailing wind.
Land at Corporation Street "New Victoria Phase 2"	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.	No	No significant changes to the wind microclimate are expected as the scheme is located outside the study area.

7.78 When considered on an individual basis, none of the cumulative developments listed within Table 7.10, are expected to have a meaningful impact on the wind conditions within and around the Proposed Development, due to their distance from the site, specific location or scale. However, due to the number of cumulative developments, and thus the potential for compounding effects, it is considered prudent to assess a scenario including the cumulative developments; the results are outlined below.

7.79 Figures 7.9, 7.10, 7.11, 7.12 and 7.13 present the pedestrian comfort wind conditions for the proposed development within cumulative surrounds.

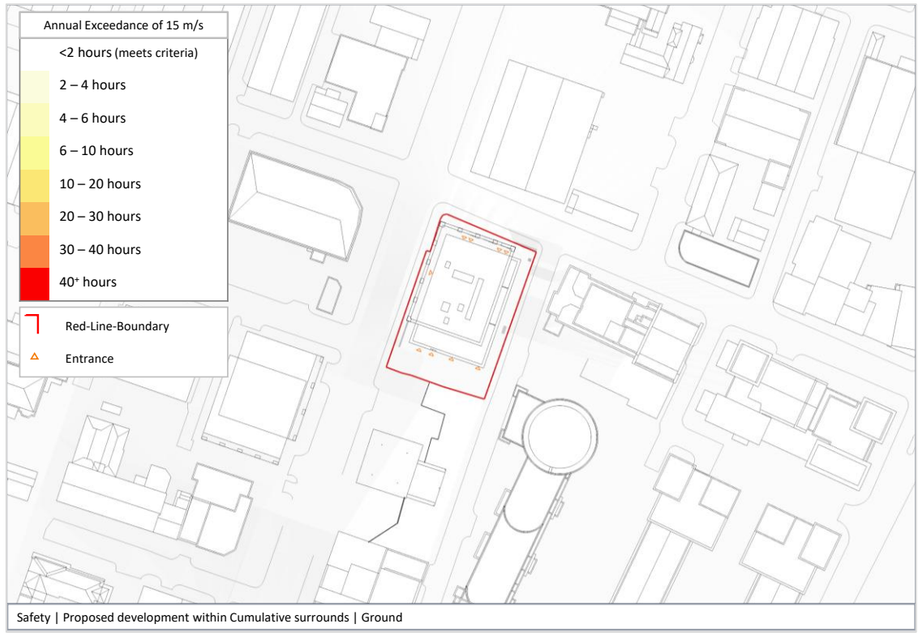


Figure 7.9: Configuration 3 - Proposed development within cumulative schemes – Safety – Ground

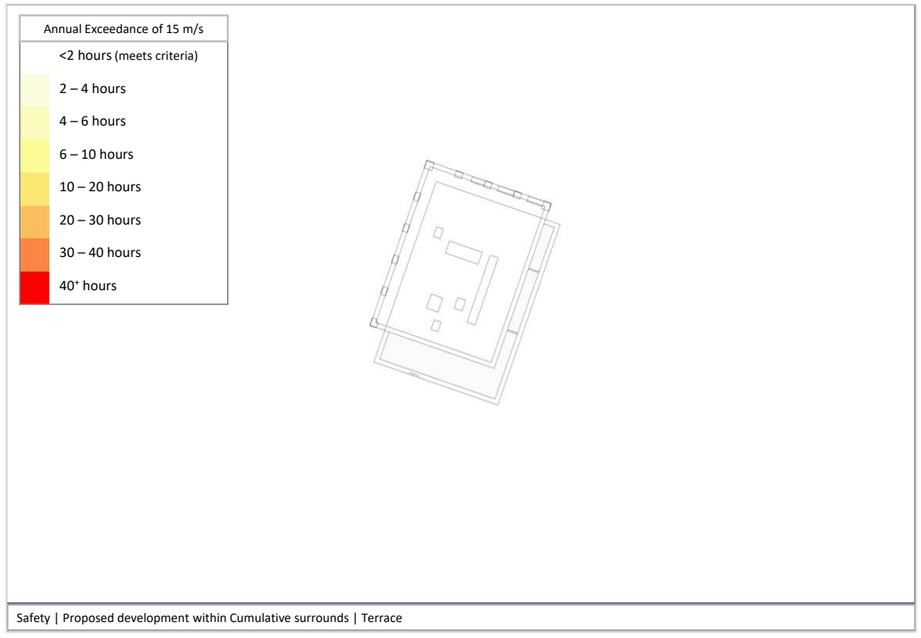


Figure 7.10: Configuration 3 - Proposed development within cumulative schemes – Safety – Terrace

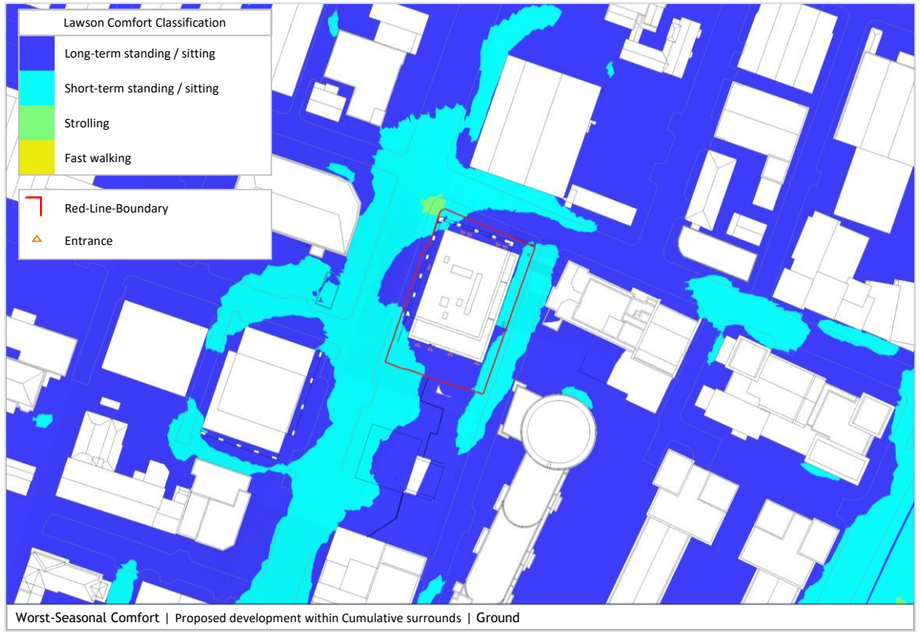


Figure 7.11: Configuration 3 - Proposed development within cumulative schemes – Comfort – Worst seasonal

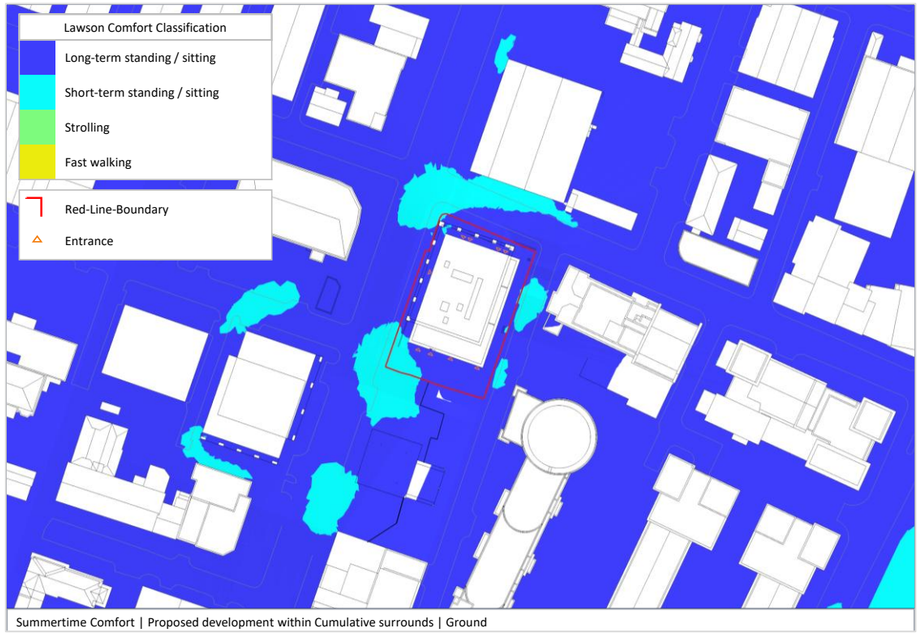


Figure 7.12: Configuration 3 - Proposed development within cumulative schemes – Comfort – Summer season – Ground

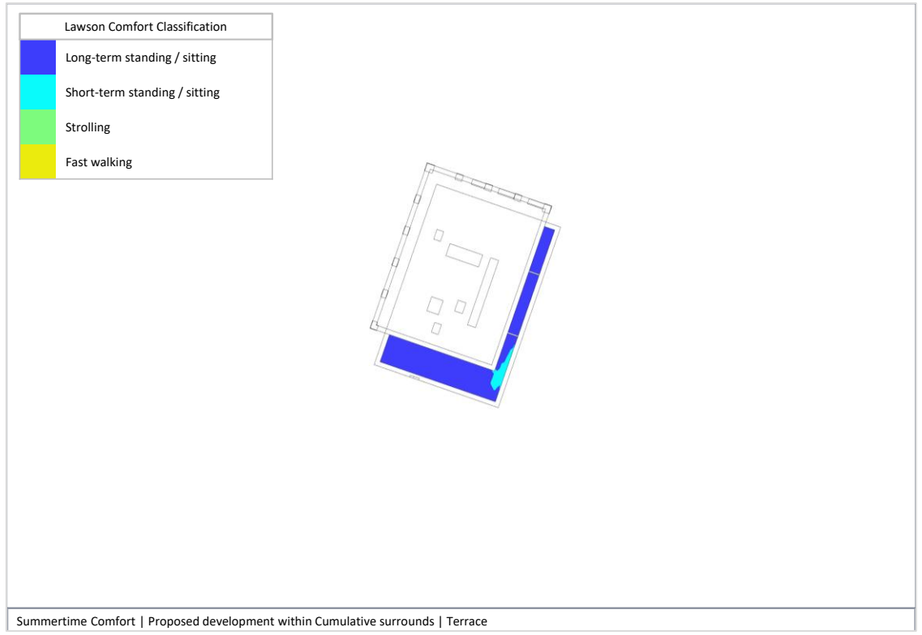


Figure 7.13: Configuration 3 – Proposed development within cumulative schemes – Comfort – Summer season – Terrace

Demolition and Construction Cumulative Effects

7.80 The cumulative effects during demolition and construction are expected to be temporary, short-term, **Negligible**.

Completed Development Cumulative Effects

7.81 The cumulative effect during completed development is expected to be permanent, long-term, **Negligible.**

Summary of Assessment (NTS)

Background

7.82 This chapter has detailed the potential wind microclimate effects due to the demolition and construction stage and the completed development stages of the proposed development. The assessment has been undertaken taking into account the relevant national, regional and local legislation, policy and guidance.

7.83 For the demolition and construction stage wind conditions have been assessed qualitatively, using professional judgement of an experienced wind engineer, based on an assessment of the background wind climate at the site and the results from the computer modelling.

7.84 For the completed development stage, computer modelling was undertaken. Three configurations were tested using a digital model of the proposed development and the study area taking into account the existing baseline and future baseline with cumulative schemes.

7.85 Meteorological data for the site shows prevailing winds from the south throughout the year with a secondary peak from the west, mainly during the summer months.

7.86 Baseline conditions meet the safety criteria and are suitable for at least short-term standing or better throughout the year. Thus, wind conditions are comfortable for pedestrian movement and access at building entrances throughout the study area.

Demolition and Construction Effects

7.87 During the demolition and construction works, there would be potential for wind to blow into and across any open areas of the site. However, the construction site would be occupied only by site workers, whose sensitivity to windy conditions would be reduced, while pedestrians moving elsewhere in the study area would be too far to notice any effect of a cleared site due to site hoardings. As a result, during demolition and construction works, there are no significant effects predicted on off-site and on-site receptors and consequently no additional mitigation is required.

Completed Development Effects

7.88 During the completed development stage, the wind conditions within and around the site would continue to meet the wind safety and comfort criteria.

7.89 The inclusion of cumulative developments leads to an improvement on the terrace where strolling conditions are no longer present, adjusting the negligible adverse effect to negligible neutral effect (remaining not significant).

7.90 Overall, it is considered that the completed proposed development would result in **Negligible** effects on the wind microclimate and identified receptors and as such would not give rise to significant effects on the wind microclimate conditions.

Cumulative Effects

7.91 Following the introduction of the completed proposed development, the wind conditions within and around the site would continue to meet the wind safety and comfort criteria.

7.92 Overall, it is considered that the completed proposed development would result in **Negligible** effects on the wind microclimate and identified receptors, and as such would not give rise to significant effects on the wind microclimate conditions.

8 SOCIOECONOMICS AND HUMAN HEALTH

Introduction

8.1 This chapter of the ES reports on the likely significant socioeconomics and human health effects to arise from the demolition and construction stage and the completed development stage of the proposed development.

8.2 The chapter describes

- the socioeconomics and human health policy context;
- the methods used to assess the potential impacts and likely effects;
- the baseline conditions at the site and within the study area;
- the effects taking into consideration embedded mitigation;
- the need for additional mitigation and enhancement;
- the significance of residual effects; and
- inter-project cumulative effects.

8.3 The chapter is supported by the following technical appendices in ES Volume 3:

- Technical Appendix 8.1: Policy and Guidance

Methodology

8.4 The assessment has been informed by the following legislation, policies and published guidance:

- International Legislation:
  - There is no international legislation relating to the assessment of socio-economics;
  - There is no international legislation relating to the assessment of human health;
- National Legislation, Policy and Guidance:
  - National Planning Policy Framework (2024);
- Regional Policy and Guidance:
  - Greater Manchester Combined Authority Places (GMCA) for Everyone Joint Development Plan;
  - Greater Manchester Combined Authority Strategy (GMCA) 2024-203; and
  - Greater Manchester Combined Authority (GMCA) Housing Strategy 2024;
- Local Policy and Guidance:
  - Manchester City Council (MCC) Local Plan;
  - Manchester City Council (MCC) Core Strategy Development Plan Document; and
  - Relevant Supplementary Planning Documents.
- Topic Specific Guidance and Industry Standards:
  - Additionality Guide (2014);
  - Institute of Sustainability and Environmental Professionals (ISEP) (formerly IEMA) publications including
  - Social Impact Assessment in EIA in the UK;
  - Delivering Proportionate EIA;
  - Demystifying Cumulative Effects;
  - Determining Significance for Human Health in Environmental Impact Assessment and other good practice guidance.
  - ISEP Guide to Scoping in Human Health Assessment and Health in Environmental Impact Assessment; and
  - HUDU and other relevant guidance on planning for health, health infrastructure and healthy built environments.

8.5 Further details are provided in ES Volume 3: Technical Appendix 8.1: Policy and Guidance.

Consultation

8.6 At the time of writing, consultation relevant to socioeconomics and human health has comprised of the formal EIA scoping process with Manchester City Council (MCC) and Statement of Community Involvement (SCI) through which the proposed scope and methodology for this topic have been presented and agreed in principle. No separate topic-specific consultation has been undertaken beyond the scoping process.

8.7 Table 8.1 summarises the consultation that has been undertaken with respect to the human health and socioeconomics assessment.

Table 8.1: Summary of Consultation

Consultee and Form/Date of Consultation	Summary of Comments	Where in this Chapter Comments are addressed
EIA Scoping Opinion		
Manchester City Council, Scoping Opinion Report, 5th January 2026	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.	N/A
Other Consultation		
Statement of Community Involvement (SCI) – Public consultation event and online consultation, held 2 December 2025 (SCI dated 17/12/2025)	A public consultation event was held and promoted via a dedicated website, leaflet drop (approximately 1,500 leaflets) and email invitations to local Councillors. No members of the public attended the event and no responses were received via the online survey. One Councillor responded by email, raising comments relating to the consultation process, venue accessibility and affordable housing provision.	The consultation process and outcomes are summarised in ES Chapter 6 (Consultation). No socio-economic or human health issues were raised through public consultation that require assessment or mitigation within this chapter. The absence of public representations is noted in the baseline and assumptions for the socioeconomics and human health assessment.

Assessment Scope

8.8 The socioeconomics and human health assessment has followed a proportionate, pathway-based approach in line with relevant ISEP guidance on social impact assessment, human health and proportionate EIA. The assessment has focussed on those determinants of health and socioeconomic

impacts that, as identified through scoping, have reasonable potential to result in significant effects for a development of this nature. Professional judgement has been applied within the structured framework set out in this chapter.

Technical Scope

8.9 Consistent with the EIA scoping report, the technical scope of the assessment has considered the following impact pathways:

- Housing: Provision of housing to meet local and wider needs and any implications for housing supply and choice;
- Open space, leisure and play: Change in demand for open space, leisure and play space arising from the introduction of new residents or loss of open space;
- Employment and income (construction): Temporary employment and income generation associated with demolition and construction activities, including for local residents and the wider Greater Manchester labour market; and
- Built environment and design: Potential effects on daylight and sunlight and wind microclimate as these relate to residential amenity and health, drawing on the Daylight, Sunlight and Overshadowing and Wind Microclimate Assessments; and design aspects of the proposed development relevant to inclusive, safe and healthy environments, including private and community amenity space and access.

8.10 Determinants such as air quality, noise and vibration, climate change mitigation and adaptation, land quality, risk-taking behaviour, diet and nutrition, relocation, community identity, social participation, education and training, health and social care services, and crime and safety have been considered at scoping and, for reasons set out in the EIA Scoping Report, are not expected to give rise to likely significant effects from the proposed development and are therefore scoped out of detailed assessment.

Spatial Scope

8.11 The study area comprises have been determined by means of professional judgement, and industry best practice. The study areas used for each of the assessment topics, are outlined in Table 8.2 below, as well as Figure 8.1.

Table 8.2: Study Areas

Impact/Receptor/Infrastructure	Study Area
Population (including relating to health)	Cheetham ward
Housing	MCC area and GMCA area
Open space, leisure and play space	Cheetham ward
Employment and income	MCC area and GMCA area
Built Environment	For Daylight, Sunlight and Overshadowing, the site and immediate surroundings. For Wind Microclimate, the site and all relevant build structures in the immediate surroundings.

Temporal Scope

8.12 The assessment has considered impacts arising during the demolition and construction stage. These would be expected to be temporary and short to medium-term (5-10 years). The completed development stage, on the other hand, would be expected to be permanent and long-term (i.e. more than 10 years).

Baseline Characterisation Method

Desk Study

8.13 Baseline conditions for socioeconomics and human health have been established by desk-based review of publicly available data and published sources. Data was obtained from the following sources:

- Office for National Statistics (ONS) Census 2021[1]
- Indices of Multiple Deprivation (2025)[2]
- Business Register and Employment Survey, Claimant Count and other ONS labour market statistics[3]
- Public Health England data (as reported in the Fingertips service) [4,5]

Field Study

8.14 The socioeconomics and human health assessment has been based on secondary data. No primary surveys or monitoring were required. The data available from secondary sources is considered adequate and representative for the purposes of this assessment.

Assessment Method

8.15 The assessment has adopted the overall EIA methodology described in ES Chapter 2 and the approach to human health and social impact assessment set out in relevant ISEP guidance.

8.16 The method comprises:

- identifying relevant socioeconomic and heath impact pathways for the proposed development;
- establishing the existing, and where appropriate, future baseline conditions;
- identifying sensitive receptors, including vulnerable population groups;
- assessing the magnitude of change for each impact pathway, informed by quantitative estimates of population, child yield and construction employment where feasible;
- assigning receptor sensitivity;
- combining magnitude and sensitivity to determine the scale and significance of effects, using professional judgement; and
- identifying additional mitigation, and where relevant, enhancement measures and reassessing residual effects.

Demolition and Construction Stage

8.17 For the demolition and constructions stage, the assessment has focussed on:

- temporary direct and indirect employment and income generation associated with the demolition and construction programme;

Completed Development Stage

8.18 For the completed development stage, the assessment has focussed on:

[1] Office for National Statistics (2025) Census 2021. Available at: https://www.nomisweb.co.uk/sources/census_2021
[2] Ministry of Housing, Community and Local Government (2025) Indices of Multiple Deprivation 2025. Available at: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2025
[3] Including the Business Register and Employment Survey 2025 and Annual population Survey 2025.
[4] Public Health England (2025) Fingertips – Local health, public health data for small geographic areas. Available at: https://fingertips.phe.org.uk/profile/local-health/data#page/1/gid/1938133180/pat/6/ati/501/are/E08000003/iid/93084/age/169/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1
[5] Public Health England (2025) Fingertips – Ward Data (October 2025). Available at: https://fingertips.phe.org.uk/profile/local-health

- the contribution of 251 new homes to local and wider housing needs, having regard to type and mix;
- changes in demand for open space, leisure and play associated with the new resident population;
- the quality of the built environment and residential amenity (including daylight/sunlight and wind microclimate effects provided by the relevant technical assessments); and
- implications for human health and health inequalities via these determinants.

Cumulative Stage

8.19 The assessment of inter-project cumulative effects has considered the proposed development in combination with the cumulative schemes identified in the EIA Scoping Report and ES Chapter 5, where these are likely to interact spatially and temporally with the proposed development for socio-economic and human health outcomes.

Assessment Criteria

8.20 The criteria used to assess if an effect is significant or not, is set out in subsequent sub-sections. This is determined by consideration of the sensitivity of the receptor, magnitude of impact and scale of the effect. In considering the significance of an effect, consideration has been given to the duration of the effect, the geographical extent of the effect and the application of professional judgement. The assessment of socioeconomic and human health effects has been undertaken in accordance with the method set out by ISEP's *Determining Significance for Human Health in Environmental Impact Assessment (2022)*.

Receptor Sensitivity

8.21 The sensitivity of receptors has been classified as low, medium or high, in accordance with the criteria set out in Table 8.3.

Table 8.3: Receptor Sensitivity Criteria

Sensitivity	Criteria
Low	Receptors with low vulnerability and high adaptive capacity, for whom the change would represent a small proportion of total activity or wellbeing.
Medium	Receptors with some vulnerability and moderate adaptive capacity.
High	Receptors with high vulnerability and/or limited adaptive capacity, or for whom policy places particular emphasis.

Impact Magnitude Criteria

8.22 The magnitude of impact has been classified as low, medium or high, in accordance with the criteria set out in Table 8.4.

Table 8.4: Impact Magnitude Criteria

Magnitude of Impact	Criteria
Low	Small change to the baseline; affects a small proportion of the receptor; short-term or limited in geographic extent.
Medium	Noticeable change in level or quality of provision, access our outcome; affects a moderate proportion of the receptor or area; may require some adjustment b the receptor.
High	Substantial change in level or quality of provision, access or outcome; affects a large proportion of the receptor or area; maybe compromise continued functioning of services or lead to substantial changes in socioeconomic or health outcomes.

Significance Criteria

8.23 Impacts have been assessed on the basis of the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 8.5.

Table 8.5: Significance Criteria

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

8.24 Based on professional judgement, moderate and major effects are considered significant in EIA terms.

8.25 In determining the significance of reported effects, consideration has been given to the type of effect i.e. direct, indirect or secondary, the geographical extent of the effect and the duration of the effect i.e. temporary which is considered to be either short term (up to five years) or medium term (5-10 years) or permanent (10 years or more).

8.26 Duration of effect has been described as short-, medium- or long-term-, in accordance with the criteria set out in Table 8.8.

Table 8.6: Duration of Effects Criteria

Duration	Criteria
Short	Effects lasting up to 5 years, typically associated with the demolition and construction stage. These effects are temporary, limited in duration, and generally reversible once construction activities conclude.
Medium	Effects lasting between 5 and 10 years, extending beyond completion into early occupation and operation. These may persist through initial phases of resident settlement or local service adjustment, and may be reversible depending on the nature of the impact.
Long	Effects lasting more than 10 years during the operational life of the proposed development. These may be permanent or difficult to reverse, and are often associated with sustained changes in population, housing, access to services, amenity or community infrastructure.

Nature of Effect Criteria

8.27 The nature of the effect has been described as either adverse, neutral or beneficial as follows:

- Beneficial – An advantageous effect to a receptor;
- Neutral – An effect that on balance, is neither beneficial nor adverse to a receptor or is equally beneficial and adverse to a receptor; or
- Adverse – A detrimental effect to a receptor.

Assumptions and Limitations

8.28 This socioeconomics and human health assessment has been undertaken using a proportionate, evidence-led approach in accordance with ISEP guidance and the overall EIA methodology set out in ES Volume 2 Chapter 2: EIA Process and Methodology. The assessment has relied on publicly available secondary data sources, professional judgement and information provided by the project team regarding the proposed development. No primary data collection, surveys or monitoring have been undertaken as part of this assessment.

8.29 Baseline socio-economic and population characteristics have been derived primarily from the Office for National Statistics Census 2021[1], Indices of Multiple Deprivation 2025[2], labour market statistics[3] and publicly available health datasets, including Fingertips profiles[4,5]. It is assumed that these datasets accurately reflect prevailing conditions within Cheetham ward and the wider Manchester context. While some datasets may not fully capture more recent post-pandemic changes or short-term population movements, they are considered sufficiently robust and appropriate for the purposes of this assessment.

8.30 The assessment of open space, leisure and play has been undertaken on a qualitative basis. MCC does not currently apply a single adopted quantitative open space or play space standard expressed as a fixed square-metre requirement per resident. As a result, the assessment has focused on accessibility, availability of nearby facilities and housing mix. Professional judgement, rather than the application of numerical standards, has been applied in reaching conclusions. This approach is considered appropriate and proportionate in the absence of locally defined quantum benchmarks.

8.31 The assessment of built environment and design effects, including daylight, sunlight and wind microclimate, has drawn upon the findings of the relevant technical assessments reported in separate ES chapters. This chapter does not replicate those technical analyses but interprets their findings in socio-economic and human health terms. It is assumed that the conclusions of those technical assessments are accurate and robust.

8.32 The assessment has not considered individual behavioural responses or personal lifestyle choices, which can influence health outcomes, as these are inherently uncertain and outside the control of the proposed development. Instead, the assessment focuses on population-level effects and reasonable worst-case assumptions.

Baseline Conditions

Existing Baseline

Introduction to the Area, Local Population and Key Receptors

8.33 The proposed development is located in the ward of Cheetham, to the north of Manchester city centre, in the district area of Manchester City Council, as outlined in Figure 8.1.

8.34 The overall proposed development aims to deliver:

- 251 residential units;
- a mix of 1- and 2-bedroom mix of 1- and 2-bedroom apartments;
- 4 townhouses;
- dedicated cycle facilities; and
- associated basement and ground floor works.

8.35 The characteristics of the resident population of the study area are outlined below. Data for the study area relates to the Cheetham ward.

Population

8.36 Recent population statistics from ONS Census 2021 note there are 21,475 residents in Cheetham ward.

8.37 Cheetham ward's population equates to 3.89% of Manchester's total population of 551,934.

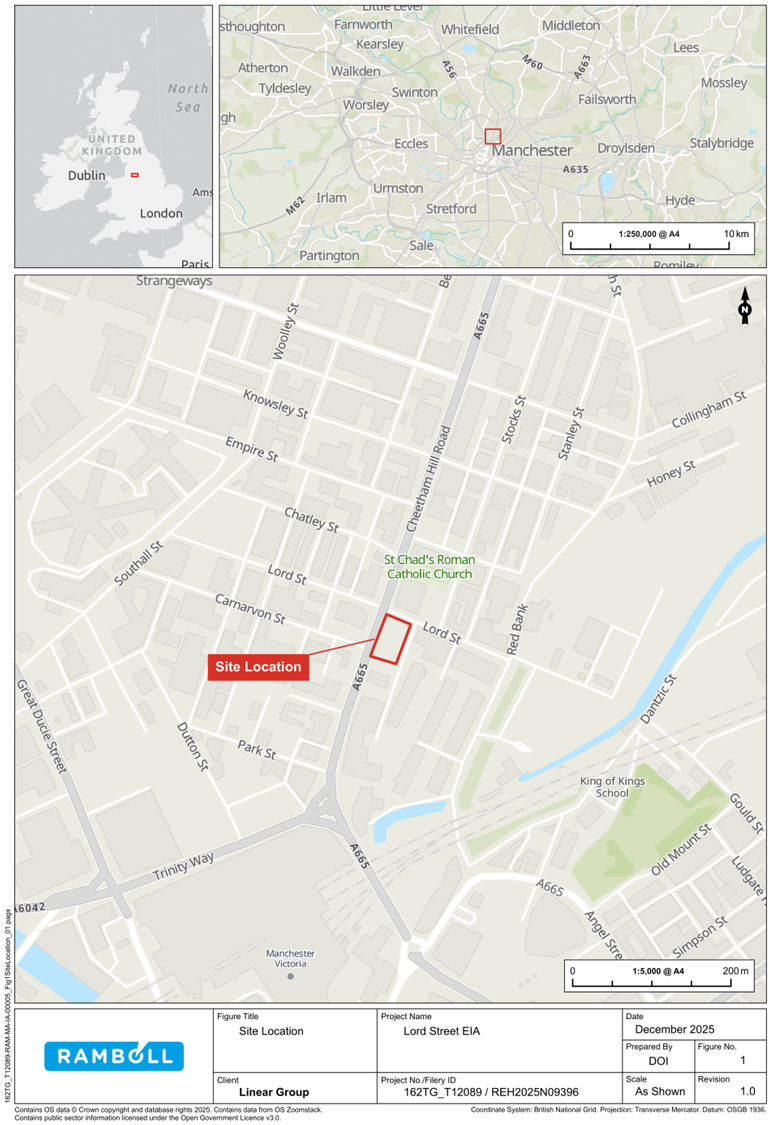


Figure 8.1 Site Location Map

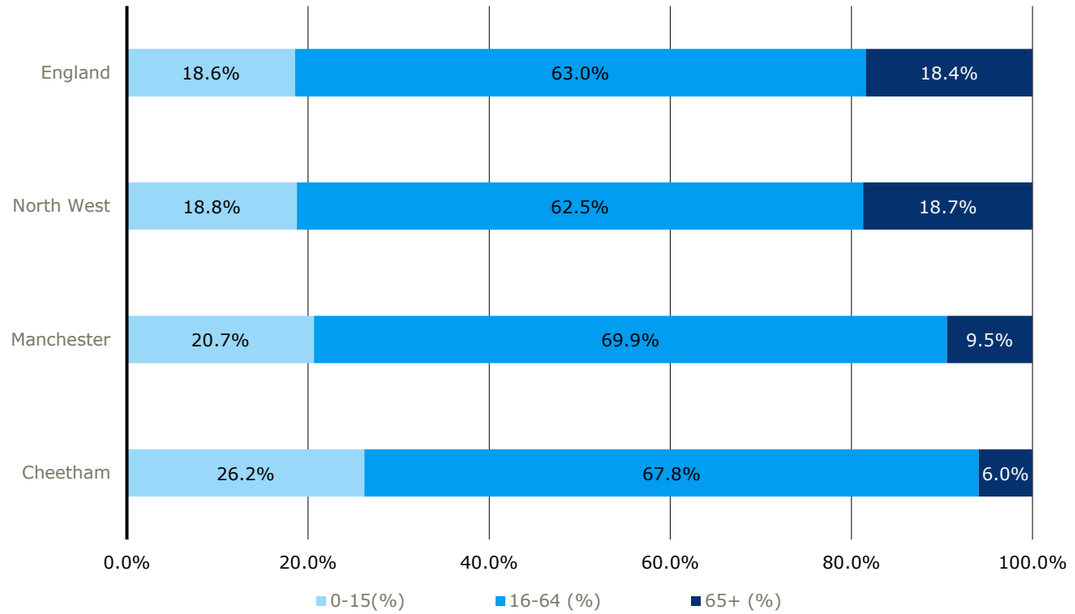


Figure 8.2 Population by Age (% of Total Population)
Source: ONS Census 2021

8.38 In terms of age structure, the proportion of residents who were of working age (18-64 years) in Cheetham was 67.8%. This is marginally lower than the rate for Manchester as a whole (69.9%), yet higher than both the North West regional average (62.5%) and the national figure (63.0%).

8.39 The ward also has a comparatively young profile. Only 8.0% of Cheetham's population were aged 65 years and over, which is somewhat below the proportions for Manchester (9.5%), the North West (18.7%) and England (18.4 %).

8.40 Children and young people (0-15 years) accounted for 28.2% of Cheetham's residents. This is somewhat higher than Manchester (20.7%), the North West (18.8%) and England (18.6%).

Ethnicity

8.41 Cheetham ward's ethnic profile diverges markedly from wider comparators (see Figure 8.2). White residents comprise just 28.7%, compared with 58.8% in Manchester, 85.6% across the North West and 81.0% nationally.

8.42 By contrast, 48.1% of Cheetham's population identify as Asian, Asian British or Asian Welsh. This is more than double the Manchester average of 20.9% and around five times the national figure of 9.6%. The ward also records higher proportions of people from Mixed or Multiple ethnic groups (11.5%) relative to Manchester 5.3%, the North West 2.3% and England 3.0%.

8.43 Black, Black British, Black Welsh, Caribbean or African communities account for 5.0%, below Manchester 11.9% but above the regional 2.2% and close to England 4.2%. A further 8.7% of residents identify with Other ethnic groups, exceeding the shares for Manchester 5.1%, the North West 1.5% and England 2.2%.

8.44 Overall, these figures highlight Cheetham's ethnic diversity, characterised by a markedly lower proportion of White residents, and significantly higher representations of Asian and Mixed ethnic groups than are evident at city-wide, regional and national scales.

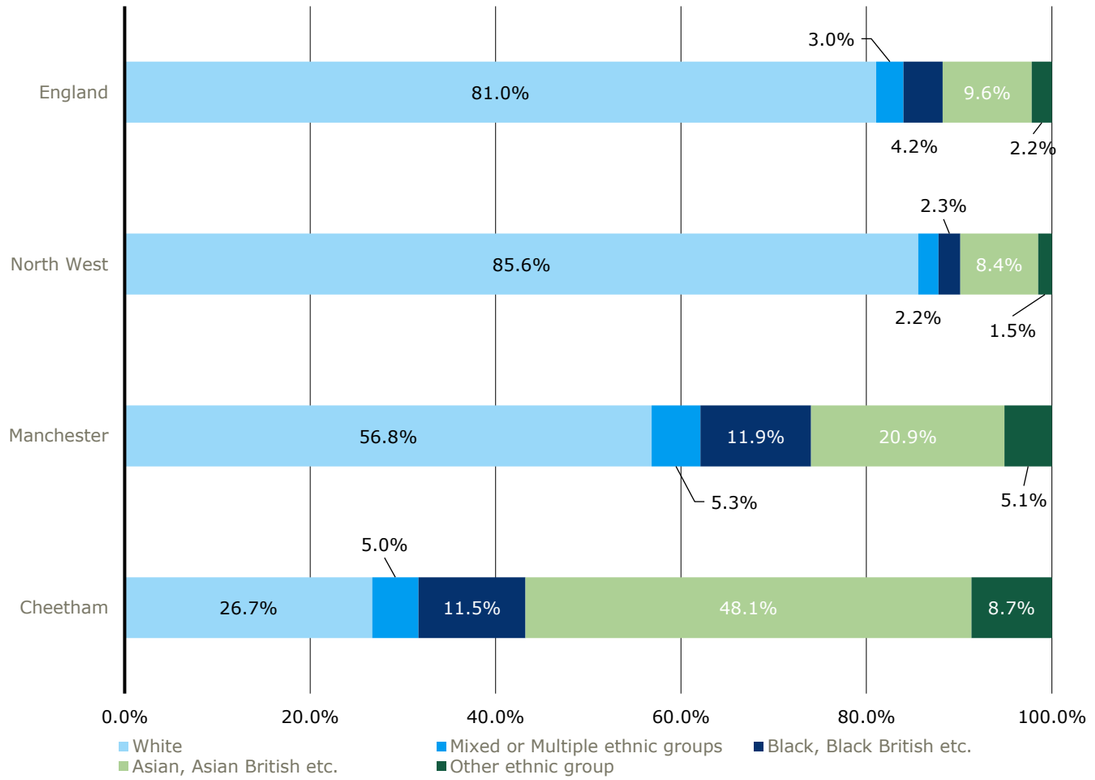


Figure 8.3 Ethnicity distribution (% of Total Population)
Source: ONS Census 2021

Religion

8.45 Table 8.7 indicates that more than half of Cheetham's residents identify as Muslim (54.3%), a share that is over twice the Manchester average of 22.3% and about seven times higher than the regional 7.6% and national 8.7% figures.

8.46 Conversely, only 20.6% of the ward's population identify as Christian, below Manchester's 38.2%, the North West at 52.5% and England at 48.3%.

8.47 Just 14.8% of residents report having no religion, less than half the proportions recorded for Manchester 32.4%, the North West 32.6% and England 38.7%, indicating a comparatively high level of religious affiliation in the ward.

8.48 Other faith groups are present in smaller numbers, such as Hindu 1.4%, Sikh 1.7%, Buddhist 0.6% and Jewish 0.6%. While each of these figures is broadly in line with or slightly above city and national averages, they collectively reinforce Cheetham's position as one of Manchester's most religiously diverse wards.

Table 8.7 Religion distribution (% of Total Population)

Self-Reported Religion	Cheetham	Manchester	North West	England
No Religion	14.8%	32.4%	32.6%	38.7%
Christian	20.6%	38.2%	52.5%	48.3%
Buddhist	0.6%	0.6%	0.3%	0.5%
Hindu	1.4%	1.1%	0.7%	1.8%
Jewish	0.6%	0.5%	0.4%	0.5%
Muslim	54.3%	22.3%	7.6%	8.7%
Sikh	1.7%	0.5%	0.2%	0.9%
Other Religion	0.2%	0.5%	0.4%	0.6%
Not Answered	5.8%	5.9%	5.3%	8.0%

Source: ONS Census 2021

Deprivation

8.49 The Indices of Multiple Deprivation (IMD) (2025) measure relative deprivation in small areas in England, known as lower-layer super output areas (LSOAs), typically containing around 1,500 residents or 650 households. Deprivation is assessed based on seven domains, which are combined to form an overall index: income; employment; health deprivation and disability; education and skills training; crime; barriers to housing and services; and living environment.

8.50 Figure 8.4 illustrates overall deprivation in the ward of Cheetham, using smaller Lower Layer Super Output Areas (LSOAs).

8.51 Of the 9 LSOAs within the Cheetham ward, six (Manchester 058A, Manchester 056A, Manchester 008A, Manchester 058B, Manchester 008C, and Manchester 056B) are ranked among the 10% most deprived areas in terms of overall deprivation. These LSOAs particularly exhibit high levels of deprivation in the income and employment domains, indicating substantial socio-economic challenges. For example, Manchester 058A, 056A, 008A, and 058B all score a 1 in overall deprivation, highlighting the highest levels of deprivation.

8.52 The remaining three LSOAs (Manchester 056C, Manchester 058C, and Manchester 008H) show varied levels of deprivation. Manchester 056C, in particular, is ranked as decile 7 overall, placing it among the 30% least deprived areas nationally. These LSOAs demonstrate mixed outcomes across different domains, with improvements in education, skills training, and barriers to housing and services, as depicted in Table 8.8 and Figure 8.4. This analysis underscores significant deprivation issues within the Cheetham ward, especially in income, employment, health, and education domains.

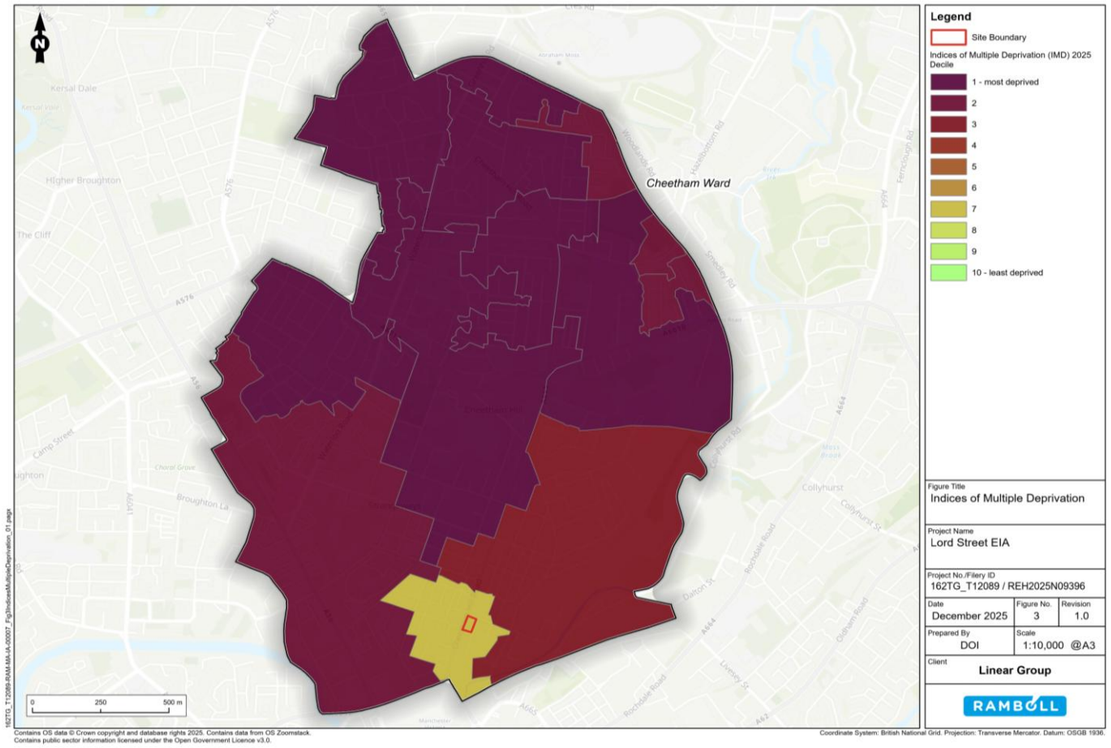


Figure 8.4 IMD map of Study Area

Table 8.8 Indices of Multiple Deprivation 2025 for Cheetham ward

LSOA name (2021)	Overall	Income	Employ-ment	Education, Skills and Training	Health	Crime	Barriers to Housing and Ser-vices	Living En-viron-ment
Manchester 058A	1	1	1	1	1	1	1	7
Manchester 056A	1	1	2	2	2	3	1	1
Manchester 008A	1	1	2	2	3	3	1	2
Manchester 058B	1	1	2	2	2	1	1	6
Manchester 008C	1	1	3	1	3	5	1	1
Manchester 056B	7	10	10	7	3	4	3	4
Manchester 056C	3	5	7	2	1	2	2	5
Manchester 058C	2	3	5	4	1	1	2	4
Manchester 058D	1	1	2	3	2	2	2	8
Manchester 056D	1	1	1	2	1	1	1	4
Manchester 008H	2	1	2	3	3	3	1	3

Source: MHCLG, October 2025

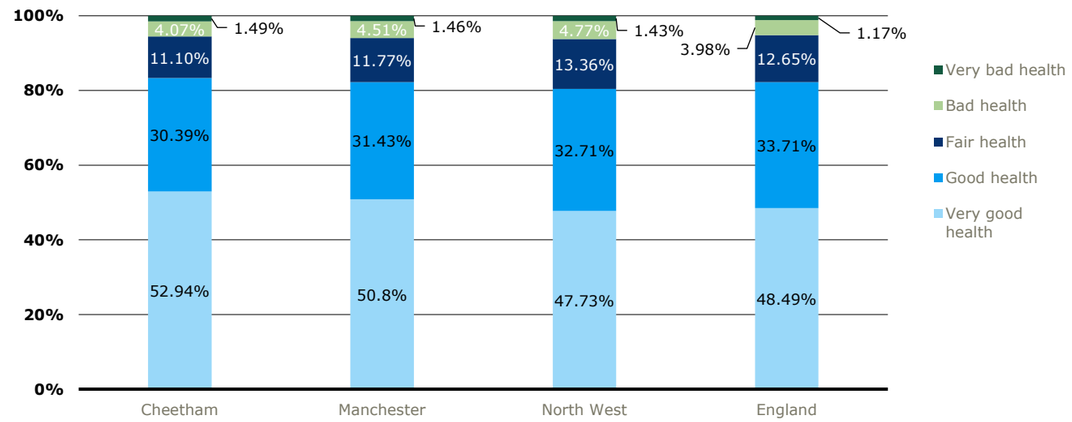


Figure 8.5 Self-Reported Health Outcomes (% of Total population)

Source: ONS Census 2021

8.53 Self-reported health provides a high-level indicator of population health and wellbeing, reflecting both physical and mental health status, and broader social determinants. Figure 8.5 presents Census 2021 self-reported health outcomes for Cheetham ward compared with Manchester, the North West and England.

8.54 In Cheetham, 52.9% of residents report their health as "very good" and a further 30.4% report "good" health. Approximately 11.1% of residents report "fair" health, while around 4.1% report "bad" or "very bad" health. The proportion of residents reporting "very good" health is marginally higher than the Manchester average, but lower than the England average. The combined proportion of residents reporting "fair", "bad" or "very bad" health, is broadly comparable with Manchester and higher than the national average.

8.55 Data indicates that a notable proportion of Cheetham's population experiences less than good self-reported health. While self-reported health is subjective, higher proportions of "fair" and "bad" health are commonly associated with increased prevalence of long-term conditions, reduced wellbeing and greater reliance on health and support services. These patterns are consistent with the ward's demographic profile, and levels of deprivation identified elsewhere in this baseline.

Table 8.9 Obesity rates for Cheetham ward and comparators

	Cheetham	Manchester	North West	England
Reception prevalence of obesity (including severe obesity) (% of population)	11.6	11.5	10.5	9.8
Reception prevalence of overweight (including obesity) (% of population)	21.1	23.9	23.7	22.3
Year 6 prevalence of obesity (including severe obesity) (% of population)	29.6	27.6	23.6	22.3
Year 6 prevalence of overweight (including obesity) (% of population)	48.0	42.0	37.8	38.2

Source: PHE Fingertips

8.56 Prevalence rates of obesity and overweight conditions in early childhood provide a measure of public health, indicating risk factors for long-term health issues and highlighting areas in need of targeted interventions. Table 8.9 shows data from PHE Fingertips on the prevalence of obesity and overweight conditions in Reception and Year 6 children in Cheetham ward, compared to Manchester, the North West, and England.

8.57 In Cheetham, the reception prevalence of obesity (including severe obesity) is 11.6%, slightly higher than both the Manchester average of 11.5% and the North West average of 10.5%, and notably higher than the England average of 9.8%. Additionally, 21.1% of Reception children in Cheetham are classified as overweight (including obesity), which is lower than the Manchester and North West averages but comparable to the national average of 22.3%.

8.58 By Year 6, the prevalence of obesity (including severe obesity) in Cheetham rises significantly to 29.6%, surpassing the Manchester average of 27.6%, the North West average of 23.6%, and the England average of 22.3%.

8.59 Furthermore, 48.0% of Year 6 children in Cheetham are overweight (including obesity), which is higher than the Manchester average of 42.0%, the North West average of 37.8%, and the national average of 38.2%.

Table 8.10 Hospital admission rates in Cheetham ward and comparators

	Cheetham	Manchester	North West	England
Emergency hospital admissions: all causes (Standardised Admission Ratio)	135.7	131.1	NA	100
Cancer incidence: all cancers (Standardised Admission Ratio)	101.9	118.6	NA	100
Intentional self-harm: emergency hospital admissions (Standardised Admission Ratio)	67.4	80.8	NA	100
Alcohol-related conditions: admission episodes (Standardised Admission Ratio)	128.7	137.0	NA	100

Source: PHE Fingertips

8.60 Standardised Admission Ratios ('SARs') provide insight into the health status of a population and the burden placed on healthcare services. Table 8.10 presents PHE Fingertips data on emergency hospital admissions for various causes in Cheetham ward, compared to Manchester and England.

8.61 In Cheetham, the SAR for emergency hospital admissions from all causes stands at 135.7, which is higher than the Manchester average of 131.1 and significantly above the England standard of 100. The cancer incidence SAR in Cheetham is 101.9, lower than the Manchester average of 118.6 but slightly above the national standard of 100. Cheetham reports a SAR of 67.4 for emergency hospital admissions due to intentional self-harm, which is notably lower than the Manchester average of 80.8 and the England standard of 100.

8.62 The SAR for alcohol-related conditions in Cheetham is 128.7, below the Manchester average of 137.0 but significantly above the England standard of 100. This indicates a higher prevalence of alcohol-related admissions in Cheetham compared to the national average, although it is less severe than in Manchester overall. These statistics reveal important health challenges within Cheetham ward, with elevated rates of emergency admissions for various causes, and a notable burden of alcohol-related conditions.

Table 8.11 Mortality rates and life expectancy for Cheetham ward and comparators

	Cheetham	Manchester	North West	England
Mortality from all causes (Standardised Ratio, per 100)	124.0	138.1	112.3	100
Mortality from cancer (Standardised Ratio, per 100)	98.9	128.8	107.9	100
Mortality from cardiovascular disease (Standardised Ratio, per 100)	154.9	138.4	110.0	100
Mortality from coronary heart disease (Standardised Ratio, per 100)	187.2	165.3	118.2	100
Mortality from stroke (Standardised Ratio, per 100)	168.6	122.7	109.4	100
Mortality from respiratory diseases (Standardised Ratio, per 100)	148.2	165.2	124.2	100
Life expectancy at birth (Male)	75.7	75.2	77.6	79.1
Life expectancy at birth (Female)	81.0	79.6	81.6	83.0
Mortality from causes considered preventable (aged under 75)	149.5	165.6	125.0	100

Source: PHE Fingertips

8.63 Standardised Mortality Ratios ('SMRs') provide critical insight into the health status and mortality risks within a population, highlighting areas in need of targeted health interventions and preventive measures.

8.64 Table 8.11 presents PHE Fingertips data on mortality from various causes and life expectancy in Cheetham ward, compared to Manchester, the North West, and England. In Cheetham, the SMR for mortality from all causes is 124.0, which is lower than the Manchester average of 138.1 but higher than the North West average of 112.3 and significantly above the England standard of 100. The SMR for cancer mortality in Cheetham is 98.9, which is below the Manchester average of 128.8 and also slightly less than the North West average of 107.9. This indicates that Cheetham has a lower cancer mortality rate compared to Manchester and the North West but slightly higher than the national average.

8.65 Conversely, Cheetham has a significantly higher SMR for mortality from cardiovascular diseases at 154.9, which surpasses the Manchester average of 138.4 and the North West average of 110.0. The SMR for coronary heart disease in Cheetham stands at 187.2, notably higher than Manchester's average of 165.3 and the North West average of 118.2. Stroke mortality in Cheetham is also higher, with an SMR of 168.6, compared to 122.7 in Manchester and 109.4 in the North West. Mortality from respiratory diseases in Cheetham is elevated at 148.2, lower than Manchester's 165.2 but still above the North West average of 124.2.

8.66 Life expectancy at birth is another crucial indicator, where males in Cheetham have an expectancy of 75.7 years, slightly higher than the Manchester average of 75.2 years but lower than the North West average of 77.6 years and the national average of 79.1 years. Females in Cheetham have a life expectancy of 81.0 years, which is lower than both the Manchester average of 79.6 years and the North West average of 81.6 years and significantly below the national average of 83.0 years. Lastly, the SMR for mortality from causes considered preventable (aged under 75) in Cheetham is 149.5, which is lower than Manchester's 165.6 but higher than the North West average of 125.0 and substantially above the England standard of 100.

Housing

Household Size and Bedroom Provision

8.67 Household composition and dwelling size provide important context for understanding housing need, overcrowding risk and suitability of the existing housing stock, all of which are relevant to socio-economic conditions and human health. Figure 8.4 illustrates the distribution of households by number of bedrooms in Cheetham ward compared with Manchester, the North West and England.

8.68 The baseline indicates that Cheetham ward has a relatively high proportion of smaller dwellings. Approximately 17.3% of households occupy one-bedroom homes and 35.3% occupy two-bedroom homes. Combined, over half of all households in the ward live in dwellings with one or two bedrooms. This proportion is higher than the Manchester average, and notably higher than the England average, reflecting the dense urban nature of the area, and a prevalence of smaller housing units.

8.69 By contrast, the proportion of households living in larger homes is lower in Cheetham. Around 38.5% of households occupy three-bedroom dwellings, while only 11.0% live in homes with four or more bedrooms. This is substantially below the proportion of larger homes recorded nationally, where over one-fifth of households occupy dwellings with four or more bedrooms. The limited availability of larger homes in Cheetham has implications for larger households, including families with children, and may contribute to risks of overcrowding where household sizes exceed available bedroom space.

8.70 From a health perspective, higher concentrations of smaller dwellings can be associated with increased risks of overcrowding, reduced privacy and poorer mental wellbeing, particularly in areas with higher proportions of children and larger household sizes. These factors are relevant in Cheetham, given the ward's younger age profile and higher proportion of children compared with Manchester and wider comparators.

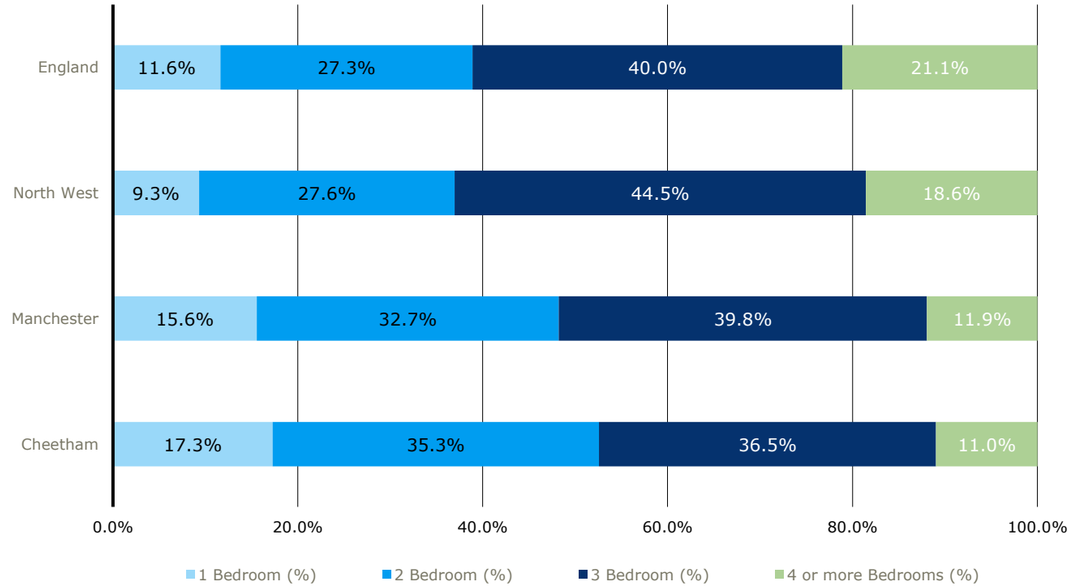


Figure 8.6 Households by number of Bedrooms (% of Total Households)
Source: ONS Census 2021

Households by Tenure

8.71 Housing tenure patterns provide further insight into affordability, housing security and socio-economic vulnerability. Figure 8.6 illustrates tenure distribution across Cheetham ward, Manchester, the North West and England.

8.72 Cheetham ward is characterised by a high reliance on the private rented sector. A substantial proportion of households are privately rented or living rent-free, significantly exceeding the proportions recorded for Manchester as a whole and markedly higher than regional and national averages. This contrasts with lower levels of owner occupation, both outright and with a mortgage, within the ward.

8.73 The proportion of households living in social rented accommodation in Cheetham is also notable, although private renting remains the dominant tenure. High levels of private renting are commonly associated with reduced housing security, higher housing costs relative to income and more frequent residential mobility. These characteristics can contribute to financial stress and poorer health outcomes, particularly for lower-income households and families with children.

8.74 Lower levels of owner occupation in Cheetham reflect wider socio-economic conditions, including lower average incomes and higher levels of deprivation. From a health perspective, tenure insecurity and affordability pressures are recognised determinants of mental health and wellbeing and can exacerbate existing health inequalities.

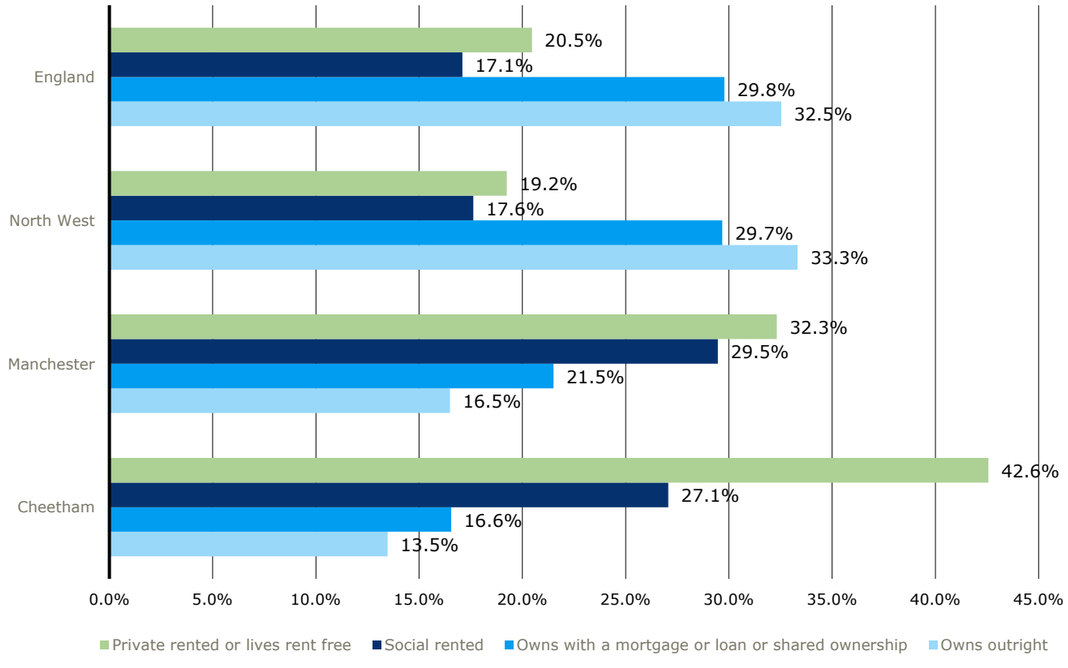


Figure 8.7 Households by number of Bedrooms (% of Total Households)
Source: ONS Census 2021

Housing Affordability

8.75 Housing affordability indicators further demonstrate baseline pressures within Manchester. Housing affordability ratios measure the relationship between median house prices and median income levels within a given area. Specifically, the ratio is calculated by dividing the median house price by the median annual earnings. A higher ratio indicates less affordable housing, meaning that a larger portion of median earnings is required to purchase a median-priced home. Conversely, a lower ratio suggests more affordable housing relative to local incomes.

8.76 The median house price to median earnings ratio in Manchester for 2025 is approximately 8.5, compared with around 5.9 across the North West region. This indicates that housing in Manchester is less affordable relative to local incomes than the regional average. Over the past five years, the ratio in Manchester has been reported at 8.7 compared to 8.3 in the region, underscoring persistent affordability challenges in the city. The higher housing affordability ratio in Manchester signifies that residents need a larger proportion of their income to afford a home and exacerbating economic pressures.

Open space, Leisure and Play space

8.77 Cheetham ward is characterised by a dense urban form with a mix of residential, commercial and institutional land uses, and limited provision of large, high-quality public open space within the immediate neighbourhood, as illustrated in Figures 8.8 and 8.9.

8.78 Existing open space provision within the ward comprises a combination of formal parks, small landscaped spaces and incidental green areas, which together provide opportunities for recreation, walking and informal leisure. However, the quantity and accessibility of open space is constrained by the built-up nature of the area and historic patterns of development.

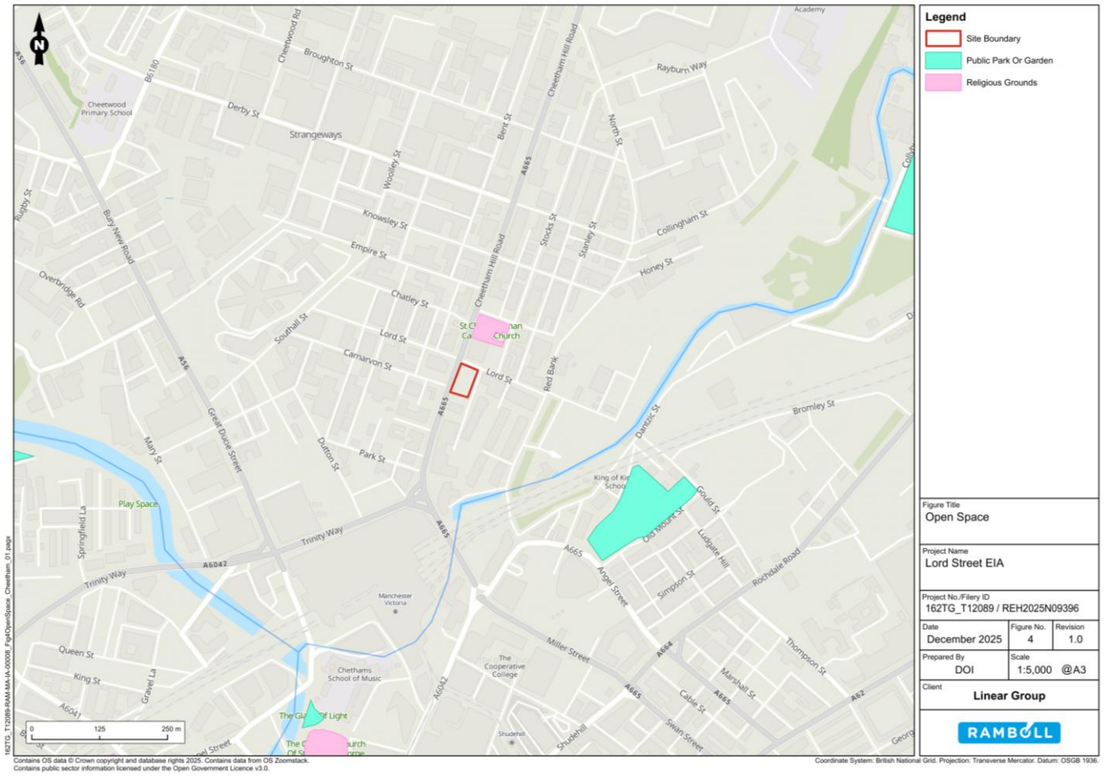


Figure 8.8 Open spaces in Study Area

8.79 Publicly accessible open spaces serving the ward include St Michael's Flags and Angel Meadow Park, Bellott Street Park and Cheetham Park. These spaces vary in size, function and quality, with larger parks such as Cheetham Park providing a wider range of recreational opportunities, while smaller spaces primarily support informal use, seating and pedestrian movement. Access to these spaces is generally on foot for local residents, although walking distances and route quality vary across the ward.

8.80 Baseline evidence indicates that parts of Cheetham ward experience high levels of deprivation, including within the living environment and health domains of the Indices of Multiple Deprivation. In this context, access to good-quality public open space is particularly important, as residents in more deprived areas are more likely to rely on public provision for outdoor recreation, physical activity and social interaction. Limitations in the quantity, capacity or quality of local open space may therefore have disproportionate implications for wellbeing and quality of life among existing residents.

8.81 Provision of dedicated children's play space within Cheetham ward is limited and unevenly distributed. Formal play facilities are primarily located within larger parks, such as Cheetham Park, which includes a children's play area and a multi-use games area. Other nearby open spaces offer limited or no dedicated play infrastructure and are more suited to informal recreation or passive use.

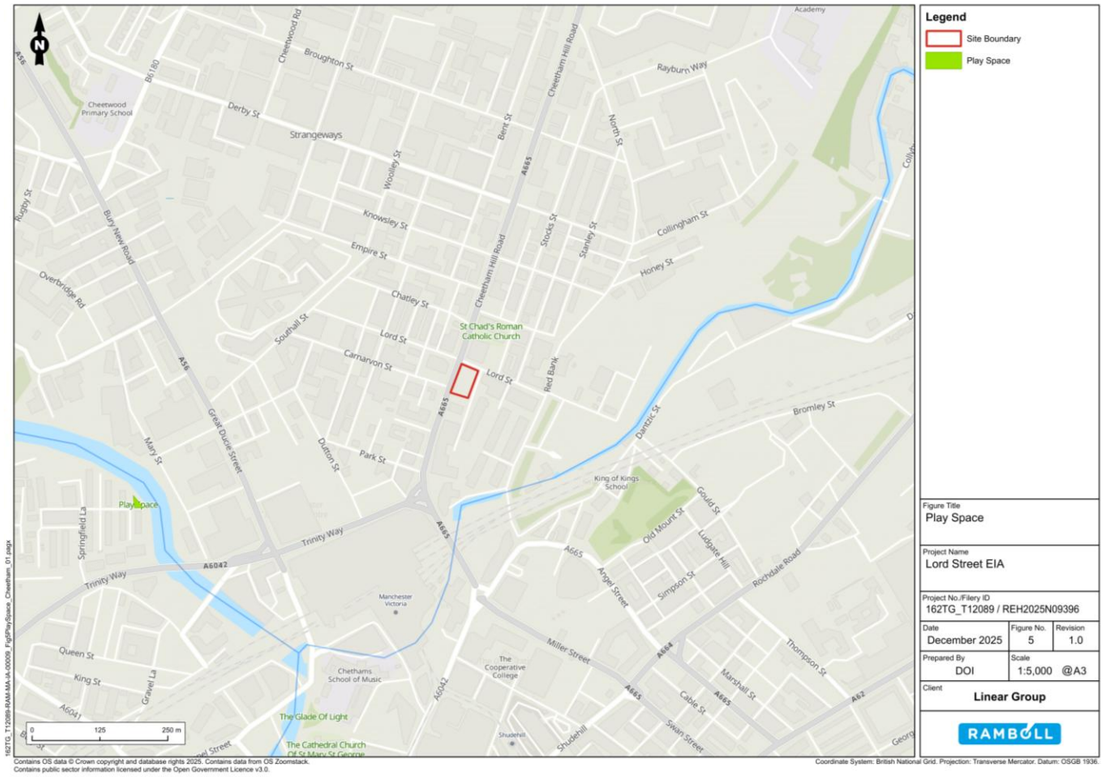


Figure 8.9 Play spaces in Study Area

8.82 The ward has a relatively young population profile compared with Manchester, the North West and England, with a higher proportion of children and young people. This demographic profile indicates an existing baseline demand for children's play opportunities and youth recreation. Where access to formal play space is constrained by distance, capacity or quality, children and young people may have fewer opportunities for regular outdoor play and physical activity, which is recognised as an important determinant of physical health, mental wellbeing and social development.

8.83 Overall, the baseline position is one in which existing open space and play provision serves the ward but is limited in quantity relative to population density and demographic need. Children, young people and households in areas of higher deprivation are considered to be more sensitive to changes in access to open space and play facilities, given their greater reliance on local, publicly accessible provision.

Employment and Income

Employment Rates

8.84 Employment indicators provide context for baseline socio-economic conditions, and are closely linked to income, health outcomes and resilience to change. Data from the Annual Population Survey for the 12 months to June 2025 indicates that employment rates among working-age residents (aged 16–64) in Manchester are lower than those recorded for both the North West and England as a whole. Correspondingly, unemployment and economic inactivity rates are higher in Manchester relative to regional and national averages.

8.85 This pattern reflects the presence of structural labour market challenges within the city, including concentrations of deprivation, health-related economic inactivity and barriers to employment for some population groups. Within this context, employment conditions in wards such as Cheetham are influenced by both local labour market opportunities and city-wide economic trends. Higher levels of unemployment and economic inactivity are recognised as contributors to poorer health outcomes and reduced household resilience, particularly in communities experiencing multiple forms of deprivation.

8.86 Overall, baseline employment conditions indicate that parts of the local population may have increased sensitivity to changes affecting employment opportunities, income stability and access to local economic activity.

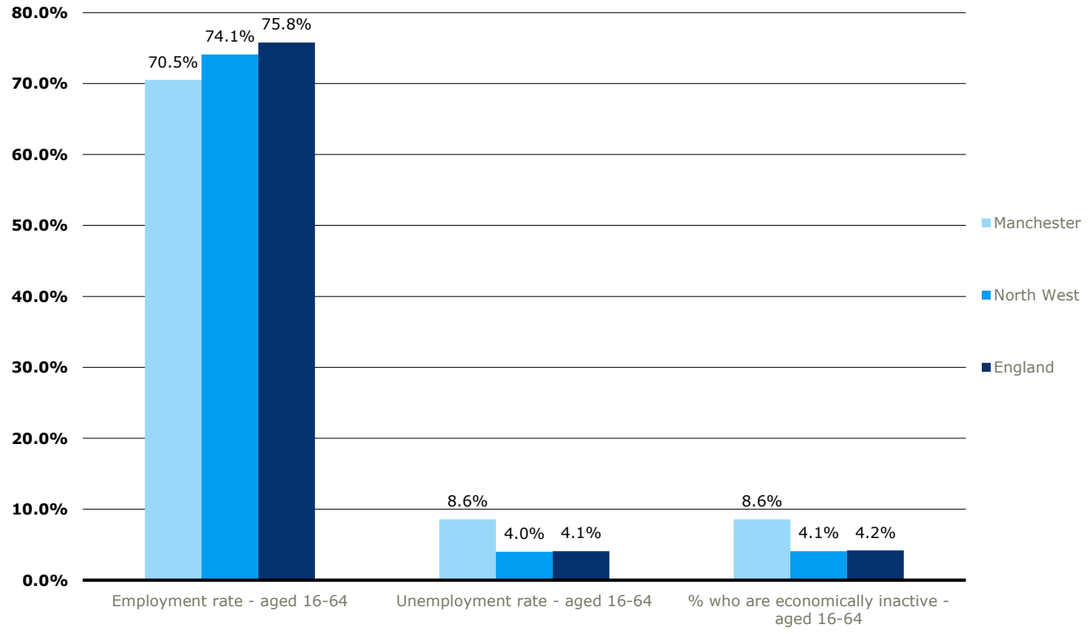


Figure 8.10 Employment rates (% of Total Population)
Source: Annual Population Survey (12 months to June 2025)

Occupation Distribution

8.87 The occupational structure of Manchester's workforce provides further insight into baseline socio-economic conditions. As shown in Table 8.12, Manchester has a higher proportion of residents employed in professional occupations compared with the North West and England, reflecting the city's role as a regional centre for higher-value service sectors, including professional services, education and healthcare.

8.88 At the same time, Manchester has lower proportions of residents employed in administrative and secretarial roles and skilled trades compared with regional and national averages. The city also has a broadly comparable proportion of residents employed in elementary occupations, caring and leisure roles, and process or plant operatives, indicating a mixed occupational profile that includes both higher-skilled and lower-paid employment.

8.89 This occupational distribution suggests that while parts of the workforce benefit from access to higher-skilled employment, a substantial proportion of residents remain employed in sectors that are more vulnerable to economic fluctuation and are often associated with lower pay and less secure working conditions. These factors are relevant to understanding baseline income levels and potential vulnerability to socio-economic change.

Table 8.12 Occupation Distribution (% of Active Workers)

Occupation Class	Manchester	North West	England
1: Managers, Directors and Senior Officials	8.8%	10.0%	11.5%
2: Professional Occupations	34.9%	28.7%	27.2%
3: Associate Professional Occupations	12.7%	14.0%	15.1%
4: Administrative and Secretarial Occupations	5.5%	9.1%	9.2%
5: Skilled Trades Occupations	5.6%	8.1%	8.3%
6: Caring, Leisure and Other Service Occupations	9.4%	9.5%	8.4%
7: Sales and Customer Service Occupations	8.1%	8.4%	5.6%
8: Process, Plant and Machine Operatives	7.7%	8.4%	5.6%
9: Elementary Occupations	9.2%	9.5%	8.9%

Source: Business Register and Employment Survey 2024

Educational Attainment

8.90 Educational attainment within Cheetham ward is lower than that recorded for Manchester, the North West and England. Census 2021 data indicates that 25.0% of Cheetham's working-age population have no formal qualifications, compared with 19.7% across Manchester and approximately 18–19% at regional and national levels.

8.91 Although over one-third of Cheetham residents hold Level 4 qualifications or above, the ward has lower proportions of residents with intermediate qualifications (Levels 2 and 3) compared with wider comparators. This polarised qualification profile reflects underlying inequalities in access to education and skills development and may contribute to barriers to employment progression and income growth for parts of the local population.

8.92 Lower qualification levels are also associated with poorer health outcomes and increased economic inactivity, reinforcing the sensitivity of the local population to changes affecting employment opportunities and the local economy.

Table 8.13 Highest Level of Qualification (% of Working Population)

Area	No Qualifications	L1 and entry level	Apprenticeship	L2 qualification	L3 qualification	L4 qualifications or above	Other qualifications
Cheetham	25.0%	9.7%	10.9%	3.0%	12.5%	35.1%	3.8%
Manchester	19.7%	8.0%	10.3%	3.5%	18.2%	37.6%	2.7%
North West	19.5%	9.7%	13.6%	5.9%	17.6%	31.2%	2.5%
England	18.1%	9.7%	13.3%	5.3%	18.9%	33.9%	2.8%

Source: ONS Census 2021

Income levels

8.93 Income data from the Annual Survey of Hours and Earnings for 2025, further illustrates baseline socio-economic conditions within Manchester. Median weekly earnings for Manchester residents are lower than those recorded for both the North West and England as a whole, with a median weekly income of £589 compared with £616 regionally and £648 nationally. Median annual earnings in Manchester (£36,278) are also below the North West (£37,445) and England (£39,243).

8.94 Lower median income levels reduce household resilience to cost pressures and are associated with increased risks of financial stress, poorer housing outcomes and adverse health effects. In wards such as Cheetham, where income deprivation is already prevalent, lower earnings contribute to heightened sensitivity to changes affecting employment stability, living costs and access to local services.

8.95 Overall, the baseline employment and income profile indicates that parts of the local population experience economic vulnerability, which is relevant to the assessment of socio-economic and human health effects arising from the proposed development.

Future Baseline

The 'Do Nothing' Scenario

8.96 The site is currently occupied by a vacant brownfield site, which was previously seven commercial units.

Future Population

8.97 The proposed development would be constructed in approximately 150 weeks (equating to approximately 38 months). As per Table 5.1 in ES Volume 3 Chapter 5: Demolition and Construction Description, the proposed development is expected to start in Q1 2027 and be completed in Q1 2030.

8.98 The recently released ONS 2022-based Sub National Population Projections (SNPP)[6] model that over the anticipated build period of the Proposed Development, the population of Manchester is expected to increase by 1.3% from 610,495 to 621,718. This is slightly below what is modelled at the national level, of 1.4%.

Future Households

8.99 The proposed development would be constructed in approximately 150 weeks (equating to approximately 38 months). As per Table 5.1 in ES Volume 3 Chapter 5: Demolition and Construction Description, the proposed development is expected to start in Q1 2027 and be completed in Q1 2030.

8.100 The recently released ONS 2022-based Sub National Household Projections (SNPP)[7] model that over the anticipated build period of the Proposed Development, the number of households in Manchester will increase by 3.28%, from 235,555 to 243,277 households. This is a higher expected increase than in the North West (2.62%) and England (2.69%).

Sensitive Receptors

8.101 The receptors identified as sensitive to the proposed development and which have been 'scoped-in' to the assessment are summarised in Table 8.14.

Table 8.14: Summary of Sensitive Receptors

Receptor	Sensitivity
Existing residents within Cheetham Ward	**High** - The local population includes communities experiencing high levels of deprivation, poorer baseline health outcomes and limited adaptive capacity. Changes affecting housing quality, residential amenity, access to open space and environmental conditions may disproportionately affect wellbeing and quality of life.
Neighbouring residential occupants (including Jefferson Place, Barton Place, Britton House, The Hallmark, Melia House and Masson Place)	**High** – Residents are directly exposed to changes in daylight, sunlight and wind conditions affecting primary living spaces and residential amenity. Residential receptors are considered highly sensitive in socio-economic and health terms due to the importance of housing quality for wellbeing.
Children (existing and future residents)	**High –** Children and young people are particularly sensitive to changes affecting housing quality, access to daylight, sunlight, open space and play, all of which influence physical development, mental wellbeing and social outcomes.
Older people	**High –** Older people may spend longer periods indoors and are therefore more sensitive to changes in daylight, sunlight and thermal comfort. Reduced adaptive capacity increases sensitivity to changes in residential amenity and environmental conditions.
People with long-term illness, disability or reduced mobility	**High –** Individuals with underlying health conditions or mobility impairments may be more reliant on the quality of the indoor environment and nearby amenity space, and may be more vulnerable to reductions in comfort, daylight or opportunities for outdoor activity.
Local labour force	**Low to Medium –** The wider Greater Manchester labour market has a high adaptive capacity. Temporary employment effects are beneficial and short-term, and do not expose receptors to health risks.
Local economy and services	**Low –** The scale of population change associated with the development is small relative to the wider Manchester context, and local services and economic systems have high adaptive capacity.

Assessment of Effects

Demolition and Construction Effects

8.102 This section reports the likely socio-economic and human health effects arising during the demolition and construction stages. The assessment has considered the impact pathways identified in Section 8.9 and the duration and nature of construction activities as outlined in ES Vol 2 Chapter 4: Proposed Development. Effects have been assessed using the ISEP-aligned sensitivity–magnitude–significance framework set out in Section 8.24.

Temporary Construction Employment and Income

8.103 The demolition and construction phase of the proposed development is estimated to generate 401 person years of employment. The 150 weeks (3 years) of demolition and construction works are anticipated to generate approximately **134 FTE** direct and indirect demolition and construction jobs.

8.104 For a development of this scale, it is likely that some of the construction workers would travel from other areas to the proposed development, which would result in some economic benefits being realised outside of Manchester city centre.

8.105 As such, there is a requirement to calculate the number of 'net' construction jobs, to quantify the increase in construction employment. It is anticipated that **113 FTE** jobs would be retained within Manchester

[6] Office for National Statistics (2025) ONS 2022-based Sub National Population Projections. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2022based

[7] Office for National Statistics (2025) ONS 2022-based Sub National Household projections. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland

city centre and the wider Greater Manchester area. The net job figure considers the below Additionality Guide[8] factors:

- Leakage of 25% - A reasonably high proportion of benefits would be retained within the target area/target group;
- Displacement at 25% - There are expected to be some displacement effects, although only to a limited extent; and
- Multiplier effect at 1.50 - Limited local supply linkages and induced or income effects.

Table 8.15: Proposed Development – Gross/Net Construction Jobs

Additionality Guide Factors	Proposed Development	Reference Case	Additionality Factor
Gross Direct Jobs	134	No on-site job loss accounted for due to vacant site	-
Estimated Leakage (25%)	-		33
Gross Local Direct Effects	100		-
Displacement (25%)	-		25
Net Local Direct Effects	75		-
Multiplier (1.5)	-		38
Total Net Jobs	113		-

8.106 In the context of the Manchester and GMCA construction labour markets, the scale of change is likely to represent a low magnitude beneficial impact. Given the low sensitivity of the local labour force the socio-economic effect is assessed as a Minor Beneficial, temporary, direct effect (not significant).

Temporary Construction Income Generation

8.107 As detailed above, approximately 113 FTE temporary net demolition and construction FTE jobs are anticipated to be generated during the demolition and construction phase of the proposed development. It is also estimated that UK employees spend an average of £18.73[9] per day (adjusted for inflation).

8.108 It is accepted that not all the gross expenditure from the proposed development's construction workers would be spent within the Manchester city centre and Greater Manchester geographies. Some leakage is likely to occur, and thus a 25% leakage factor has been applied to demolition and construction worker expenditure, using professional judgement. This is based upon large inward commuting figures into Manchester city centre[10].

8.109 Therefore, it is assumed that 75% of total construction worker expenditure would be retained within GMCA study area, which includes Manchester city centre. Taking this factor into account, it is estimated that total net additional spending of approximately £356,543 per annum would be created by new demolition and construction workers, and be retained within the local economy. Table 8.16 illustrate how this figure was calculated.

Table 8.16: Proposed Development – Gross/Net Construction Jobs

Additionality Guide Factors	Proposed Development
A: Estimated spending per construction worker (accounting for inflation)	£18.73
B: Average number of days worked per year as per the ONS (accounting for bank holidays, 260-8)	252
C: Total net local jobs	113
Total gross spend (A*B*C)	£475,390.79
Total net spend retained in the Study Area (75%)	£356,543.09

8.110 In the context of the Manchester and GMCA economies, the scale of change is likely to represent a low magnitude beneficial impact. Given the low sensitivity of the local economy the socio-economic effect is assessed as a Minor Beneficial, temporary, direct effect (not significant).

Completed Development Effects

8.111 This section assesses socio-economic and human health effects arising once the proposed development is complete and occupied. Effects are considered permanent and long-term. The analysis draws on the development quantum described in ES Vol 2 Chapter 4: Proposed Development and baseline data set out in Section 8.34.

Housing

8.112 Housing is a key determinant of both socio-economic conditions and human health. At a socio-economic level, the provision of new homes contributes to meeting identified needs, can increase housing choice, and supports the functioning of the local housing market (including by helping to accommodate population growth and reduce pressure on existing stock).

8.113 For human health, the availability of safe, secure and good-quality housing is strongly associated with improved wellbeing and reduced health risks, including through reduced overcrowding, improved thermal comfort, better living conditions, and greater residential stability. Conversely, limited supply and poor affordability can contribute to housing stress, insecurity and inequalities, which may disproportionately affect vulnerable groups.

8.114 Baseline evidence indicates that housing affordability pressures exist within Manchester, and that Cheetham contains areas of high deprivation, including domains related to income, employment and health. The ward also has a relatively young population profile and higher proportions of children and young people than Manchester and wider comparators, which can increase demand for appropriately sized and affordable homes. Future residents (including lower-income households, larger households, and those at risk of overcrowding) are considered to be of high sensitivity to changes in housing supply, affordability and quality.

8.115 The proposed development would deliver 251 new residential units, comprising one- and two-bedroom apartments and four townhouses. This represents a net increase in housing supply within Manchester City Council's administrative area, and would contribute to strategic objectives for housing delivery and housing choice across the city and the Greater Manchester area.

8.116 Manchester City Council's most recent Five-year Housing Supply Statement for 2025[11] notes that 'Manchester's final total housing requirement from 1st April 2025 to 31st March 2030 is 21,287 or 4,257 per year' (as per paragraph 3.2). Over the construction period between 2027 and 2030, this equates to a housing requirement of 12,771 housing units. As such, the delivery of 251 units from the proposed

[8] Homes and Communities Agency (2014) Additionality Guide 4th Edition 2014. Available at: https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf

[9] Visa Europe. (2014). UK Working Day Spending Report. Adjusted using Bank of England inflation calculator (available here: https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator), assessing change from 2014 to Nov 2025.

[10] GMCA (2022) Greater Manchester Independent Prosperity Review Evidence Update: Transport. Available at: https://www.greatermanchester-ca.gov.uk/media/6719/gmipr-evidence-update-transport.pdf

[11] Manchester City Council (2025) MCC Five-year Housing Supply Statement at 1 April 2025. Available at: https://www.manchester.gov.uk/downloads/download/7384/five-year_housing_land_supply_statement

development will provide 1.97% of Manchester's housing requirement for the period during which it is built out.

8.117 Local planning policy establishes clear expectations for the delivery of affordable housing. Manchester Core Strategy Policy H8 requires that residential developments of 15 dwellings or more, or on sites of 0.5 hectares or greater, make provision for affordable housing, subject to site viability and other material considerations. Policy H8 historically sought up to 20% affordable housing on qualifying sites, recognising that delivery may vary depending on viability, location and scheme characteristics.

8.118 In addition, the Manchester Housing Strategy 2022–2032 sets out a strategic ambition to deliver 36,000 new homes across the city by 2032, including at least 10,000 affordable homes, with a strong emphasis on social rent and genuinely affordable tenures. The Strategy identifies affordability as a critical determinant of health and wellbeing and highlights the need for new development to contribute to inclusive growth and the reduction of health inequalities.

8.119 There is no on-site affordable housing provision as part of the development. While this reflects viability and market considerations typical of high-density city-centre developments, the absence of affordable housing means that the proposal does not directly contribute to meeting identified affordable housing needs within Manchester, or to the strategic targets set out in the Manchester Housing Strategy.

8.120 The provision of 251 new homes would provide additional housing stock, supporting local and city-wide housing delivery and increasing choice, particularly for smaller households. In the context of the Manchester and GMCA housing markets, the scale of change is likely to represent a low to medium magnitude beneficial impact (noticeable locally, but a small proportion of total housing supply at the city-region scale). Given the high sensitivity of receptors (including households affected by affordability pressures and deprivation), the socio-economic effect is assessed as a Minor Beneficial, long-term, direct effect (not significant).

8.121 The introduction of new housing has the potential to support improved health outcomes by providing additional opportunities for residents to access stable accommodation. New-build homes also typically provide improved baseline living conditions compared with older or poorer-quality stock (e.g. better safety and thermal performance), which can support physical health and mental wellbeing.

8.122 On the basis of the information available, the delivery of 251 homes is expected to result in a low to medium magnitude beneficial change for health outcomes (through increased supply and potential improvements to housing conditions for new occupiers). Given high receptor sensitivity in the local context, the overall human health effect is assessed as Minor Beneficial, long-term, direct effect (not significant).

8.123 No significant adverse effects are identified for housing in socio-economic or health terms. The overall conclusion is that the proposed development would deliver a net beneficial contribution to housing supply and associated determinants of health, with effects assessed as Minor Beneficial and not significant in EIA terms.

Open Space, Leisure and Play

8.124 Access to open space, leisure and play facilities is an important determinant of both socio-economic outcomes and human health. Public and communal open spaces support opportunities for physical activity, social interaction and recreation, which are associated with improved physical health, mental wellbeing and social cohesion. At a socio-economic level, the availability and quality of open space can influence residential amenity, neighbourhood attractiveness and overall quality of life, particularly in higher-density urban areas.

8.125 Children's play space is particularly important for supporting child development, physical activity and social skills, while access to informal and formal open space is also beneficial for older people and other vulnerable groups by providing opportunities for walking, rest, social contact and stress reduction. Where access to open space is limited, there can be disproportionate effects on communities experiencing higher levels of deprivation, who may have fewer alternatives for leisure and recreation.

8.126 There is no existing open space or play space within the site, as it is currently a vacant brownfield site comprising derelict hardstanding and overgrown vegetation.

8.127 Several areas of public open space are located within walking distance of the site:

- St Michael's Flags and Angel Meadow Park, a park and garden to the site east of the site. It provides formal landscaping, paths and seatings;
- Bellott Street Park, to the north of the site, an open landscaped space with seating; and
- Cheetham Park, north of the site, which provides a park with children's play area and multi-use games area ('MUGA'), alongside other recreational facilities.

8.128 The proposed development would introduce 251 new homes, generating an estimated population of around 635 residents[12]. This additional population would increase demand for general open space and outdoor recreation, communal and private amenity space and children's play space.

8.129 The majority of units are currently expected to be 1 and 2-bedroom homes, which typically generate a lower child yield compared to family housing. While this reduces the expected demand for formal children's play provision relative to family-oriented schemes, some demand for play opportunities and informal outdoor space would nonetheless arise, particularly for younger children and visiting family members.

8.130 Manchester City Council does not currently set a single adopted quantitative standard for open space or play space expressed as a fixed square-metre requirement per resident. Instead, policy and supporting evidence place emphasis on the accessibility, quality and functionality of open space, and on ensuring that new development does not result in unacceptable pressure on existing provision. In the absence of a locally defined quantum standard, this assessment has therefore taken a qualitative, accessibility-led approach, informed by professional judgement and relevant health and social impact guidance.

8.131 The proposed development would provide a total of approximately 490 m² of private on-site amenity space for residents, alongside approximately 350 m² of publicly accessible amenity space at ground level. In addition, the scheme includes approximately 605 m² of accessible open space comprising hard landscaped areas, circulation space and seating areas, as illustrated on the submitted Areas Plan. These spaces are intended to support informal recreation, social interaction, relaxation and pedestrian movement, and would contribute positively to residential amenity in a high-density urban context.

8.132 Residents of the proposed development and surrounding area, particularly children and young people, older people and households experiencing higher levels of deprivation, are considered to have high sensitivity to changes in access to open space and play opportunities. Given the absence of on-site provision, there is potential for some additional pressure on nearby open spaces. However, the availability of several public parks and play facilities within walking distance, combined with the relatively modest scale of population increase and lower expected child yield, means that the magnitude of change is assessed as low.

8.133 On this basis, the socio-economic effect of the completed development on open space, leisure and play is assessed as Minor Adverse, long-term and direct, and not significant in EIA terms. In human health terms, reliance on off-site facilities may marginally reduce convenience of access for some residents but is not expected to lead to measurable adverse health outcomes at a population level. Health effects are therefore assessed as Minor Adverse, long-term and not significant.

[12] This population yield is calculated by multiplying the total number of units with Manchester's average number of persons per household of 2.57 (as per ONS Census 2021). This figure is slightly lower than a population yield of 760, based on full occupancy, thus it is considered a reasonable 'worst case' scenario.

Daylight, Sunlight and Overshadowing

8.134 Daylight, sunlight and overshadowing are relevant to socio-economic conditions and human health because they influence residential amenity, wellbeing, comfort, and the usability of internal and external spaces. Adequate access to daylight and sunlight is associated with positive mental health outcomes, reduced stress, improved sleep regulation and visual comfort, and supports the quality of living environments. Poor daylight conditions can contribute to dissatisfaction with housing, reduced wellbeing and, in some cases, disproportionate effects on vulnerable groups such as older people, children, and those spending more time indoors. From a socio-economic perspective, daylight and sunlight affect housing quality, residential satisfaction and neighbourhood attractiveness, which in turn can influence stability, turnover and perceptions of place. In higher-density urban contexts, some reduction in daylight and sunlight is expected, and guidance such as the BRE recognises the need to balance optimisation of light access with efficient land use and housing delivery.

8.135 Potential daylight, sunlight and overshadowing effects associated with the proposed development have been assessed in detail in Chapter 6: Daylight, Sunlight and Overshadowing, with reference to the BRE Guidance (2022) and the use of alternative targets to reflect the high-density urban context. The assessment focuses on neighbouring residential receptors and external amenity spaces where there is a reasonable expectation of daylight and/or sunlight.

8.136 The technical assessment concludes that most neighbouring buildings would experience either no material change or only minor reductions in daylight that remain within BRE guidance or acceptable alternative thresholds. For a number of neighbouring buildings, including Britton House, The Hallmark, Melia House, Masson Place and St Chad's Presbytery, overall effects on daylight amenity are assessed as Minor Adverse and not significant, reflecting the localised nature of impacts and the fact that many affected rooms are of lower daylight sensitivity or continue to achieve acceptable internal daylight distribution.

8.137 For Jefferson Place and Barton Place, the assessment identifies Moderate Adverse effects on daylight amenity overall, with reductions concentrated on parts of these buildings that are in closest proximity to the Site. In these locations, a proportion of habitable rooms would experience reductions in daylight that exceed BRE thresholds and alternative targets, and these effects are therefore considered significant in EIA terms for the daylight discipline.

8.138 With respect to sunlight, the assessment identifies that effects on neighbouring buildings and external amenity spaces are limited. St Chad's Presbytery would continue to meet sunlight targets, and Britton House would experience overall Minor Adverse (and not significant) effects on sunlight amenity. The external amenity spaces associated with Britton House and St Chad's Presbytery would remain well sunlit and continue to achieve the relevant time-in-sun criteria.

8.139 The receptors affected by daylight and sunlight changes are existing residential occupants, who are considered to be of high sensitivity where changes affect primary living spaces. For the majority of neighbouring buildings, where daylight effects are Minor Adverse and localised, the magnitude of change is considered low to medium at the building scale and does not materially alter the overall quality or usability of the housing stock. In socio-economic terms, these effects are assessed as Minor Adverse, permanent, long-term and direct, and not significant.

8.140 For Jefferson Place and Barton Place, where Moderate Adverse daylight effects are identified, there is potential for localised adverse effects on residential amenity and perceived housing quality for affected occupants. Given the high sensitivity of receptors and the magnitude of change for some rooms, the socio-economic effect for these receptors is assessed as Moderate Adverse, permanent, long-term and direct, and therefore significant. These effects are confined to a limited number of neighbouring properties and do not affect wider housing delivery, economic activity or access to services at the ward or city level.

8.141 In human health terms, daylight and sunlight primarily influence comfort and mental wellbeing rather than physical health or safety. For the majority of neighbouring receptors, where effects are Negligible or Minor Adverse, changes in daylight and sunlight are not expected to result in measurable changes in health outcomes. Human health effects for these receptors are therefore assessed as Minor Adverse, permanent, long-term and direct, and not significant.

8.142 For residents of Jefferson Place and Barton Place who experience greater reductions in daylight to primary living spaces, there is potential for localised adverse effects on comfort and wellbeing, particularly for individuals who spend a high proportion of time indoors. However, these effects do not give rise to risks to physical health, do not affect sunlight to external amenity spaces, and affect a limited population. Applying professional judgement consistent with established health assessment guidance, the human health effects associated with daylight and sunlight are therefore assessed as Minor Adverse and not significant in EIA terms.

8.143 Overall, the proposed development would result in adverse effects on daylight amenity for some neighbouring receptors, including significant effects in EIA terms for daylight at Jefferson Place and Barton Place. However, these effects are localised and relate to residential amenity in a high-density urban context. In socio-economic terms, the effects are limited to residential amenity for specific neighbouring properties and do not affect wider socio-economic conditions. In human health terms, effects are primarily related to comfort and wellbeing and do not result in significant health effects at a population level. No additional mitigation is proposed, and residual effects remain as identified in the technical Daylight, Sunlight and Overshadowing assessment.

Wind Microclimate

8.144 Wind microclimate can influence socio-economic conditions and human health by affecting the safety, comfort and usability of external spaces, including pedestrian routes, building entrances, communal terraces and areas of open space and play. Excessive wind speeds can discourage people from using outdoor areas, reduce dwell time, and limit opportunities for social interaction and physical activity. From a health perspective, strong or uncomfortable winds can increase the risk of instability or falls, particularly for older people, children and those with mobility impairments, and may deter walking or outdoor recreation.

8.145 Potential wind microclimate effects associated with the proposed development have been assessed in detail in Chapter 7: Wind Microclimate, using CFD modelling informed by the LDDC variant of the Lawson Comfort Criteria, with a qualitative assessment undertaken for the demolition and construction stage.

8.146 During the demolition and construction stage, wind conditions are predicted to remain acceptable for pedestrians in the surrounding area and for construction workers on site, whose sensitivity is reduced. Effects during this phase are assessed as temporary, short-term and Negligible Neutral (not significant).

8.147 Given that wind safety and comfort criteria are met for the intended uses of pedestrian routes, entrances and communal amenity spaces, wind microclimate effects are not expected to reduce the usability of on-site open space, leisure or play areas, nor to discourage pedestrian movement or access to surrounding services. The proposed development would therefore not give rise to adverse socio-economic effects related to wind microclimate, such as reduced footfall, reduced use of outdoor amenity space or diminished residential amenity. Similarly, no adverse effects on human health are anticipated in relation to pedestrian safety, comfort or opportunities for outdoor activity.

8.148 Overall, wind microclimate effects are assessed as Negligible Neutral (not significant) for both socio-economic conditions and human health.

Local Economy

8.149 The completed development has the potential to impact the local economy, primarily through changes in population, household expenditure and indirect support for local services and businesses. From a socio-economic perspective, the introduction of new residents can contribute to demand for local goods and services, support the viability of nearby shops, cafés and services, and increase footfall in the surrounding area. From a human health perspective, a stable and functioning local economy can

indirectly support wellbeing by sustaining employment opportunities, accessible services and neighbourhood vitality, which are recognised social determinants of health.

8.150 The proposed development would deliver 251 new homes, with an estimated resident population of approximately 635 people. This represents a modest increase in population relative to the size of Cheetham ward and the wider Manchester City Council area. The majority of residents are expected to be economically active adults or smaller households, as per the predominance of one- and two-bedroom units. As such, the development would be expected to generate additional local expenditure on furnishings, everyday goods and services, including food retail, leisure, personal services and transport.

8.151 It is estimated that the average homeowner spends approximately £7,667.92 (original figure updated for inflation) to make their house 'feel like home' when moving into a property[13]. This money is generally spent on furnishing and decorating a property. This expenditure would generate a range of economic benefits for the local economy by supporting indirect and induced jobs within local businesses. By applying this average level of one-off spending on household products and services, it is estimated that (considering an approximate figure of 50% to account for leakage, as per the Additionality Guide[14], related to spending on both comparison and convenience goods) £1,527,126 of spending would occur. This injection of resident spending into the local economy would support local businesses and increase work prospects in the area.

8.152 According to the most recent ONS Family Spending data[15], it is estimated that each household within the North West region spends on average £381.10 per week on household expenditure (this is calculated by subtracting average housing, and gas and electricity costs of £88.60 per week, from an average total expenditure of £469.70 per week). This would equate to £18,761.60 per year on average, when multiplying weekly expenditure by 52. Adjusted for inflation, this results in a final figure of £19,533.63 per year.

8.153 To apply a 'worst case' scenario, it is assumed that some of those moving to the new market homes would already be residents of Manchester and would thus not generate new net expenditure. Therefore, a displacement factor of 25% has been applied to the spending of the additional population. This considers a scenario in which there are expected to be some displacement effects of household expenditure, to a limited extent.

8.154 Using estimates of average expenditure for households in the North West region, an assessment has been made of the additional spending on local convenience goods and leisure services, and of the employment that would be supported.

8.155 Approximately £4.90 million per year is expected to be spent by residents living in the proposed development, though this is not confined to a geographic scope, and some displacement effects are likely. Of this (£4.90 million per year), Manchester and other shopping destinations geographically local to Manchester, are expected to retain around £3.68 million per year of the proposed development's expenditure.

8.156 In socio-economic terms, the local economy and business base within Manchester and Cheetham ward are considered to be of low to medium sensitivity, reflecting the scale and diversity of the city's economy and its capacity to absorb incremental population growth. The magnitude of change associated with the completed development is assessed as low, as the additional population represents a small proportion of the existing ward and city population and would not materially alter economic performance at a local or sub-regional scale.

8.157 In human health terms, any economic effects associated with the completed development are indirect and relate to the potential for improved access to local services, increased neighbourhood activity and perceptions of vitality. These pathways can contribute positively to mental wellbeing and social cohesion, particularly where services are accessible on foot. However, given the modest scale of change and the absence of evidence of pressure on local services or displacement of existing economic activity, the magnitude of impact on health determinants is assessed as low.

8.158 The local population, including future residents, is therefore considered to experience a Minor Beneficial effect on health via economic pathways, which is not significant in EIA terms. No adverse health effects related to the local economy are anticipated as a result of the completed development.

Assessment of Residual Effects

Additional Mitigation

Demolition and Construction Stage

8.159 No significant socio-economic or human health effects are predicted to arise during the demolition and construction stage beyond the temporary employment and income benefits reported in Section 8.75 to 8.78. Embedded mitigation measures set out in ES Chapter 4 (including construction management and good practice controls) would be implemented as part of the project design and delivery. Accordingly, no additional mitigation measures are required for socioeconomics and human health during the demolition and construction stage.

Completed Development Stage

8.160 For the completed development stage, the assessment identifies Minor Beneficial effects relating to housing supply and the local economy, and Negligible to Minor effects for wind microclimate. Daylight, sunlight and overshadowing effects include Moderate Adverse effects for a localised set of neighbouring receptors (as reported in the technical Daylight, Sunlight and Overshadowing chapter). These effects are inherent to the built form in a high-density urban context and have been assessed as residual in the technical chapter. No additional socioeconomics and human health mitigation measures are proposed in this chapter. Residual effects therefore remain as set out in the Assessment of Effects section.

Enhancement Measures

8.161 While no additional mitigation is required to address significant adverse socio-economic or human health effects, a number of non-essential enhancement measures could be incorporated by the Applicant to further optimise positive outcomes associated with the proposed development. These measures are not relied upon to conclude significance and are therefore voluntary in nature.

- **Local Employment and Skills Opportunities** – The Applicant could seek to maximise local socio-economic benefits during demolition and construction through voluntary engagement with local employment, training and apprenticeship initiatives (e.g. via existing Manchester or GMCA employment programmes). This could increase access to construction-related employment and skills development for residents in Cheetham ward and other priority areas, supporting inclusive economic growth.
- **Supply Chain Engagement** – Where practicable, the use of local contractors and suppliers could be encouraged, helping to retain a greater proportion of construction-related expenditure within the local economy and reinforcing positive indirect economic effects.
- **Information for New Residents** – Provision of welcome information for new residents, highlighting nearby parks, walking routes, play spaces, community facilities, healthcare services and sustainable travel options, could help promote healthier lifestyles and encourage integration with the surrounding neighbourhood.

[13] Research carried out by OnePoll on behalf of Barratt Homes, August 2014. Original figure of £5,500 updated using Bank of England Inflation calculator to assess change from 2014 to November 2025.
[14] Homes and Communities Agency (2014) Additionality Guide 4th Edition 2014. Available at: https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf
[15] Office for National Statistics (2024) Family Spending Workbook 3: Expenditure by Region – FYE 2024 edition of this dataset, Table A33, adjusted for inflation from 2024 to Nov 2025 using Bank of England inflation calculator. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/familyspendingworkbook3expenditurebyregion

- **Contribution to Local Area Quality** – While not required to mitigate impacts, opportunities could be explored (subject to agreement with Manchester City Council) for the development to contribute indirectly to the quality or accessibility of nearby public realm or open space through design integration, improved pedestrian permeability or wayfinding, enhancing the usability of existing facilities for both new and existing residents.

8.162 These enhancement measures would reinforce the Minor Beneficial effects identified for housing, the local economy and health-related determinants, but are not necessary to make the development acceptable in EIA terms. The assessment conclusions and significance determinations set out in this chapter remain valid without their implementation.

Demolition and Construction Residual Effects

8.163 As no additional mitigation is required, the residual demolition and construction effects remain as reported in the assessment of effects section. These comprise a Minor Beneficial effect on employment and income generation for the wider labour market and supply chain, which is temporary, short-term and not significant in EIA terms.

Completed Development Residual Effects

8.164 As no additional mitigation would be required, the residual completed development effects remain as reported in the assessment of effects section.

Summary of Residual Effects

8.165 In summary, the residual completed development effects comprise Minor Beneficial effects relating to housing supply and the local economy, Negligible Neutral effects for wind microclimate, and Minor to Moderate Adverse effects relating to daylight and sunlight amenity for a small number of neighbouring residential receptors. The Moderate Adverse socio-economic amenity effects identified for Jefferson Place and Barton Place remain significant in EIA terms at the local receptor level, consistent with the technical Daylight, Sunlight and Overshadowing assessment. The corresponding human health effects associated with daylight and sunlight are assessed as not significant in EIA terms, as they relate primarily to amenity and wellbeing pathways affecting a limited population without evidence of population-level health outcomes.

8.166 Table 8.17 provides a tabulated summary of the outcomes of the assessment of the proposed development.

Table 8.17: Summary of Residual Effects

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ +/- -	D I	P T	R IR	St Mt Lt
Demolition and Construction								
Local Residents and Economy	Creation of Demolition and Construction Employment	None required	Minor beneficial (not significant)	+	D	T	R	St
Local Economy	Temporary retail spending of temporary Demolition and Construction Workers	None required	Minor beneficial (not significant)	+	D	T	R	St
Completed Development								
Existing and future residents	Net increase in housing supply through delivery of 251 new homes, contributing to housing delivery and choice	None required	Minor beneficial (not significant)	+	D	P	IR	Lt
Existing and future residents	Increased demand for open space, leisure and play facilities due to additional resident population	Non required	Minor adverse (not significant)	-	D	P	IR	Lt
Existing and future residents	Changes in residential amenity arising from daylight and sunlight effects to neighbouring properties (Jefferson Place and Barton Place)	None required	Moderate adverse (significant)	-	D	P	IR	Lt
Existing and future residents	Changes in residential amenity arising from daylight and sunlight effects to other neighbouring properties	None required	Minor adverse (not significant)	-	D	P	IR	Lt
Existing and future residents	Wind microclimate conditions affecting pedestrian comfort and safety	None required	Negligible (not significant)	+/-	D	P	IR	Lt
Existing and future residents	Increased local expenditure and support for local services arising from new resident population	None required	Minor beneficial (not significant)	+	I	P	IR	Lt

Notes:

* - = Adverse/ + = Beneficial/ +/- = Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R = Reversible/ IR = Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term.

**Negligible/Minor/Moderate/Major

Cumulative Effects

Intra-Project Effects

8.167 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 10: Cumulative Effects.

Inter-Project Effects

8.168 Inter-project cumulative effects for socioeconomics and human health consider whether the proposed development, when taken together with other existing, approved or under-construction developments in the vicinity, could result in materially different outcomes for the receptors identified in Table X.6. The assessment is informed by the cumulative schemes list in Appendix 2 of the EIA Scoping Report and focuses on schemes that are spatially and temporally capable of interacting with the proposed

development through shared pathways, including population-driven demand effects, local economy effects and, where relevant, overlapping construction programmes.

8.169 Table 8.18 identifies the cumulative schemes with the greatest potential to interact with the proposed development for socio-economic and human health outcomes. Schemes that are either too distant, too small, or unlikely to materially combine with the proposed development for the pathways scoped into this chapter are not expected to give rise to cumulative effects that would alter the conclusions of the assessment.

8.170 Table 8.18 provides a summary of the likely cumulative effects resulting from the proposed development and the cumulative developments.

Table 8.18: Inter-Project Cumulative Effects

Cumulative Development	Demolition and Construction		Completed Development	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
Land at 33–41 Cheetham Hill Road (237 apartments, approx. 50m)	Yes	There is potential for overlap in construction programmes in the same locality, which could combine to increase short-term construction employment demand and supply-chain activity within the same labour market.	Yes	The additional residential population in close proximity could combine with the proposed development to incrementally increase local expenditure and demand for nearby open space and local services.
1 Park Place (154 apartments, approx. 110m)	Yes	Potential temporal overlap could add to short-term construction employment activity and local supply-chain demand, although effects remain beneficial and temporary.		The combined additional residents could contribute to a modest cumulative increase in footfall and expenditure in the surrounding area and marginally increase demand for open space/leisure provision.
Red Bank Victoria (outline/approved, up to 4,800 units, approx. 210m)	Yes	If construction phases overlap, there is potential for a combined uplift in construction employment and local expenditure associated with construction workers and procurement, though this would remain temporary and beneficial at the labour market scale.	Yes	The scale of additional housing in the wider area has potential to cumulatively increase demand for parks/open space and to support local services and business viability through higher footfall and spending.
Victoria Riverside (up to 634 apartments, under construction, approx. 425m)	Yes		Yes	Additional residents could contribute to incremental cumulative demand for open space and local services and modestly strengthen the local economy through expenditure effects.
Brewery Gardens (505 apartments, under construction)	Yes	There is potential for overlap in construction employment activity, reinforcing beneficial employment effects at the city labour market scale.	Yes	As a residential-led scheme, it could add to cumulative population growth locally, increasing demand for open space and supporting local businesses, while remaining proportionate in the Manchester context.

8.171 The cumulative schemes above are residential-led and within close proximity to the site, meaning they are most likely to interact with the pathways scoped into this chapter. They are also of a scale that could plausibly combine with the proposed development for population-driven effects, including open space and play demand and local expenditure effects, and for short-term construction employment effects if construction phases overlap.

Demolition and Construction Cumulative Effects

8.172 The demolition and construction stage effects scoped into this chapter relate primarily to temporary employment and income generation. In the cumulative context, where construction programmes overlap with nearby schemes, there is potential for a combined uplift in construction employment, local procurement and associated short-term expenditure in the surrounding area.

8.173 The receptors for construction employment effects comprise the Greater Manchester labour market and associated supply chains, which have low to medium sensitivity due to their scale and adaptive capacity. The magnitude of the cumulative effect is assessed as low to medium beneficial, because construction employment is temporary, the labour market is broad, and the combined activity does not represent a step-change in economic conditions at the Manchester or GMCA scale.

8.174 Accordingly, cumulative demolition and construction effects on employment and income are assessed as Minor Beneficial, temporary and short-term, and not significant in EIA terms.

Completed Development Cumulative Effects

8.175 In the completed development cumulative context, the principal mechanism for inter-project cumulative socio-economic and health effects is the combined increase in residential population arising from the proposed development together with nearby residential-led schemes.

8.176 In socio-economic terms, the combined additional residents would be expected to increase local expenditure and footfall, supporting the vitality and viability of local shops, services and leisure uses. Given the diversity and scale of the Manchester economy and the existing capacity of local economic systems to respond to changes in demand, the sensitivity of the local economy and services receptor remains low to medium. The magnitude of cumulative change is assessed as low to medium beneficial, reflecting that the combined schemes could produce a noticeable local uplift in activity but would not materially alter economic structure or performance at a city-wide scale.

8.177 The resulting cumulative effect on the local economy is therefore assessed as Minor Beneficial, permanent and long-term, and not significant in EIA terms.

8.178 For open space, leisure and play, the cumulative schemes would collectively increase population in the surrounding area and therefore increase demand for public open space and play opportunities. The sensitivity of residents, particularly children, older people and groups experiencing deprivation, remains high. However, for this chapter the magnitude of cumulative change is assessed as low to medium, because the proposed development itself generates a modest population increase and the additional demand is distributed across multiple spaces and facilities within the wider ward and city context.

8.179 On this basis, the cumulative effect on open space, leisure and play is assessed as Minor Adverse at most, permanent and long-term, and not significant. This conclusion reflects that the cumulative change is not anticipated to compromise access to open space at the ward level, and it does not introduce a pathway likely to result in significant population health effects, although it may incrementally increase local competition for space at peak times.

8.180 In human health terms, cumulative effects associated with the local economy are expected to be indirect and beneficial, relating to increased neighbourhood vitality, walkable access to services and strengthened viability of local amenities. Given that these effects are modest and operate at the level of determinants rather than direct exposures, the magnitude of cumulative health impact is assessed as low beneficial. The resulting cumulative human health effect is therefore Minor Beneficial, long-term, and not significant.

8.181 The built environment pathways (including daylight, sunlight and wind microclimate) have been assessed in the relevant technical chapters using cumulative massing scenarios. For the purposes of this socioeconomics and human health chapter, those cumulative built environment findings do not materially alter the conclusions reached for population health, because the relevant effects are localised to specific receptors and relate primarily to amenity and comfort rather than determinants likely to drive measurable health outcomes at a population level.

8.182 Overall, the completed development cumulative effects for socioeconomics and human health are not significant in EIA terms.

Summary of Assessment (NTS)

Background

8.183 This chapter has detailed the potential socioeconomic and human health effects due to the construction and completed development stages of the proposed development. The assessment of construction and completed development stages has been undertaken taking into account the relevant national and local guidance and regulations.

Demolition and Construction Effects

8.184 During demolition and construction, the main socio-economic effects relate to the creation of temporary jobs and associated expenditure by the workforce and supply chain. This is expected to result in a Minor Beneficial, temporary effect for the wider labour market and local economy, which is not significant in EIA terms.

8.185 Standard construction management measures would be implemented as part of the project, and no additional mitigation is required for socio-economics and human health. Overall, demolition and construction are not expected to give rise to significant socio-economic or human health effects, and effects would cease once construction is complete.

Completed Development Effects

8.186 Once completed, the proposed development would provide 251 new homes, increasing housing supply and supporting housing delivery objectives. This is assessed as a Minor Beneficial, long-term socio-economic and human health effect (not significant). The development does not include on-site affordable housing and therefore does not directly contribute to meeting identified affordable housing needs, although it would add to overall housing stock and choice.

8.187 The additional resident population would increase day-to-day spending and support nearby services and businesses. This effect is assessed as Minor Beneficial and not significant.

8.188 The development would increase demand for local open space and recreation. With no on-site children's play space, future residents would rely on nearby parks and play facilities. Given the modest scale of population increase and availability of open space within walking distance, effects are assessed as Minor Adverse, long-term and not significant.

8.189 Residential amenity effects have been considered using the separate technical assessments of daylight/sunlight and wind microclimate. Wind effects are assessed as Negligible and not significant. For daylight, some neighbouring residents would experience noticeable reductions, and significant effects are identified for parts of Jefferson Place and Barton Place in relation to residential amenity. These effects are localised to specific neighbouring properties. For human health, daylight/sunlight effects are expected to relate primarily to amenity and wellbeing pathways affecting a limited population and are therefore not significant in EIA terms.

8.190 Overall, the completed development is expected to result in Minor Beneficial effects for housing supply and the local economy and no significant human health effects. A significant localised socio-economic amenity effect is identified for daylight impacts at Jefferson Place and Barton Place, consistent with the technical daylight assessment.

Cumulative Effects

8.191 Cumulative effects have been considered with other developments in the surrounding area. Overlapping construction activity could increase temporary employment and spending, which would be positive and not significant. In the completed development scenario, cumulative population growth could incrementally increase demand for parks and local services while also supporting local businesses. These cumulative effects are not expected to be significant for socioeconomics or human health, and they do not change the conclusion that the main significant effects identified relate to localised daylight impacts at specific neighbouring residential buildings.

9 CLIMATE CHANGE AND GREENHOUSE GASES

Introduction

9.1 This chapter of the ES reports on the likely significant Climate Change and Greenhouse Gas (GHG) effects to arise from the demolition and construction stage and the completed development stage of the proposed development.

9.2 The chapter describes the Climate Change and GHG policy context; the methods used to assess the potential impacts and likely effects; the baseline conditions at the site and within the study area; the effects taking into consideration embedded mitigation; the need for additional mitigation and enhancement; the significance of residual effects; and inter-project cumulative effects.

9.3 The chapter is supported by the following technical appendices in ES Volume 3:

- Technical Appendix 9.1: Climate Change and Greenhouse Gases Legislation and Policy Summary;
- Technical Appendix 9.2: Life Cycle Assessment; and,
- Technical Appendix 9.3: Carbon and Energy Statement.

Methodology

9.4 The assessment has been informed by the following legislation, policies and published guidance:

- International Legislation:
  - Paris Agreement (2015)[1].
- National Legislation, Policy and Guidance:
  - Climate Change Act 2008 (2050 Target Amendment) Order 2019[2] (2019);
  - Carbon Budget Orders 2009[3], 2011[4], 2016[5], 2021[6];
  - National Planning Policy Framework[7] (2024);
  - Planning Practice Guidance - Climate Change[8] (2019); and,
  - Net Zero Strategy: Build Back Greener[9] (2021).
- Regional Policy and Guidance:
  - Greater Manchester Combined Authority (GMCA) Places for Everyone (PfE)[10] (2024);
    - Policy JP-S1: Sustainable Development;
    - Policy JP-S2: Carbon and Energy;
    - Policy JP-S3: Heat and Energy Networks;
    - Policy JP-S6: Resource Efficiency;
    - Policy JP-P1: Sustainable Places; and,
  - Design Guidance for Net Zero[11] (2025).
- Local Policy and Guidance:
  - Manchester City Council (MCC) Core Strategy Development Plan Document[12] (2012);
  - Addendum to Manchester Core Strategy[13] (2024);
    - Policy EN 4 - Reducing CO2 Emissions by Enabling Low and Zero Carbon Development;
    - Policy EN 5 - Strategic Areas for low and zero carbon decentralised energy infrastructure;
    - Policy EN 6 - Target Framework for CO_2 Reductions from Low or Zero Carbon Energy Supplies; and,
  - MCC Declaration of Climate Emergency[14] (2019).
- Topic Specific Guidance and Industry Standards:
  - Chartered Institution of Building Services Engineers (CIBSE). TM54 Evaluating operational energy use at the design stage[15] (2022);
  - Institute of Sustainability and Environmental Professionals (ISEP), formerly the Institute of Environmental Management and Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition[16] (2022);
  - IEMA GHG Management Hierarchy[17] (2020);
  - Royal Institution of Chartered Surveyors (RICS). Whole life carbon assessment for the built environment 2nd Edition[18] (2023); and,
  - World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). The Greenhouse Gas Protocol[19] (2019).

9.5 Further details of the relevant International and National Legislation and Policy are provided in ES Volume 3: Technical Appendix 9.1. A review of the relevant Regional and Local Policies is provided in ES Volume 3: Technical Appendix 9.3.

Consultation

9.6 A request for a Scoping Opinion (reference: EIASCO/25/012) was submitted by the Applicant to MCC on 21st November 2025. This was accompanied by a Scoping Report prepared by Ramboll[20]. A Scoping Opinion was issued by the MCC on 8th January 2026 which included comments from statutory consultees. Table 9.1 summarises key comments raised by the statutory consultees of relevance to this assessment, which accompanied the EIA Scoping Opinion, and how the assessment has responded to them.

[1] United Nations Framework Convention on Climate Change. 2015. Paris Agreement 2015.
[2] UK Government. 2019. The Climate Change Act 2008 (2050 Target Amendment) Order 2019.
[3] Department of Business, Energy & Industrial Strategy (DBEIS). 2009. Carbon Budgets Order 2009.
[4] DBEIS. 2011. Carbon Budgets Order 2011.
[5] DBEIS. 2016. Carbon Budgets Order 2016.
[6] DBEIS. 2021. Carbon Budgets Order 2021.
[7] Department for Levelling Up, Housing and Communities, 2024. National Planning Policy Framework. London. HMSO.
[8] https://www.gov.uk/guidance/climate-change. Accessed on 15th January 2026.
[9] Department for Energy Security and Net Zero. 2022. Net Zero Strategy: Build Back Greener.
[10] GMCA. 2024. Places for Everyone.
[11] GMCA. 2025. Design Guidance for Net Zero.
[12] MCC. 2012. Core Strategy Development plan Document.
[13] https://www.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027/3. Accessed on 15th January 2026.
[14] MCC. 2019. Declaration of a Climate Emergency.
[15] CIBSE. 2022. TM54 Evaluating operational energy use at the design stage
[16] IEMA. 2022. Assessing Greenhouse Gas Emissions and Evaluating their Significance.
[17] IEMA. 2020. IEMA GHG Management Hierarchy.
[18] RICS, 2023. Whole life carbon assessment for the built environment 2nd Edition.
[19] WRI and WBCSD. 2019. The Greenhouse Gas Protocol
[20] Ramboll. 2025. Lord Street Scoping Opinion Request Report.

Table 9.1: Summary of Consultation		
Consultee and Form/Date of Consultation	**Summary of Comments**	**Where in this Chapter Comments are addressed**
EIA Scoping Opinion		
MCC / 8th January 2026	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES	Comments are addressed throughout the chapter

Assessment Scope

9.7 The proposed development has the potential to result in GHG emissions. As such, associated effects have been assessed in accordance with the IEMA guidance 'Assessing Greenhouse Gas Emissions and Evaluating their Significance'[21]. It is important to note that there is no singular industry approach to assessing GHG emissions and that there are a range of different methodologies associated with the built environment sector. The IEMA guidance[22] does not specify a particular approach, but rather sets out advice as to the key components required to deliver a robust, appropriate, proportionate and consistent assessment.

9.8 It should be noted that GHGs have the ability to influence the radiation balance of the earth. The extent to which a single molecule of gas can influence this balance varies dependent on the composition of the molecule. As such, different GHGs have different radiative forcing. For the purpose of this assessment, where possible, greenhouse gas impacts are measured in tonnes of equivalent carbon dioxide (tCO_2e). This measure describes the functionally equivalent mass of CO_2 as the reference - the amount CO_2 that would have the same effect as 'x' amount of that gas. For example, methane has a greater radiative forcing affect than CO_2 and as such the equivalent CO_2 is greater than one.

Technical Scope

9.9 For the purposes of the assessment, GHG emissions generated by the proposed development have been calculated based on lifecycle stages, as presented within RICS 'Whole life carbon assessment for the built environment 2nd edition'[23]. The lifecycle stages are detailed in Table 9.2.

Table 9.2: Lifecycle Stages		
Stage	**Module**	**Description**
Product Stage	A1 - Raw material supply	Includes extraction, transportation and manufacturing processes necessary to produce any construction products
	A2 - Transport	
	A3 - Manufacturing	
Construction Stage	A4 - Transport	Transportation of construction products and all construction processes, including wastage, up to project completion. This includes any on-site demolition or strip-out works required at the beginning of the project
	A5 - Construction and installation process	
In-use Stage	B1 - Use	Direct emissions and removals from construction products, such as emission of blowing agents from insulation, refrigerant leakage from equipment or removal of CO_2 through carbonation of concrete
	B2 - Maintenance	Material-related emissions that occur from maintenance, repair and replacement of any construction products, components, or elements of the asset over the reference study period
	B3 - Repair	
	B4 - Replacement	
	B5 - Refurbishment	Any refurbishment, retrofit or change in performance of the asset planned at the outset of the project to occur at some point after construction is completed
Operational Carbon	B6 - Operational energy use	Energy use of the asset over the completed development stage
	B7 - Operational water use	Water use of the asset over the completed development stage
	B8 - Other operational uses	User activities not included elsewhere such as emissions from vehicles using a road over the completed development stage
End of Life Stage	C1 - Deconstruction and demolition	Impacts during the end-of-life stage of an asset. This includes deconstruction or demolition, waste processing, recovery or disposal and associated transport
	C2 - Transport	
	C3 - Waste processing	
	C4 - Disposal	

9.10 The GHG Protocol[24] categorises direct and indirect emissions into three broad scopes:

- Scope 1: all direct GHG emissions;
- Scope 2: indirect GHG emissions from the generation of purchased electricity, heat, or steam; and,
- Scope 3: other indirect emissions, such as the extraction and production of purchased materials and fuels, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal etc.

[21] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[22] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[23] RICS, 2023. Whole life carbon assessment for the built environment 2nd Edition.
[24] WRI and WBCSD. 2019. The Greenhouse Gas Protocol.

9.11 Indirect Scope 3 emissions are emitted from activities which are predominantly outside of the Applicant's control. However, in the supreme court judgment of Finch v Surrey County Council[25] it is made clear that Scope 3 emissions should be considered as leading to potential indirect effects of a development, but only if these are likely. For example, if information on which a reasoned conclusion could properly be based is available, such as when the end use of the material is certain.

9.12 The IEMA guidance[26] makes it clear that the scope of a GHG emissions assessment should be defined based on the likely proportion of emissions during a specific project stage. For example, if the majority of impacts occur during the operational phase of a project and construction impacts are negligible, then the GHG assessment can reflect this.

9.13 Details of the Scope 1, 2 and 3 emission sources across the lifetime of the proposed development have been identified and those scoped into the assessment are outlined in the following sections.

Demolition and Construction Stage

9.14 The following activities will contribute GHG emissions during the demolition and construction stage of the proposed development:

- Embodied carbon associated with the extraction and manufacturing of building materials (lifecycle modules A1 to A3). These fall within Scope 3 emissions; and,
- Transport of construction materials to the site, demolition, site clearance and waste removal, and construction and installation of products on-site (lifecycle modules A4 to A5). These are predominantly Scope 1 emissions.

Completed Development Stage

9.15 The following activities will contribute GHG emissions during the completed development stage of the proposed development:

- Embodied carbon associated with maintenance, repair, replacement and refurbishment within the buildings (lifecycle modules B1 to B5). These fall within Scope 3 emissions;
- Operational energy requirements associated with purchased electricity from the National Grid and distribution network (lifecycle module B6). These fall within Scope 2 and 3 emissions; and,
- Operational water consumption associated with the supply of water to and extraction and processing of foul water from the proposed development (lifecycle module B7). These fall within Scope 3 emissions.

Emission Sources Scoped Out of Assessment

9.16 The IEMA guidance[27] recommends that activities with emissions that in total equate to less than 5% of the lifecycle emissions of the proposed development may be scoped out of the assessment. The following sources were therefore not considered further:

- GHG emissions from the treatment and disposal of waste materials during the completed development stage. It is noted these will be minimised through standard best practice including the implementation of an Operational Waste Management Plan. Further details are provided in Chapter 4: Proposed Development Description;
- It is assumed that maintenance, refurbishment and repair to extend the operational lifetime of the buildings would be considered before decommissioning. Therefore, it is considered unlikely that the proposed development would be decommissioned at the end of the 60-year timeframe considered throughout this assessment. Furthermore, should the proposed development be decommissioned after the 60-year timeframe, any demolition activities, waste disposal and replacement development would be built to be net zero standards in line with the regulations at that time. As such, end of life emissions associated with the proposed development have been scoped out of the assessment; and,
- The proposed development is car-free and does not provide any car parking spaces. Therefore, GHG emissions associated with road vehicle exhaust emissions will be limited to delivery and servicing vehicles and likely to be minimal in comparison to other emission sources.

Spatial Scope

9.17 GHG emissions contribute to climate change, which is a global environmental effect. Therefore, the study area for the assessment is not limited by any specific geographical scope or defined by specific sensitive receptors. Nevertheless, the assessment has focused on emission sources associated with the proposed development over which the Applicant has some ability to control or influence.

Temporal Scope

9.18 The assessment has considered impacts arising across the lifetime of the proposed development, inclusive of the demolition and construction stage and completed development stage. The lifetime of the development has been considered to be 60-years, the standard assumed life of a building in line with RICS guidance[28].

Baseline Characterisation Method

Desk Study

9.19 The existing baseline represents GHG emissions from the site prior to development. This may include emissions from existing projects (e.g. energy consumption from a building which is scheduled for refurbishment, demolition or replacement) and infrastructure (e.g. current operational and end-user emissions of a road due to be upgraded). In the context of this assessment, the current baseline has considered potential GHG emissions from the existing site use, as well as establishing GHG emissions at a national and regional level.

Field Study

9.20 Not applicable to this chapter.

Assessment Method

Demolition and Construction Stage

Embodied Carbon (Lifecycle Modules A1 to A3) and Construction Process (Lifecycle Modules A4 to A5)

9.21 A Life Cycle Assessment (LCA) for the proposed development has been prepared by Element Sustainability and is presented in ES Volume 3: Technical Appendix 9.2. The LCA was undertaken to provide compliance with the requirements of the PfE Design Guidance for Net Zero[29].

[25] Finch vs Surrey. 2024. Judgement R (on the application of Finch on behalf of the Weald Action Group) (Appellant) v Surrey County Council and others (Respondents).
[26] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[27] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[28] RICS, 2023. Whole life carbon assessment for the built environment 2nd Edition.
[29] GMCA. 2025. Design Guidance for Net Zero.

9.22 The assessment calculated the whole life carbon impact of the proposed development in accordance with RICS guidance[30] methodology (incorporating all lifecycle modules), and to separately report on the upfront embodied carbon (lifecycle modules A1 to A5).

9.23 One Click LCA Software was used to undertake the LCA. The software is a recognised tool to conduct LCAs and complies with the following standards:

- BS EN 15978: 2011[31] – Sustainability of Construction Works – Assessment of Environmental Performance of Buildings - Calculation Method;
- ISO 14040 2006: Environmental Management[32] – Lifecycle Assessment – Principles and Framework; and,
- ISO 14044 2006: Environmental Management[33] – Lifecycle Assessment – Requirements and Guidelines.

9.24 A detailed methodology including relevant inputs, assumptions and limitations of the LCA are provided within ES Volume 3: Technical Appendix 9.2.

Completed Development Stage

Operational Embodied Carbon (Lifecycle Modules B1 to B5)

9.25 Operational embodied carbon (lifecycle modules B1 to B5) emissions were calculated within the LCA presented within ES Volume 3: Technical Appendix 9.2. The methodology for calculating GHG emissions is the same as detailed previously.

Operational Energy Use (Lifecycle Module B6)

9.26 A Carbon and Energy Statement for the proposed development has been prepared by Element Sustainability and is presented in ES Volume 3: Technical Appendix 9.3. The Carbon and Energy Statement was undertaken to provide compliance with the requirements of the PfE Design Guidance for Net Zero[34].

9.27 The energy performance of the proposed development was calculated using the CIBSE TM54[35] assessment methodology. The energy demand for the dwellings was calculated in DesignBuilder, a dynamic building simulation modelling (DSM) software package widely used for TM54 assessments. This software allows detailed modelling of building fabric, ventilation, internal gains and heating system performance to produce predictions of regulated energy use. The modelling provides a robust indication of the expected space heating and overall Energy Use Intensity (EUI).

9.28 A detailed methodology including relevant inputs, assumptions and limitations of the assessment is provided within ES Volume 3: Technical Appendix 9.3.

9.29 The proposed development will be fully electric. Therefore, indirect GHG emissions from the generation of purchased electricity from the National Grid and losses as a result of transmission and distribution of the electricity from source to site have been calculated based on the energy demand for the proposed development and emissions factors derived from the Department for Energy Security and Net Zero (DESNZ) published GHG Reporting: Conversion Factors 2025[36].

9.30 The proposed development will implement photovoltaic (PV) panels at roof level to provide on-site renewable electricity generation. The estimated energy generation of the PV array has been provided by Element Sustainability. On-site provision of energy will reduce the reliance on grid supplied electricity. As such, a net reduction in total energy demand has been calculated to account for the on-site generation of electricity.

Operational Water Use (Lifecycle Module B7)

9.31 The projected water consumption and foul water production for the proposed development has been estimated based on the requirement of PfE[37] Policy JP-S4 - Flood Risk and Water Environment to achieve a daily consumption of less than 110 litres/person/day (l/p/d). The number of people in the residential units has been estimated based on the maximum occupancy for a worst-case assessment. It is assumed that the amount of daily foul water will be equal to daily water consumption.

9.32 Associated GHG emissions have been calculated by multiplying the calculated annual water consumption of the proposed development by emissions factors derived from DESNZ's GHG Reporting: Conversion Factors 2025[38] for water supply and treatment of foul water.

Cumulative Stage

9.33 An overarching principle of the IEMA guidance is that GHG emissions from all global development cumulatively contribute to climate change and a change to the global environment. This, therefore, makes the assessment of GHG emissions a cumulative assessment by its very nature. As such, the combined effects of local committed development are not considered further.

Assessment Criteria

9.34 When determining the significance of effect, the IEMA guidance[39] states:

> *"IEMA's 2010 principles on climate change mitigation and EIA identify climate change as one of the defining environmental policy drivers and that action to address GHG emissions is essential. Specifically, three overarching principles are particularly relevant to considering the aspect of significance:*
>
> - *The GHG emissions from all projects will contribute to climate change, the largest interrelated cumulative environmental effect.*
> - *The consequences of a changing climate have the potential to lead to significant environmental effects on all topics in the EIA Directive (e.g. human health, biodiversity, water, land use, air quality).*
> - *GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit, as such any GHG emissions or reductions from a project might be considered to be significant."*

9.35 The IEMA guidance goes on to state:

> *"When evaluating significance, all new GHG emissions contribute to a negative environmental impact; however, some projects will replace existing development or baseline activity that has a higher GHG profile. The significance of a project's emissions should therefore be based on its net impact over its lifetime, which may be positive, negative or negligible;*
>
> *Where GHG emissions cannot be avoided, the goal of the EIA process should be to reduce the project's residual emissions at all stages; and,*

30 RICS, 2023. Whole life carbon assessment for the built environment 2nd Edition.
31 European Standard. 2011. BS EN 15978: 2011 – Sustainability of Construction Works – Assessment of Environmental Performance of Buildings - Calculation Method.
32 International Organization for Standardization. 2006. ISO 14040 2006: Environmental Management – Lifecycle Assessment – Principles and Framework.
33 International Organization for Standardization. 2006. ISO 14044 2006: Environmental Management – Lifecycle Assessment – Requirements and Guidelines
34 GMCA. 2025. Design Guidance for Net Zero.
35 CIBSE. 2022. TM54 Evaluating operational energy use at the design stage.
36 DESNZ. 2025. GHG Reporting: Conversion Factors 2025.
37 GMCA. 2024. Places for Everyone.
38 DESNZ. 2025. GHG Reporting: Conversion Factors 2025.
39 IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.

Where GHG emissions remain significant, but cannot be further reduced, approaches to compensate the project's remaining emissions should be considered."

9.36 The above aligns with the IEMA mitigation hierarchy[40]. When determining impact significance, the guidance indicates:

"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."

9.37 The assessment of the potential impacts and likely effects as a result of the proposed development has taken into account both the demolition and construction stage and completed development stage. In line with the IEMA guidance[41], the sensitivity of the receptor (i.e., the global atmosphere) in relation to GHG emissions is always considered to be 'high'. The criteria for determining the significance of effects are outlined in Table 9.3. The significance level attributed to each effect is based on the best practice guidance from IEMA[42].

Table 9.3: Significance of Effect

Significance	Criteria
Major Adverse	The project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero
Moderate Adverse	The project's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero
Minor Adverse	The project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero
Neutral	The project's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions
Beneficial	The project's net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared to the without-project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact

9.38 All GHG emissions to the atmosphere have a lasting effect, accumulating and remaining in the atmosphere and contributing to global warming. As such, all effects are considered to be long term, permanent, direct and irreversible.

Assumptions and Limitations

9.39 The following assumptions and limitations were made when completing the assessment:

- The assessment has relied on data provided by Elemental Sustainability within the LCA and Carbon and Energy Statements. It has been assumed that these data sets have been reported correctly;
- The LCA was conducted during RIBA Stage 2 (concept design). Therefore, design detail is limited and will be considered further as the scheme progresses through to the Technical Design Stage. A number of assumptions were consequently used in order to complete the baseline assessment. The RICS Professional Statement has provided reasonable assumptions, based on UK average industry standard practice, which must be used during early design phase whole life carbon assessments that are to act as baselines for progressive reporting. A 15% early design stage contingency factor was applied to account for uncertainty and lack of detailed design information;
- The proposed development will generate road vehicle emissions during the demolition and construction stage. GHG emissions have been incorporated into the embodied carbon calculations undertaken as part of the LCA;
- Eight representative dwellings were chosen to reflect the range of apartment and townhouse layouts across the development for the energy demand calculations with the average EUI calculated based on these dwelling types. This is considered a robust approach at early design stage. However, it is also recommended that a TM54: Operational Energy Performance assessment is conducted on the entire building in order to accurately assess the operational energy of the development once detailed design is complete. Any such changes are considered unlikely to materially change the determined magnitude of effect or significance identified within this chapter;
- 2025 GHG emission factors for electricity obtained from the National Grid and losses due to transmission and distribution of electricity have been applied across the lifetime of the proposed development. This is considered to be a worst-case approach as the National Grid continues to decarbonise towards Net Zero in 2050 with increasing supply from renewable sources;
- Operational water consumption emissions were calculated based on the Applicant achieving the maximum permitted 110l/p/d in line with PfE requirements. Following detailed design and specification of water saving techniques to be implemented it is likely that water consumption across the site will be lower and the calculated emissions will be an overestimation;
- It is assumed that the aspirations presented in the below list are committed to by the Applicant throughout the lifetime of the proposed development. The following commitments have been considered when determining the significance of effect and further details are provided in ES Chapter 4: Proposed Development Description and ES Chapter 5: Demolition and Construction Description:
  - Construction Environmental Management Plan (CEMP);
  - Site Waste Management Plan (SWMP);
  - Construction Logistics Plan (CLP); and,
  - Water efficiency strategy.
- There is inherent uncertainty within all modelling and predictive software and emission factors.

Baseline Conditions

Existing Baseline

National and Regional Emissions

9.40 Within the context of GHG emissions assessment, the baseline is a reference point against which the impact of the proposed development can be compared against. This section establishes existing GHG emissions at a national and regional level.

[40] IEMA. 2020. IEMA GHG Management Hierarchy.
[41] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[42] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.

9.41 On 3rd July 2025, the Department for Energy Security and Net Zero (DESNZ) released the latest version of 'UK local authority and regional GHG emissions statistics, 2005 to 2023'[43]. The data contains the most up to date available GHG emission estimates for the UK, England and MCC, presenting total and sectoral emissions. GHG emission estimates for 2023 are provided in Table 9.4.

Table 9.4: 2023 National and Regional Sectoral Emissions

Sector	Annual Emissions ($ktCO_2e$)		
	UK	England	MCC
Industry	56,675	39,084	195
Commercial	29,590	25,312	338
Public Sector	10,380	8,599	182
Domestic	76,897	63,148	512
Transport	113,307	93,952	621
LULUCF[(a)]	1,119	-598	3
Agriculture	48,288	29,819	3
Waste	19,838	16,312	335
Total	356,094	275,589	2,189

Note: (a) Land use, land use change and forestry

9.42 As shown in Table 9.4, the transport and domestic sectors represent the highest contributions of GHG emissions throughout Manchester, England and the wider United Kingdom.

9.43 Target annual emissions for 2023 were derived by the University of Manchester's Tyndall Centre for Climate Change Research using a science-based approach to set carbon budgets to achieve net zero by 2038, in line with MCC's declaration of a climate emergency. The target annual emissions for 2023 was 975$ktCO_2e$. Based on the data presented in Table 9.4, MCC were significantly above their target in 2023 and further work is required if they are to be net zero by 2038.

Existing Land Use

9.44 In line with IEMA guidance[44], the existing baseline for the assessment is defined by the GHG emissions arising from current activities within the site boundary for the assessment year of 2026.

9.45 The site comprises brownfield land with a single storey derelict building occupying the south-west corner. The remainder of the site is occupied by hardstanding and vegetation which has encroached onto the plot since the demolition of previous structures. The site is currently vacant with no land uses. As such, for the purpose of this assessment, baseline emissions from the site are considered to be zero.

Future Baseline

9.46 The future baseline represents a scenario without the proposed development, with the site remaining in its current state over the study period. As there are currently no GHG emissions associated with the site, this will continue should the proposed development not come forward. Therefore, all emissions generated by the proposed development will be in excess of existing and future baseline of the site.

Sensitive Receptors

9.47 As outlined in Table 9.5, the sensitive receptor affected by GHG emissions considered in the assessment is the global atmosphere. In line with the IEMA guidance[45], the sensitivity of the global atmosphere to increases in GHG emissions is 'high'.

Table 9.5: Summary of Sensitive Receptors

Receptor	Sensitivity
Global atmosphere	High

Assessment of Effects

Demolition and Construction Effects

9.48 This section identifies and assesses the scale and nature of the main effects arising from the proposed development during the demolition and construction stage.

Embodied Carbon (Lifecycle Modules A1 to A3) and Construction Process (Lifecycle Modules A4 to A5)

9.49 A LCA has been undertaken for the proposed development as provided in ES Volume 3: Technical Appendix 9.2. A breakdown of the total GHG emissions for the demolition and construction stage is provided in Table 9.6.

Table 9.6: Calculated Demolition and Construction Stage GHG Emissions

Lifecycle Module	Emissions ($kgCO_2e$)
A1 - A3: Product Stage	11,011,789
A4: Transport	729,072
A5: Construction and Installation Process	1,494,586
Total	**13,180,004**

9.50 The total GHG emissions from the demolition and construction stage were calculated to be 13,180,004$kgCO_2e$.

9.51 As part of PfE, GMCA released the 'Design Guidance for Net Zero'[46], providing a series of metrics and Key Performance Indicators (KPIs) to be met for new development. The KPIs include upfront embodied carbon targets for minor and major developments, providing a measure of the success of how design decisions have influenced the carbon performance of the building. The proposed development is defined as a 'Large Major Development' as the number of residential units is greater than 150. The representative target for 'Upfront Embodied Carbon - Flats' is <600 $kgCO_2e/m^2$.

9.52 As stated in ES Volume 3: Technical Appendix 9.2, the calculated upfront embodied carbon for the proposed development is 593.69 $kgCO_2e/m^2$. This is below the PfE Design Guidance for Net Zero[47] target value.

9.53 The following efforts will be committed to by the Applicant in order to minimise embodied carbon as the project progresses through to Detailed Design stage:

- Materials will be selected based on their environmental performance and how they will be sourced. Indirect carbon emissions will therefore be taken into account, including those involved in the

[43] DESNZ. 2025. UK local authority and regional GHG emissions statistics, 2005 to 2023.
[44] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[45] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[46] GMCA. 2025. Design Guidance for Net Zero.
[47] GMCA. 2025. Design Guidance for Net Zero.

extraction and cultivation, manufacture and handling processes and subsequent, in-life emissions resulting from the use of those materials within the proposed development;

- Materials with a low environmental impact throughout their lifecycle will be prioritised within the new building. Additionally, materials with associated Environmental Performance Declarations (EPD) will be favoured;
- Responsibly sourced materials from suppliers operating an Environmental Management System and procuring timber verified by either the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification standard (PEFC) will be prioritised; and,
- Material selection will be carefully considered to avoid the use of toxic materials, such as Volatile Organic Compounds (VOCs) and contribute towards creating a healthy indoor environment.

9.54 Additionally, Chapter 5: Demolition and Construction Description of this ES commits to producing and adhering to the following documents in order to implement sustainable construction practices and to reduce GHG emissions throughout the demolition and construction stage:

- CEMP - to detail control measures and activities to be undertaken to minimise likely environmental impacts, as well as associated roles and responsibilities;
- CLP - implemented to manage the sustainable delivery of goods; and,
- SWMP - to identify waste management options in consideration of the waste hierarchy, on- and off-site options, and the arrangements for identifying and managing any hazardous wastes produced.

9.55 The proposed development is below the relevant target for upfront embodied carbon stipulated within PFE Design Guidance for Net Zero[48] and commits to minimising embodied carbon and GHG emissions throughout the demolition and construction stage. Therefore, the project's GHG impacts are considered to be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. In line with IEMA guidance[49], the effects are considered to be **minor adverse** and therefore **not significant**.

Completed Development Effects

9.56 This section identifies and assesses the scale and nature of the main effects arising from the proposed development during the completed development stage.

Operational Embodied Carbon (Lifecycle Modules B1 - B5)

9.57 A LCA has been undertaken for the proposed development as provided in ES Volume 3: Technical Appendix 9.2. A breakdown of the total GHG emissions for lifecycle stages B1 to B5 for the 'In-use Stage' referring to the use, maintenance, repair, refurbishment and replacement of materials is provided in Table 9.7.

Table 9.7: Calculated Completed Development In-use Embodied Carbon GHG Emissions

Lifecycle Module	Emissions ($kgCO_2e$)
B1 - B5: In-use Stage	2,349,675

9.58 The total GHG emissions from operational embodied carbon throughout the completed development stage were calculated to be 2,349,675$kgCO_2e$.

9.59 There are no standards or targets for 'In-use Stage' embodied carbon emissions. However, through the measures highlighted to reduce embodied carbon throughout the design and construction stage, materials will inherently be of lower embodied carbon if required to be repaired, refurbished or replaced. Additionally, through the Detailed Design stage the Applicant has committed to prioritising materials, plant, fixtures and fittings based on their durability and longevity. Therefore, the project's GHG impacts are considered to be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. In line with IEMA guidance[50], the effects are considered to be **minor adverse** and therefore **not significant**.

Operational Energy Use (Lifecycle Module B6)

9.60 A Carbon and Energy Statement has been undertaken for the proposed development as provided in ES Volume 3: Technical Appendix 9.3. The calculated average EUI of the proposed development is 29.90 kWh/m^2/year. Based on a GIA of 22,203 m^2, the annual energy demand of the proposed development is 663,870 kWh/yr.

9.61 Estimated energy generated by the proposed PV panels has been provided by Element Sustainability at 39,239.25 kWh/yr based on the following assumptions:

- PV footprint: 339 m^2;
- Provision of 500 Watt PV panels, with area 2 m^2;
- 84.75 kilowatt-peak (kWp) total installed PV capacity; and,
- 1 kWp PV generates 463 kWh/yr electricity (derived from SAP10 for south facing panel, no overshading).

9.62 Based on the above, the PV panels will provide approximately 6% of the total energy demand, reducing the amount of electricity required by the grid to 624,631 kWh.

9.63 The calculated energy demand has been converted to GHG emissions based on DESNZ's GHG Reporting: Conversion Factors 2025[51] for electricity produced by the National Grid and associated transmission and distribution losses between supply and use of the electricity. The calculated GHG emissions are provided in Table 9.8.

Table 9.8: Calculated Completed Development Operational Energy Use GHG Emissions

Emission Source	Emission Factor ($kgCO_2e/kWh$)	Energy Demand (kWh/yr)	Annual Emissions ($kgCO_2e/yr$)	Lifetime Emissions ($kgCO_2e$)
UK Grid Electricity	0.17700	624,631	110,997	6,659,820
Transmission and Distribution	0.01853	624,631	11,574	694,440
Total			**122,571**	**7,354,260**

9.64 The total GHG emissions from operational energy use throughout the completed development stage were calculated to be 7,354,260 $kgCO_2e$.

9.65 In order to limit energy demand and GHG emissions during the completed development stage, the following design features will be integrated into the scheme tol collectively contribute towards emission reductions:

- High performance thermal insulation;
- Low air permeability;
- Air Source Heat Pumps (ASHPs) to provide hot water;
- Mechanical Ventilation with Heat Recovery (MVHR);
- PV panel array;
- Sophisticated heating controls;
- Appliances and white goods specified will be highly energy efficient; and,
- Each dwelling will be specified with a smart meter to enable occupant to effectively monitor and manage their energy consumption.

[48] GMCA. 2025. Design Guidance for Net Zero.
[49] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[50] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[51] DESNZ. 2025. GHG Reporting: Conversion Factors 2025.

9.66 As detailed in ES Volume 3: Technical Appendix 9.3, based on the proposed energy strategy, the proposed development achieves a space heating demand of 6.51 kWh/m^2/yr and an average EUI of 29.90 kWh/m^2/yr respectively. Both metrics are below the PfE Design Guidance for Net Zero[52] KPIs of 15 kWh/m^2/yr for space heating and 35 kWh/m^2/yr for EUI. Additionally, the provision of PV panels will be equivalent of 41% of the ground floor space, above the 40% KPI of the PfE Design Guidance for Net Zero[53].

9.67 Based on the design of the scheme meeting the PfE Design Guidance for Net Zero targets and incorporated measures to reduce energy demand, the project's GHG impacts are considered to be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. In line with IEMA guidance[54], the effects are considered to be **minor adverse** and therefore **not significant**.

Operational Water Consumption (Lifecycle Module B7)

9.68 The proposed development will be designed to reduce mains and potable water consumption and will include the following water efficient designs and equipment:

- A water efficiency strategy will be determined for the site and will include for the provision of 'A' rated appliances as a minimum; and,
- Water efficient sanitary fittings such as low flush WCs and low flow taps and showers with flow regulators would be installed in the dwellings.

9.69 It is anticipated that with the proposed measures in place, the proposed development will achieve a calculated daily consumption of less than 110 l/d/p in line with PfE[55] Policy JP-S4 - Flood Risk and the Water Environment.

9.70 GHG emissions have been calculated based on a maximum level of 110 l/p/d for water consumption and foul water and emission factors derived from DESNZ's GHG Reporting: Conversion Factors 2025[56] for water supply and water treatment. The calculated GHG emissions are provided in Table 9.9.

Table 9.9: Calculated Completed Development Operational Water Consumption GHG Emissions

Emission Source	Emission Factor ($kgCO_2e/Ml$)	Water Consumption (Ml/yr)	Annual Emissions ($kgCO_2e/yr$)	Lifetime Emissions ($kgCO_2e$)
Water Supply	191.3	30.3	5,791	347,477
Water Treatment	170.9	30.3	5,173	310,376
Total			**10,964**	**657,853**

9.71 The total GHG emissions from operational water consumption throughout the completed development stage were calculated to be 657,853 $kgCO_2e$.

9.72 Based on the design of the proposed development meeting the Policy JP-S4 - Flood Risk and the Water Environment and incorporated measures to reduce water consumption, the project's GHG impacts are considered to be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. In line with IEMA guidance[57], the effects are considered to be **minor adverse** and therefore **not significant**.

Lifetime Development Effects

9.73 A summary of the calculated GHG emissions for the proposed development, inclusive of both the demolition and construction stage and completed development stage is provided in Table 9.10.

Table 9.10: Calculated GHG Emissions from Proposed Development

Development Stage	Emission Source	Lifetime Emissions (tCO_2e)	Proportion of Total Emissions (%)
Demolition and Construction	Embodied carbon (lifecycle modules A1 to A3) and construction process (lifecycle modules A4 to A5)	13,180	56.0
Completed Development	Operational embodied carbon (lifecycle modules B1 - B5)	2,350	10.0
Completed Development	Operational energy use (lifecycle module B6)	7,354	31.2
Completed Development	Operational water consumption (lifecycle module B7)	658	2.8
Total		**23,542**	**100**

9.74 As shown in Table 9.10, total GHG emissions generated over the lifetime of the development is 23,542 tCO_2e. Over a lifetime of 60-years, average annual emissions generated by the scheme are predicted to be 392.3 tCO_2e/yr. Embodied carbon during the demolition and construction phase and operational energy usage contribute the vast majority of GHG emissions associated with the scheme. During the Detailed Design stage of the proposed development, opportunities should be sought to further reduce embodied carbon within materials and the energy demand where practicable.

9.75 In order to provide context to the assessment results, annual GHG emissions have been compared to the Carbon Budget for MCC derived by the University of Manchester's Tyndall Centre for Climate Change Research for the opening year of the scheme 2032. The carbon budget for MCC in 2032 is 290.4 $ktCO_2e$. Annually averaged emissions from the proposed development represent 0.14% of the total budget, a subjectively small proportion.

Assessment of Residual Effects

Additional Mitigation

,

Demolition and Construction Stage

9.76 No significant effects are predicted and consequently no additional mitigation is required for the demolition and construction stage. However, an updated LCA should be conducted at the Detailed Design stage when increasing levels of detail in the design and specification of the built asset will become available to ensure compliance with the PfE Design Guidance for Net Zero Upfront Embodied Carbon KPI and the conclusions drawn within this assessment. Opportunities should be sought where possible to further reduce embodied carbon within the specified construction materials. This can be secured via planning condition to be submitted prior to commencement of the development.

[52] GMCA. 2025. Design Guidance for Net Zero.
[53] GMCA. 2025. Design Guidance for Net Zero.
[54] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[55] GMCA. 2024. Places for Everyone.
[56] DESNZ. 2025. GHG Reporting: Conversion Factors 2025
[57] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.

Completed Development Stage

9.77 No significant effects are predicted and consequently no additional mitigation is required for the completed development stage. However, the following recommendations are made to ensure compliance with the conclusions of this assessment as the project progresses through to Detailed Design stage:

- In relation to embodied carbon during the completed development stage (lifecycle modules B1 - B5), an updated LCA should be conducted at the Detailed Design stage when increasing levels of detail in the design and specification of the built asset will become available. Opportunities should be sought to minimise less durable materials that require more frequent refurbishment or replacement and specify materials with extended lifespans and warranties. This can be secured via planning condition to be submitted prior to commencement of the development; and,
- In relation to operational water consumption (lifecycle module B7), during the Detailed Design stage, A water efficiency strategy should be developed and specify the water efficient sanitary fittings such as low flush toilets and low flow taps and showers with flow regulators that will be installed in the dwellings to ensure compliance with the PfE[58] Policy JP-S4 - Flood Risk and the Water Environment daily consumption targets. This can be secured via planning condition to be submitted prior to commencement of the development.

Enhancement Measures

9.78 No enhancement measures are proposed in respect of Climate Change and GHG effect.

Demolition and Construction Residual Effects

9.79 As no additional mitigation would be required, the residual completed development effects remain as reported in the assessment of effects section:

- GHG emissions as a result of embodied carbon in construction materials, construction transport and demolition and construction processes (lifecycle modules A1 - A5) are considered to have a **minor adverse** and therefore **not significant** effect.

Completed Development Residual Effects

9.80 As no additional mitigation would be required, the residual completed development effects remain as reported in the assessment of effects section:

- GHG emissions as a result of in-use stage embodied carbon (lifecycle modules B1 - B5) are considered to have a **minor adverse** and therefore **not significant** effect;
- GHG emissions as a result of operational energy use (lifecycle module B6) are considered to have a **minor adverse** and therefore **not significant** effect; and,
- GHG emissions as a result of operational water consumption (lifecycle module B7) are considered to have a **minor adverse** and therefore **not significant** effect.

Summary of Residual Effects

9.81 Table 9.11 provides a tabulated summary of the outcomes of the assessment of the proposed development.

Table 9.11: Summary of Residual Effects

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ +/- -	D I	P T	R IR	St Mt Lt
Demolition and Construction								
Global Atmosphere	GHG emissions as a result of embodied carbon in construction materials, construction transport and demolition and construction processes (lifecycle modules A1 - A5)	Updated LCA at detailed design stage	Minor adverse (not significant)	+	D	P	R	Lt
Completed Development								
Global Atmosphere	GHG emissions as a result of in-use stage embodied carbon (lifecycle modules B1 - B5)	Updated LCA at detailed design stage	Minor adverse (not significant)	+	D	P	R	Lt
Global Atmosphere	GHG emissions as a result of operational energy use (lifecycle module B6)	None required	Minor adverse (not significant)	+	D	P	R	Lt
Global Atmosphere	GHG emissions as a result of operational water consumption (lifecycle module B7)	Water efficiency strategy at detailed design stage	Minor adverse (not significant)	+	D	P	R	Lt

Notes:
* - = Adverse/ + = Beneficial/ +/- = Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R = Reversible/ IR = Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term.
**Negligible/Minor/Moderate/Major

Cumulative Effects

Intra-Project Effects

9.82 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 10: Cumulative Effects.

Inter-Project Effects

9.83 As stated previously, an overarching principle of the IEMA guidance[59] is that GHG emissions from all global development cumulatively contribute to climate change and a change to the global environment. This, therefore, makes the assessment of GHG emissions a cumulative assessment by its very nature. As such, the combined effects of local committed development have not been considered further.

[58] GMCA. 2024. Places for Everyone.

[59] IEMA. 2022. Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.

Summary of Assessment (NTS)

Background

9.84 Potential Climate Change and Greenhouse Gas effects due to the demolition and construction and completed development stages of the proposed development have been assessed. This has been undertaken taking into account the relevant national and local guidance and regulations.

Baseline

9.85 A desktop assessment of baseline greenhouse gas emissions from the site in its current layout was undertaken. As the site is currently vacant there are no greenhouse gas emissions generated from the site. Therefore, any future development on the site will lead to an increase in greenhouse gas emissions to the atmosphere.

Demolition and Construction Effects

9.86 During demolition and construction works greenhouse gas emissions may be generated directly through the burning of fuels for construction transport, plant and generators, or indirectly as a result of electricity use from the national grid and carbon emissions generated during the manufacture and transport of materials used within the construction of the proposed development.

9.87 A lifecycle carbon assessment has been produced calculating all greenhouse gas emissions generated during the demolition and construction stage of the proposed development. The total emissions during the construction stage of the proposed development were compared against regional net zero targets for large scale developments and were found to be below the target level.

9.88 As the project progresses the life cycle assessment will be updated to reflect exact specifications and quantities of materials utilised through the construction of the development. Locally sourced materials and materials with lower associated carbon emissions will be prioritised to minimise greenhouse gases generated by the proposed development.

9.89 Additionally, a number of management plans will be utilised throughout the demolition and construction stage to ensure sustainable practices in relation to transport, waste and the environment are adhered to throughout its duration.

9.90 Overall, it is considered that the demolition of the existing site and construction of the proposed development would result in a minor effect on as a result of greenhouse gases to the global atmosphere, and as such would not give rise to significant effects on Climate Change.

Completed Development Effects

9.91 Once construction of the proposed development is complete and the building occupied, greenhouse gases may be generated as a result of energy supplied to the building, vehicle emissions, water usage or the maintenance, repairs or replacement of materials over the lifetime of the development.

9.92 A Carbon and Energy Statement has been produced to determine the energy requirements of the proposed development. The development has been designed to be thermally efficient, fully electric and utilise solar power panels to produce renewable energy onsite and reduce reliance on the grid. The calculated energy demand for the proposed development has been compared to regional net zero targets for large scale developments and found to be below the target level.

9.93 The proposed development will not provide car parking, limiting associated vehicle emissions from the scheme.

9.94 As part of the design process, materials fixtures and fittings installed within the proposed development will be prioritised based on their durability and longevity, reducing the requirement to replace or refurbish the proposed development. Furthermore, fixtures will be selected to with high energy and water efficiency ratings to reduce overall consumption from the proposed development.

9.95 Overall, it is considered that the completed proposed development has taken significant steps to minimise the amount of greenhouse gases emitted to the atmosphere. As such, residual effects are not considered to be significant.

10 CUMULATIVE EFFECTS

Introduction

10.1 The EIA Regulations require that the likely significant environmental effects of a development are taken into account, including any likely cumulative effects.

10.2 ISEP Guidance (formerly IEMA) Guidance[1] identifies two types of cumulative effects:

- Inter-project effects - incremental changes caused by other development schemes occurring together with the proposed development and the cumulative effects combining to worsen the effect of a particular impact; and
- Intra-project effects - those effects that occur as a result of impact interaction between different environmental topics within the same project. For example, a project might affect bird species as a result of direct loss of habitat and by noise and light disturbance. Each of these when considered in isolation may have a limited effect but taken together the sum is greater than the parts.

Inter-Project Cumulative Effects

10.3 A list of cumulative schemes for consideration in the inter-project cumulative effect assessment was presented to MCC as part of the EIA Scoping Opinion Request Report on 17th November 2025 (ES Volume 3: Technical Appendix 2.1). Following the EIA Scoping Process the agreed list was maintained and updated to account for the status of each scheme and any new potential, qualifying schemes. Details of the most up-to-date list of cumulative schemes considered in Chapter 2: EIA Process and Methodology of this ES Volume.

10.4 Inter-project effects have been addressed in each technical chapter of the ES (Chapters 6-9) of ES Volume 1 and ES Volume 2, as appropriate. To avoid significant repetition, information on the potential combined effects of the proposed development together with cumulative schemes is not presented within this chapter of the ES.

Intra-Project Cumulative Effects

10.5 The potential for intra-project cumulative effects is considered within this chapter.

Intra-Project Cumulative Effects

Assessment Approach

10.6 Ramboll has developed an approach to the cumulative assessment which uses the defined residual effects of the proposed development to determine the potential for interactions between effects and consequently the potential for significant intra-project cumulative effects to arise. This is a tried, tested and robust approach that has been implemented and accepted on a wide range of urban development applications over many years.

10.7 The approach comprised the following steps:

- First, a review of the likely residual effects (and in particular, the likely significant environmental effects) presented within the assessments of the ES was undertaken;
- Second, the likely receptors or receptor groups were identified;
- Third, the individual effects which may impact a singular receptor or receptor group were listed in a matrix format;
- Fourth, the potential for individual effects to interact for a given receptor was identified; and
- Fifth, the scale of the combined intra-project cumulative effects was assessed.

10.8 To ensure a proportionate approach, all negligible effects have been disregarded in the intra cumulative assessment. Where a range of effects has been predicted, the full range has been considered (i.e. negligible to minor).

10.9 It is noted that intra-project cumulative effects are more likely to arise when the receptor or receptor group is of higher sensitivity to change, such as human receptors, for example existing residential neighbours.

10.10 Where there is more than one effect is identified as likely to arise on a particular receptor or receptor group, the potential for effect interactions and the scale of the combined effect have been determined based on professional judgement and experience.

Intra-Project Cumulative Assessment Results

10.11 The results of the intra assessment are presented within a matrix format in the Assessment Results section as Tables 10.1 and 10.2 for the demolition and construction stage and completed development stage effects respectively.

Demolition and Construction

10.12 Table 10.1 presents this summary assessment of the intra cumulative assessment for the demolition and construction stage. No potential for intra-cumulative effects have occurred during the demolition and construction stage of the proposed development. No additional mitigation is required.

[1] ISEP: The State of Environmental Impact Assessment Practice in the UK. 2011.

Likely Residual Effects					
		Labour Market	**Existing Off-site Residential**	**Global Climate**	**Existing Townscape**
Socio-Economics and Human Health	Employment during construction				
Daylight, Sunlight and Overshadowing	Loss of daylight to homes				
	Loss of sunlight to homes				
	Overshadowing of open spaces				
Climate Change	Greenhouse Gas Emissions				
Townscape and Visual	Effects on townscape character				
	Effects on views				
Potential for effect interactions?		**No**	**No**	**No**	**No**

- Major Beneficial
- Moderate Beneficial
- Minor to Moderate Beneficial
- Minor Beneficial
- Minor Adverse to Minor Beneficial
- Neutral
- Major Adverse
- Moderate to Major Adverse
- Moderate Adverse
- Minor to Moderate Adverse
- Minor Adverse
- Negligible to Minor Adverse

Table 17.1 Intra-project effects during demolition and construction stage

Likely Residual Effects		Labour Market	Existing Off-site Residential Receptors and Users of Public Open Space	Global Climate	Existing Townscape Character	Future residents
Socio-Economics and Human Health	Provision of housing					
	Increased demand for open and play space					
	Changes in residential amenity from daylight and sunlight effects (Jefferson and Barton Place)					
Daylight, Sunlight and Overshadowing	Reduction in daylight amenity					
Climate Change	Greenhouse gas emissions					
Townscape and Visual	Effects on townscape character areas					
	Visual effects on views (View C)		(Neutral)			
Potential for effect interactions?		**No**	**Yes**	**No**	**No**	**No**

- Major Beneficial
- Moderate Beneficial
- Minor to Moderate Beneficial
- Minor Beneficial
- Minor Adverse to Minor Beneficial
- Neutral
- Major Adverse
- Moderate to Major Adverse
- Moderate Adverse
- Minor to Moderate Adverse
- Minor Adverse
- Negligible to Minor Adverse

Table 17.2 Intra-project effects during the completed development stage

Completed Development

10.13 Table 10.2 presents the summary assessment of the intra-cumulative effects summary for the completed development stage.

10.14 During the completed dvelopment, the potentail for intra cumulative effects has been identified for the following receptors/receptor groups:

- Existing off site receptors including residents, pedestrians and users of open space.

10.15 Existing off site residential receptors may be subject to effect interactions associated with:

- Townscape and visual effects with regards to appearance of the proposed development in the view and subsequent visual amenity;
- Loss of amenity daylight and sunlight and overshadowing of open spaces in the immediate surroundings; and
- Increased demand for open and play spaces for local residents.

10.16 The majority of the townscape and visual effects would be beneficial or neutral to the surrounding setting and views. The loss of daylight and sunlight effects and socio-economic effects do not interact with each other, and it is not expected to result in any new or materially different significant effect on the receptors.

Conclusions

10.17 No significant adverse or beneficial effects have been identified during the demolition and construction stage in respect of and receptors. As such, no further additional mitigation would be required to stop any intra-project cumulative effects.

10.18 In respect of the completed development stage, existing off-site residential receptors would experience adverse effects relating to socioeconomics and human health simultaneously to effects from daylight and sunlight. The loss of daylight and sunlight effects and socio-economic effects do not interact with each other, and it is not expected to result in any new or materially different significant effect on the receptors as a result of effect interactions.

11 SUMMARY OF MITIGATION AND RESIDUAL EFFECTS

Introduction

11.1 This chapter summarises the additional mitigation measures, the enhancement measures and the residual effects identified in the technical assessments of ES Volume 1 (Chapters 6-9) and ES Volume 2.

Additional Mitigation and Enhancement

11.2 As set out in Chapter 2: EIA Process and Methodology, the aim of an EIA is to develop measures to avoid, offset or reduce the significant adverse environmental effects of a project and to enhance any beneficial effects.

Additional Mitigation

11.3 Within each of the technical assessments, the need for additional mitigation measures has been considered in respect of likely significant adverse effects as far as reasonably possible. In addition, opportunities for environmental enhancement have been explored where practicable. The proposed additional mitigation and enhancement measures are in addition to the embedded design and operational mitigation measures (as described in ES Chapter 4: Proposed Development Description) and standard embedded demolition and construction mitigation measures (as described in ES Chapter 5: Demolition and Construction Description), which have been considered within the technical assessments.

11.4 Table 11.1 presents a summary of the additional mitigation measures that have been identified over the course of the EIA of the proposed development categorised under the following stages:

- Demolition and Construction; and
- Completed Development.

11.5 Reference should be made to individual technical assessments for more detail.

Table 11.1: Summary of Proposed Additional Mitigation

Topic	Proposed Additional Mitigation
Demolition and Construction	
Daylight, Sunlight and Overshadowing	None.
Wind Microclimate	None.
Socio-Economics and Human Health	None.
Climate Change	None.
Townscape and Visual Impact Assessment	None.
Completed Development	
Daylight, Sunlight and Overshadowing	None.
Wind Microclimate	None.
Socio-Economics and Human Health	None required. However, financial contributions through section 106 obligations and the Community Infrastructure Levy (CIL) would be secured to support improvements in the local area.
Climate Change	None required, however an updated LCA could be conducted at the detailed design stage to further limit embodied carbon and operational water consumption.
Townscape and Visual Impact Assessment	None.

Enhancement Measures

11.6 The following enhancement measures have been identified within the individual technical assessments:

- Socioeconomics and Human Health: Local employment and skills opportunities; supply chain engagement; information for new residents; and contribution to the quality of the local area.

Residual Effects

11.7 This section summarises the likely residual environmental effects of the proposed development following the adoption and inclusion of the additional mitigation measures that are set out in Table 11.1.

11.8 Reference should be made to ES Chapters 6-9 in ES Volume 1 and ES Volume 2 for a detailed description of likely significant residual environmental effects.

Demolition and Construction Residual Effects

11.9 Table 11.2 summarises the residual effects which have been identified by the individual technical assessments as likely to arise from the demolition and construction stage of the proposed development.

11.10 No significant effects have been identified for the demolition and construction phase of the proposed development.

Table 11.2: Demolition and Construction Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	D I	P T	R IR	St Mt Lt
Daylight, Sunlight and Overshadowing	N/A	N/A	N/A	N/A					
Wind Microclimate	Pedestrian and construction workers	Wind conditions within the site and immediate surrounding area.	None required	Negligible (not significant)	+/-	D	T	R	St
Socio-economics and Human Health	Local Residents and Economy	Creation of demolition and construction employment	None required	Minor Beneficial (not significant)	+	D	T	R	St
	Local Economy	Temporary retail spending of temporary demolition and construction workers	None required	Minor Beneficial (Not significant)	+	D	T	R	St
Climate Change and Greenhouse Gases	In-Combination Climate Impacts								
	Daylight, Sunlight and Overshadowing	Potential interactions of climate change with the identified DSO effects	None required	Not significant	N/A	N/A	N/A	N/A	N/A
	Socio-Economics receptors	Potential interactions of climate change with the identified socio-economic effects	None required	Not Significant	N/A	N/A	N/A	N/A	N/A
	Wind Microclimate receptors	Potential interactions of climate change with identified Wind Microclimate effects.	None required	Not Significant	N/A	N/A	N/A	N/A	N/A
	Greenhouse Gas Emissions								
	Global Climate	GHG Emissions.	Updated LCA at detailed design stage	Minor Adverse (not significant)	-	D	P	IR	Lt
Built Heritage, Townscape and Visual	Townscape								
	Townscape Character Area 1: Cheetham Hill Road Corridor	Appearance of demolition and construction activities in the wider townscape area surrounding the receptor.	None required.	Minor-Moderate Beneficial (not significant)	+	D	T	R	St-Mt
	Townscape Character Area 2: Lord Street/Fernie Street	Appearance of demolition and construction activities in the wider townscape area surrounding the receptor.	None required.	Minor-Moderate Beneficial (not significant)	+	D	T	R	St-Mt
	Townscape Character Area 3: Green Quarter Cluster	Appearance of demolition and construction activities in the wider townscape area surrounding the receptor.	None required.	Minor-Moderate Beneficial (not significant)	+	D	T	R	St-Mt
	Townscape Character Area 4: NOMA/Victoria North	Appearance of demolition and construction activities in the wider townscape area surrounding the receptor.	None required	Minor-Moderate Beneficial (not significant)	+	D	T	R	St-Mt

*
- = Adverse; + = Beneficial; +/- = Neutral;
D = Direct; I = Indirect;
P = Permanent; T = Temporary;
R = Reversible; IR= Irreversible;
St = Short-term; Mt = Medium-term; Lt = Long-term.

Completed Development Residual Effects

11.11 Table 11.3 summarises the residual effects which have been identified by the individual technical assessments as likely to arise within the completed development stage of the proposed development.

11.12 The following significant adverse environmental effects for the completed development have been identified and are highlighted in red text in Table 11.3:

- Daylight, Sunlight and Overshadowing: A Moderate Adverse (Significant) loss in daylight amenity for Jefferson Place and Barton Place;
- Socioeconomics and Human Health: A Moderate Adverse (Significant) change in residential amenity from loss of daylight and sunlight effects; and
- Townscape and Visual Impact: A Moderate-Major Neutral (Significant) change from Viewpoint C – Lord Street/Strangeways.

Table 11.3: Completed Development Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	D I	P T	R IR	St Mt Lt
Daylight, Sunlight and Overshadowing	St Chad's Presbytery	Reduction in daylight amenity	None required	Negligible Adverse (not significant)	+/-	D	P	IR	LT
	Britton House	Reduction in daylight amenity	None required	Minor Adverse (not significant)					
	Jefferson Place	Reduction in daylight amenity	None required	Moderate Adverse (significant)	-	D	P	IR	Lt
	The Hallmark	Reduction in daylight amenity	None required	Minor Adverse (not significant)	-	D	P	IR	Lt
	Melia House	Reduction in daylight amenity	None required	Minor Adverse (not significant)	-	D	P	IR	Lt
	Barton Place	Reduction in daylight amenity	None required	Moderate Adverse (significant)	-	D	P	IR	Lt
	Masson Place	Reduction in daylight amenity	None required	Minor Adverse (not significant)	-	D	P	IR	Lt
	Britton Place	Reduction in sunlight amenity	None required	Minor Adverse (not significant)	+/-	D	P	IR	Lt
	St Chad's Presbytery	Reduction in sunlight amenity	None required	Negligible Adverse (not significant)	+/-	D	P	IR	Lt
	Britton House - Lawn	Reduction in sunlight amenity	None required	Negligible Neutral (not significant)	+/-	D	P	IR	Lt
	St Chad's Presbytery - Gardens	Reduction in sunlight amenity	None required	Negligible Neutral (not significant)	+/-	D	P	IR	Lt
Wind Microclimate	Pedestrians	Safety – effect on pedestrian safety at the site and study area caused by wind conditions	None required	Negligible (not significant)	+/-	D	P	IR	Lt
		Thoroughfares – wind conditions at all site thoroughfares are suitable for at least short term standing conditions year-round	None required	Negligible (not significant)	+/-	D	P	IR	Lt

Table 11.3: Completed Development Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	D I	P T	R IR	St Mt Lt
		Entrances – wind conditions at all site entrances are suitable for at least short-term standing conditions throughout the year	None required	Negligible (not significant)	+/-	D	P	IR	Lt
		Terraces – wind conditions at all site terraces are suitable for at least short-term standing throughout the year	None required	Negligible adverse (not significant)	+/-	D	P	IR	Lt
		Surrounding areas – wind conditions are suitable for existing pedestrian activities	None required	Negligible (not significant)	+/-	D	P	IR	Lt
Socio-Economics and Human Health	Future Residents	Net increase in housing supply through delivery of 251 new homes	None required	Minor Beneficial (Not significant)	+	D	T	R	LT
		Increased demand for open and play space	None required	Minor Adverse (not significant)	+	I	T	R	LT
		Changes in residential amenity from daylight and sunlight effects to Jefferson Place and Barton Place	None required	Moderate Adverse (significant)	+	D	T	R	LT
		Changes in residential amenity from daylight and sunlight effects to other residential properties	None required	Minor Adverse (not significant)	+	D	P	R	LT
		Wind microclimate conditions affecting pedestrian comfort and safety	None required	Negligible (not significant)	+	D	P	R	LT
		Increased local expenditure and support for local services arising from new resident population	None required	Minor beneficial (not significant)	+	I	P	R	LT
Climate Change	Global Atmosphere	GHG emissions as a result of in-use stage embodied carbon	Updated LCA at detailed design stage	Minor Adverse (not significant)	-	D	P	IR	Lt
		GHG emissions as a result of operational energy use	None required	Minor Adverse (not significant)	-	D	P	IR	Lt
		GHG emissions as a result of operational water usage	Updated LCA at detailed design stage	Minor Adverse (not significant)	-	D	P	IR	Lt

Table 11.3: Completed Development Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	D I	P T	R IR	St Mt Lt
	In-Combination Climate Impacts								
	Daylight, Sunlight and Overshadowing	Potential interactions of climate change with identified DSO	None required	None	N/A	N/A	N/A	N/A	N/A
	Wind Microclimate	Potential interactions of climate change with the identified wind microclimate effects	None required	None	N/A	N/A	N/A	N/A	N/A
	Socio-Economics and Human Health receptors	Potential interactions of climate change with identified socioeconomic effects	None required	None	N/A	N/A	N/A	N/A	N/A
Built Heritage, Townscape and Visual	**Townscape**								
	Townscape Character Area 1: Cheetham Hill Road Corridor	Appearance of proposed development within wider townscape area surrounding the receptor	None required	Minor-Moderate Beneficial (not significant)	+	D	P	IR	Lt
	Townscape Character Area 2: Lord Street/Fernie Street	Appearance of proposed development within wider townscape area surrounding the receptor	None required	Minor-Moderate Beneficial (not significant)	+	D	P	IR	Lt
	Townscape Character Area 3: Green Quarter Cluster	Appearance of proposed development on the site which is located in this Character Area	None required	Minor-Moderate Beneficial (not significant)	+	D	P	IR	Lt
	Townscape Character Area 4: NOMA/Victoria North	Appearance of proposed development on the site which is located in this Character Area	None required	Minor-Moderate Beneficial (not significant)	+	D	P	IR	Lt
				Visual					
	View A – Manchester Fort	Appearance of proposed development on the site	None required	Minor Neutral (not significant)	+/-	D	P	IR	Lt
	View B – Manchester Jewish Museum	Appearance of proposed development on the site	None required	Minor-Moderate neutral (not significant)	+/-	D	P	IR	Lt
	View C – Lord Street / Strangeways	**Appearance of proposed development on the site**	**None required**	**Moderate-Major Neutral (significant)**	+/-	D	P	IR	Lt
	View D – Manchester Oratory	Appearance of proposed development on the site	None required	Minor–Moderate Beneficial (not significant)	+	D	P	IR	Lt
	View E – Cheetham Hill Road / Park Street	Appearance of proposed development on the site	None required	Minor Beneficial (not significant)	+	D	P	IR	Lt

Table 11.3: Completed Development Residual Effects

Topic	Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
					+ -	D I	P T	R IR	St Mt Lt
	View F – Manchester Cathedral	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt
	View G – Angel Gardens	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt
	View H – Roger Street	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt
	View I – Green Quarter	Appearance of proposed development on the site	None required	Minor Neutral (not significant)	+/-	D	P	IR	Lt
	View J – Blackfriars Street	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt
	View K – Greengate West	Appearance of proposed development on the site	None required	Minor Neutral (not significant)	+/-	D	P	IR	Lt
	View L – Angel Meadows	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt
	View M – Collyhurst Road	Appearance of proposed development on the site	None required	Negligible Neutral (not significant)	+/-	D	P	IR	Lt
	View N – Cathedral Gardens	Appearance of proposed development on the site	None required	Minor–Moderate Neutral (not significant)	+/-	D	P	IR	Lt

Notes:

* - = Adverse/ + = Beneficial/ +/- Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R=Reversible/ IR= Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term

**Negligible/Minor/Moderate/Major

Significant residual adverse effects

Significant residual beneficial effects

12.12.2050 / RF25-1259-02-RP01

Lord Street, Manchester

Built Heritage, Townscape & Visual Assessment

www.re-formlandscape.com

re-form
landscape architecture

Confidential

Revisions

Date	Author	Revision	Description of revision	Approved
23.01.26	JM	-	First Issue (DRAFT)	DL
09.02.26	JM	A	Final Issue	DL

Confidential

Contents

1.	Introduction	Page 5
2.	The Site	Page 6
3.	Relevant planning policies	Page 8
4.	Development proposals	Page 12
5.	Townscape baseline assessment	Page 14
6.	Assessment of townscape affects	Page 22
7.	Assessment of visual effects	Page 30
8.	Conclusions	Page 41

Appendix A: Figures

Appendix B: Assessment Methodology

Appendix C: Methodology for the production of photomontages

References

Confidential

1 Introduction

1.1 This Built Heritage Townscape and Townscape effect Assessment (BHTVIA) has been prepared by re-form landscape architecture on behalf of **Linear Living** to assess the likely effects of the proposed redevelopment of land at **No. 1 Lord Street, Manchester**, at the junction of Cheetham Hill Road, Lord Street and Fernie Street. The scheme comprises a **Ground + 23 storey residential building** designed by **AEW Architects**, supported by new public realm and landscaping.

1.2 The assessment considers heritage assets only in relation to their **setting and visual experience**, in accordance with NPPF Section 16 and GLVIA3 guidance. It does not seek to duplicate a heritage impact assessment, but provides proportionate commentary where heritage assets form part of the townscape or visual receptor

1.3 This report will refer to the relevant national guidance for:

i the assessment of townscape character

ii making judgements about the visual qualities of the Townscape and it's capacity for accommodating development

iii methodology for the assessment of townscape and visual effects which is in accordance with the 'Guidelines for Landscape & Townscape effect Assessment', Third Edition.

1.4 Drawing on this guidance, and an appraisal of the key townscape and visual issues associated with the Proposed Development , this report will consider:

i the character and sensitivity of the townscape within the vicinity of the Proposed Development ; and

ii the visual amenity of the receiving townscape

1.5 This report is structured as follows:

i Description of the Site and its immediate context in general terms, identifying the location and main characteristics;

ii Identification of the relevant planning policy context at national and local level that is pertinent to townscape character and visual issues;

iii Identification of baseline criteria of the Site which is to be used to inform the assessment of townscape and visual effects is established;

iv Description of the methodology for establishing the townscape and visual effects; this determines the assessment of the townscape and visual effects of the existing Site and the Proposed Development ;

v An assessment of the townscape and visual effects of the development in relation to the baseline conditions, and with and without mitigation;

vi A summary of the findings and conclusions.

Confidential

2 The Site

2.1 The site is a **cleared brownfield plot**, formerly occupied by low-rise commercial units, located at the north-eastern edge of the Manchester City Centre boundary. It sits at the confluence of three streets:

i **Cheetham Hill Road** (A665): a major arterial corridor entering the city centre

ii **Lord Street**: a secondary street serving residential blocks

iii **Fernie Street**: a local access street forming the eastern boundary of the site

2.2 The site is immediately adjacent to the **Green Quarter**, a well-established cluster of mid- and high-rise residential buildings. To the north and north-east, the character transitions towards **Strangeways**, consisting of industrial/commercial buildings and institutional heritage features, notably the Manchester Jewish Museum (View B) and Manchester Oratory (View D).

2.3 The site measures 0.18 ha. The topography is generally flat with minor falls towards the south. Levels to the surrounding streets fall steeply from Cheetham Hill Road, along Lord Street to Fernie Street. The level change between Cheetham Hill Road and Fernie Street is approximately 4m.

2.4 The site contains minimal vegetation; boundary greenery is limited and largely self-seeded. The wider context is hard.

2.5 Surrounding building heights vary from:

i 2–3 storey commercial and retail units along Cheetham Hill Road

ii 7–10 storey residential blocks within the Green Quarter

iii 20–25 storey towers (Angel Gardens, Oxygen, Victoria Riverside visible in distant views)

2.6 The site has direct frontage onto Cheetham Hill Road and is well connected to public transport, pedestrian routes and cycle links.

2.7 While the site is not located within a Conservation Area, several heritage assets lie within the 1km study area, including:

i Manchester Jewish Museum

ii Manchester Oratory

iii Manchester Cathedral

iv Historic fabric around NOMA and the Co-op Estate

2.8 These assets are reflected in Viewpoints B, D, F and N in the scoping document.

Confidential

2.9 The area is characterised by mixed-use city-edge development including residential towers, light industry, commercial retail and institutional uses. Redevelopment is common throughout the Victoria North regeneration area.

Confidential

3 Relevant planning policy

3.1 The relevant planning policies in respect of townscape and visual issues are set out in this section.

National policy – National Planning Policy Framework (NPPF,2025)

3.2 Several parts of the NPPF are directly relevant to townscape and visual issues.

Section 2 – Achieving Sustainable Development

3.3 Requires development to contribute positively to social, economic and environmental objectives. High-quality design and enhancement of the built environment are key environmental components.

Section 12 – Achieving Well-Designed Places (Paras 126–136)

3.4 This is the most significant section in relation to townscape and townscape effect. It states:

i **Para 130**: Planning policies and decisions should ensure developments "function well and add to the overall quality of the area," are "visually attractive as a result of good architecture, layout and appropriate and effective landscaping," and are "sympathetic to local character and history… while not preventing or discouraging appropriate innovation or change."

ii **Para 134**: Development that is "not well designed" should be refused.

iii **Para 135**: Local authorities should ensure design quality through detailed design guidance, design codes and effective use of design review.

iv **Para 136**: Taller buildings must be supported by robust design evidence and demonstrate appropriate height, scale, massing and townscape effect.

Section 16 – Conserving and Enhancing the Historic Environment

3.5 Relevant due to heritage receptors in the study area, including Manchester Cathedral and the Jewish Museum.

i Development affecting the setting of heritage assets should sustain and enhance significance and be supported by proportionate assessment.

Local policy

3.6 The site falls within Manchester City Council's administrative area. The most relevant Core Strategy policies for townscape and townscape effect include:

Confidential

Policy SP1 – Spatial Principles

3.7 New development should reinforce Manchester as a "successful, sustainable city," respecting its character, streets and urban grain.

Policy DM1 – Development Management

3.8 All development should:

i respond positively to the character of the area

ii achieve high-quality design

iii consider the effect on the "visual appearance of the area"

iv protect and enhance the setting of heritage assets

v use high-quality landscaping and integrate green infrastructure

Policy EN1 – Design Principles

3.9 Emphasises "excellence in urban design," requiring development to respond to:

i local character and context

ii scale, massing and height

iii materials and detailing

iv street-level activation and public realm

Policy EN2 – Tall Buildings

3.10 Critical for this BHTVIA. It identifies that tall buildings may be appropriate where:

i they contribute positively to the skyline

ii the site is in a location with capacity for height

iii they do not harm heritage settings or key views

iv they support regeneration priorities

v high-quality design is delivered throughout

3.11 Given its position at a city edge, near existing tall clusters, and within an area undergoing significant growth (Victoria North), the site is considered capable of accommodating taller development subject to visual/townscape testing.

Confidential

Policy EN9 – Green Infrastructure

3.12 Requires proposals to strengthen landscape character, enhance public realm and introduce urban greening — relevant to mitigation.

Supplementary Planning Documents (SPD) and Strategic Frameworks

3.13 Although not statutory policy, several SPDs and SRFs hold significant weight in design assessment.

Strangeways and Great Ducie Street Strategic Regeneration Framework (2018 & 2022 Addendum)

3.14 The site sits immediately adjacent to this SRF boundary. The SRF highlights:

i enhancement of gateways into the city

ii opportunities for new high-quality development

iii reinforcement of urban character and massing

iv importance of visual legibility along Cheetham Hill Road

3.15 The introduction of a well-designed tall building is consistent with ambitions to transform the area's edge and improve townscape quality.

NOMA & Victoria North Regeneration Frameworks (2015–2023)

3.16 These regeneration programmes establish the following design and townscape principles:

i creation of new tall building clusters

ii reinforcement of public realm identity

iii renewed focus on legibility and permeability in the northern city centre

iv respect for heritage assets while delivering significant new density

3.17 The site is within the sphere of influence of the Victoria North programme.

Manchester Residential Quality Guidance (2016)

3.18 Stresses:

i high-quality landscaping

ii active ground floors

iii high-quality materials

iv sensitive massing

Confidential

v integration with character areas

Manchester Green & Blue Infrastructure Strategy (2015)

3.19 Supports the introduction of new tree planting, green infrastructure and buffer planting — relevant for mitigation.

Local Heritage Context

3.20 While the site is not within a Conservation Area, several assets fall within the study area, reflected in viewpoints B, D, F and N in the scoping document:

i Manchester Jewish Museum (Listed)

ii Manchester Oratory

iii Manchester Cathedral (Grade I)

iv Historic streetscape around NOMA

3.21 The NPPF and Core Strategy require development to sustain the significance of these assets — the BHTVIA addresses this through the visual effects assessment.

Summary of Policy Relevance

3.22 Policies collectively seek:

i High-quality, context-led design responding to local character

ii Well-designed tall buildings only in appropriate, visually robust locations

iii Protection of heritage settings through careful evaluation

iv Enhancement of townscape and skyline composition

v Improvement of public realm and integration of green infrastructure

vi Active, legible, and attractive streets

Relevant Policy demonstrates that the site is:

vii appropriate in principle for taller development

viii within an established tall-building context (Green Quarter, NOMA cluster)

ix capable of accommodating change without unacceptable townscape harm

x supported by strong regeneration policy drivers (Victoria North, SRF)

Confidential

4 Development proposals

Overview

4.2 The proposals comprise a **Ground + 23 storey residential building** (24 storeys total) with associated public realm and landscape works on land at **No. 1 Lord Street**, at the junction with **Cheetham Hill Road** and **Fernie Street**. The scheme delivers:

i A single residential tower of **Ground + 23 storeys**

ii Active ground floor uses and residential amenities.

iii New public realm to all site frontages

iv Cycle storage and ancillary building servicing

4.3 The building is conceived as part of a wider **northern city centre skyline cluster**, responding to the established **Green Quarter** and emerging tall buildings associated with **NOMA and Victoria North**.

4.4 The massing is broadly rectilinear with a **slender vertical proportion** when viewed from distance. Key massing features include:

i A **strongly articulated base** addressing Cheetham Hill Road and the junction

ii A **regular form** that rises consistently from level 1 to upper floors with a regular grid of openings

iii A modestly expressed **top**, with a parapet and set-back/terrace zone at the upper levels (around the 15th–16th floors per elevation notes)

4.5 The building footprint aligns with existing urban block patterns along Lord Street and Fernie Street, reinforcing the street edge and completing currently fragmented frontages.

4.6 The development is **residential**, with supporting ancillary spaces. At ground floor:

i A **principal residential entrance lobby** addresses Cheetham Hill Road, offering a clear, legible front door

ii Townhouses to Lord Street with individual front doors and dedicated defensible space.

iii Servicing access is consolidated along Fernie Street, designed to be **visually managed and screened** within the architectural composition and new public realm.

4.7 No large areas of surface car parking are proposed at grade; servicing is expected to be managed via on-street or integrated arrangements, reducing visual clutter.

Confidential

Public Realm and Landscape Proposals

4.8 The public realm and landscape proposals include.

i **Footway and threshold improvements** to Cheetham Hill Road, Fernie Street and Lord Street, using robust paving materials that respond to proposed internal ground floor uses.

ii **Street tree planting** where feasible along Lord Street and Fernie Street to soften the immediate townscape and provide visual mitigation in short-range views

iii **Ground floor external resident's garden** located along the southern boundary between the proposed building and site boundary. Includes new shrub and tree planting, covered spaces and a variety of seating opportunities.

iv **Resident's terrace** located on the 15th floor providing additional areas of external covered space and seating.

4.9 These public realm measures are a key part of the **townscape mitigation** strategy and are referred to again in Part 6 (Mitigation and Residual Effects).

Confidential

5 Townscape baseline assessment

5.1 This section identifies the existing townscape context within the defined 1 km study area, using both desk study and field-based analysis. The analysis is structured around:

i Urban structure and built form

ii Land use

iii Street pattern and movement

iv Vegetation and open space

v Heritage and identity

vi Aesthetic and perceptual qualities

vii Defined **Townscape Character Areas (TCA1–TCA4)**

viii Assessment of susceptibility, value and sensitivity

5.2 The site is located at the edge of Manchester City Centre, approximately:

i 600 m north of Victoria Station

ii 750 m north-west of Manchester Cathedral

iii Immediately south of the Green Quarter

iv South-west of Strangeways

v North of NOMA and the Northern Gateway (Victoria North) development area

5.3 A **1 km radius** is applied for the townscape baseline, consistent with GLVIA3 guidance for tall buildings in dense urban contexts.

Urban Settlement

5.4 The urban settlement is used in the assessment as a shorthand term for the pattern and inter-relationship of buildings and open space. A study of this pattern can contribute to an understanding of townscape and character to highlight the ratio of built form to open space as a precursor to defining townscape character.

5.5 The study area contains a **complex mix** of building types, arranged as:

i Large blocks of modern high-rise residential development (Green Quarter, Angel Gardens)

ii Industrial and commercial units (Strangeways edge)

iii Civic and heritage buildings (Manchester Cathedral, Manchester Jewish Museum)

iv Historic masonry blocks (NOMA, Co-operative Estate)

v Emerging tall building clusters within Victoria North

Confidential

5.6 Building heights range from:

i **2–3 storeys** (Cheetham Hill Road secondary frontages)

ii **6–10 storeys** (Green Quarter mid-rise blocks)

iii **20–41+ storeys** (Angel Gardens, Victoria Riverside cluster)

5.7 The existing townscape already accommodates **visible tall buildings**, forming a baseline of urban height complexity.

5.8 Land use is mixed, comprising:

i Residential (Green Quarter, Angel Gardens)

ii Commercial retail, light industrial and trade counter units (Cheetham Hill Road, Lord Street)

iii Community and cultural uses (Manchester Jewish Museum)

iv Religious/institutional (Manchester Oratory)

v Civic and commercial (NOMA, One Angel Square)

vi Public open spaces (Angel Meadows, Cathedral Gardens)

5.9 This mixture contributes to a **transitional urban character**, typical of city edge regeneration zones.

Topography

5.10 The topography is an important part of the character of the area. Visually, it is relevant in defining the character of views around the Site. The townscape to the Site is broadly **flat**, ranging from approx. **+44–48 m AOD** across the 1 km study area. Cheetham Hill Road falls gently southwards towards the city centre. The surrounding buildings, not landform, create the dominant sense of enclosure.

5.11 Topography does **not** significantly screen or contain long-distance views of tall buildings.

Significant Vegetation

5.12 Existing vegetation is identified and assessed at two levels – firstly, the contribution it makes to the area as a whole and secondly, specific vegetation which may be physically affected by the Proposed Development . The existing vegetation has been mapped using aerial photography with supporting fieldwork.

5.13 Vegetation is limited but includes:

i Street trees along sections of Cheetham Hill Road and around the Green Quarter

ii Incidental pockets of greenery within new developments

iii Larger green spaces slightly beyond the site including: **Angel Meadows** and **Cathedral Gardens.**

5.14 Green infrastructure is present but **discontinuous**, giving the area a distinctly urban character.

Confidential

Movement

5.15 The area is defined by a clear movement hierarchy:

i **Cheetham Hill Road (A665)** — major arterial route into the city

ii **Lord Street / Fernie Street** — local access streets

iii **Dantzic Street & Miller Street** — key connectors to NOMA and northern areas

iv **Walking routes** linking the Green Quarter to the city centre

v **Cycle routes** incorporated within Cheetham Hill Road and surrounding streets

5.16 The site sits at a visible and well-trafficked **gateway** into the city.

Heritage

5.17 The contribution of heritage assets to townscape character varies across the study area. In locations such as NOMA and Cathedral Gardens, heritage assets contribute to townscape value through landmark presence, civic scale and historic associations. In contrast, within the immediate site context, heritage influence is more limited and filtered by intervening modern development.

5.18 Heritage assets within the study area include:

i Manchester Cathedral (Grade I) — visible in Views F & N

ii Manchester Jewish Museum (Grade II)* — View B

iii Manchester Oratory (non-designated but culturally significant) — View D

iv Heritage buildings within NOMA — Views J–L

v Historic street patterns around Dantzic Street and Angel Meadows

5.19 The site is **not within a Conservation Area** but does sit within the wider setting of several significant heritage buildings.

Existing townscape character

5.20 Townscape assessment encompasses appraisal of physical, aesthetic and intangible attributes including sense of place, rarity or representativeness, and unspoilt appearance. The combination of townscape elements and their arrangement give the different areas a unique sense of place, or ‘character’. These aspects, together with scale and character of surrounding landscapes, patterns and scale of landform, land cover and built development, need to be taken into account when assessing townscape effect.

5.21 The site is located within **National Character Area (NCA) 55: Manchester Pennine Fringe**, as defined by Natural England.

Confidential

5.22 NCA 55 comprises the urban and peri-urban areas of Greater Manchester and forms a transitional zone between the lowland plains to the west and the Pennine uplands to the east. Within Manchester, the character of this NCA is **strongly urban**, with built form and infrastructure dominating over landscape features.

5.23 Key characteristics relevant to the site include:

i A **dense, post-industrial urban townscape**, shaped by historic industrial development and ongoing regeneration

ii A **highly varied built environment**, including historic mills, warehouses, civic landmarks, modern commercial buildings and contemporary residential towers

iii The presence of **prominent vertical elements** within the skyline, including church towers, viaducts and an increasing number of modern tall buildings

iv Limited but locally important areas of **urban green space**, typically associated with river corridors and city-centre parks

v A townscape that is **dynamic and evolving**, with significant areas identified for intensification, redevelopment and regeneration

5.24 Within the city centre and inner urban areas, including the Green Quarter and Cheetham Hill Road corridor, the Manchester Pennine Fringe demonstrates a **high capacity to accommodate change**, provided development is well designed and responds positively to its urban context.

5.25 In this respect, the baseline character of NCA 55 establishes an appropriate strategic context for **high-density residential development and tall buildings**, subject to detailed townscape and visual assessment.

5.26 As part of the BHTVIA, an additional local level townscape character assessment has been undertaken based on fieldwork. This establishes the following localised character areas within 1km of the Site.

5.27 Susceptibility is increased by the presence of heritage assets and civic landmarks; however, the existing presence of tall buildings and ongoing regeneration indicates that change can be accommodated without undermining the legibility or appreciation of heritage significance.

5.28 The townscape quality of the townscape character areas is assessed in terms of their condition, value and sensitivity and is summarised as follows:

TCA1 – Cheetham Hill Road

5.29 A major arterial route composed of varied building forms including retail sheds, commercial units, small parades, and transitional mixed uses. Buildings typically 2–5 storeys but with taller elements visible in background (Green Quarter, NOMA). Streetscape is wide, traffic-dominated, with limited planting.

5.30 Key characteristics:

Confidential

i Strong linear corridor

ii High movement and visibility

iii Transitional quality with ongoing redevelopment

iv Interrupted frontage rhythm

v Long views toward the city centre

5.31 **Susceptibility: Low -** corridor can absorb vertical elements due to width, mixed character and existing visibility of tall buildings.

5.32 **Value: Moderate** Limited heritage or landscape value; townscape is functional rather than scenic.

5.33 **Sensitivity: Medium–Low**

TCA2 – Lord Street / Fernie Street Urban Block

5.34 Immediate context of the site. Characterised by small commercial buildings, surface parking remnants, and the backs/edges of larger Green Quarter blocks. Urban grain is fine but fragmented. Streets are narrow with limited greenery.

5.35 Key characteristics:

i Hard urban edge

ii Fragmented townscape

iii Visible gaps in built form

iv Immediate relationship to site

v Strong sense of transition / regeneration potential

5.36 **Susceptibility: Low -** immediate townscape, existing buildings of height within view.

5.37 **Value: Low–Moderate** - townscape quality is mixed and offers limited architecturally valuable fabric.

5.38 **Sensitivity: Medium–Low**

TCA3 – Green Quarter High-Rise Cluster

5.39 A collection of mid- and high-rise residential towers (typically 10–25 storeys). Well-designed public realm, tree planting and modern architecture. Established identity as a tall-building cluster forming part of the northern city skyline.

5.40 Key characteristics:

Confidential

i High-density residential

ii Contemporary tall buildings

iii Consistent materials and building language

iv Prominent skyline when viewed from Angel Meadows, NOMA and Victoria North

v Strong verticality

5.41 **Susceptibility: Low–Medium** Already a tall-building context; additional height nearby is less likely to be townscape disruptive.

5.42 **Value: Moderate** High-quality development but contemporary in age and not heritage-sensitive.

5.43 **Sensitivity: Low–Medium**

TCA4 – NOMA / Victoria North Transition Area

5.44 A mix of historic commercial blocks, civic institutions, new-build offices and emerging tall residential towers. Includes landmark buildings such as One Angel Square and parts of the Co-operative Estate. Represents a transitional area between the historic city core and new residential-led regeneration.

5.45 Key characteristics:

i Strong architectural heritage themes

ii New tall buildings emerging within Victoria North

iii Urban grain varies but more regular than Cheetham Hill Road

iv High civic value

v Strategic views toward the cathedral and city skyline

5.46 **Susceptibility: Low -** heritage sensitivity increases susceptibility, but tall buildings are already present.

5.47 **Value: Moderate** Presence of heritage structures and public parks.

5.48 **Sensitivity: Medium–Low**

Table 5.1: Summary of Townscape Character Areas

Character Area	Susceptibility	Value	Sensitivity
1. TCA1 – Cheetham Hill Road Corridor	Low	Moderate	Medium-Low
2. TCA2 – Lord Street / Fernie Street	Low	Moderate	Medium-Low

Confidential

3. TCA3 – Green Quarter Cluster	Low-Medium	Moderate	Low-Medium
4. TCA4 – NOMA / Victoria North	Low	Moderate	Medium-Low

5.49 Table 5.1 shows that Townscape Character Areas within the study area vary in both susceptibility and value, reflecting differences in land use, built form, townscape quality and the presence or absence of sensitive receptors.

5.50 Areas characterised by fragmented urban form, limited heritage value and an existing presence of large-scale development (notably **TCA1 – Cheetham Hill Road Corridor**, **TCA3 – Green Quarter High-Rise Cluster and TCA4 NOMA/Victoria North**) exhibit **low susceptibility** to change. In these areas, the existing scale, movement levels, and evolving character reduce sensitivity to additional vertical development, and townscape value is derived primarily from function rather than aesthetic or heritage quality.

5.51 Conversely, areas with greater coherence, stronger sense of place or proximity to designated and non-designated heritage assets (notably **TCA3 – Green Quarter Cluster)** display **marginally higher susceptibility**, particularly where new development would introduce further enclosure.

5.52 Overall, the assessment demonstrates that susceptibility is influenced primarily by the ability of each character area to physically and perceptually accommodate change, while value is influenced by townscape quality, function, heritage associations and strategic importance within the city. This approach accords with GLVIA3, which requires susceptibility and value to be considered separately before determining sensitivity.

5.53 In accordance with the methodology, the resulting Townscape Sensitivity ranges from Medium–Low to Medium–High across the study area. The highest sensitivities are confined to areas of immediate proximity to the site and those with recognised heritage or civic importance, while areas characterised by existing tall buildings and large-scale urban form demonstrate lower sensitivity and greater capacity to accommodate change.

Cumulative Development Context

5.54 A review of cumulative development has been undertaken to inform the townscape baseline and to understand whether the Proposed Development would interact cumulatively with other schemes within the study area. The cumulative schemes considered are set out in the accompanying schedule and include a significant number of **built, under construction and planning-approved developments**, many of which comprise **mid- and high-rise residential buildings** of comparable or greater scale to the Proposed Development .

5.55 The cumulative schemes are distributed throughout the wider study area, including sites along Cheetham Hill Road, and across the NOMA and Victoria North regeneration areas. Several of these developments include towers of **25 storeys and above**, with some exceeding 40 storeys, and are either completed, under construction or consented.

Confidential

Cumulative Assessment

5.56 On this basis, it is considered that the Proposed Development would **not give rise to additional or incremental cumulative townscape effects** beyond those already established by existing and consented development. The cumulative schemes do not interact in a way that would result in new or amplified townscape effects attributable to the Proposed Development.

5.57 Accordingly, and in line with GLVIA3 guidance, **cumulative townscape effects are not considered further within this assessment**, as the Proposed Development would be experienced as part of an established and evolving urban baseline shaped by the presence of multiple large-scale developments of similar character and scale.

Confidential

6 Assessment of Townscape Effects

6.1 This section of the report assesses the predicted effects of the Proposed Development on the existing townscape character of the study area. Effects are considered in the short, medium and long term, having regard to the scale of the proposed Ground + 23 storey development and the susceptibility and value of the identified Townscape Character Areas (TCAs).

6.2 The Townscape Character Areas that may be affected by the Proposed Development have been identified within the baseline assessment, together with their respective susceptibility, value and resulting sensitivity (Section 5). The Zone of Theoretical Visibility (ZTV) further informs the extent to which the development may influence townscape character beyond the immediate site context.

6.3 The assessment considers the effects arising from the completed development, as well as temporary effects associated with construction activity and operational lighting.

Mitigation

6.4 The reduction or avoidance of adverse townscape effects forms an integral part of the development proposals. In accordance with GLVIA3, mitigation is primarily delivered through **embedded design measures**, rather than reliance on post-completion screening, particularly given the scale and urban context of the proposals.

6.5 The mitigation strategy includes the following principles:

6.6 Design-led Mitigation

i A tower profile with strong vertical articulation to reduce perceived mass and skyline intrusion.

ii A clearly expressed base, middle and top to the building improves legibility and townscape coherence.

iii High-quality façade materials and detailing ensure visual robustness at both close and long distances.

iv Careful alignment with the existing Green Quarter cluster avoids the perception of an isolated or incongruous tall building.

6.7 Public Realm and Landscape Mitigation

i Public realm upgrades to Cheetham Hill Road, Lord Street and Fernie Street.

ii Introduction of street trees and soft landscape elements where feasible.

iii Removal of fragmented or poor-quality urban edges and replacement with a coherent, active frontage.

iv Improved pedestrian experience and sense of enclosure at ground level.

6.8 These measures are designed to **improve the baseline townscape condition**, particularly within the immediate site context (TCA2), and to reduce the magnitude of townscape change experienced by surrounding character areas.

Confidential

Effects of Construction

6.9 During the construction phase, the site will be subject to temporary activities that may give rise to short-term townscape effects. These activities may include:

i Temporary hoarding and site compounds

ii Movement of construction plant and vehicles

iii Material storage and crane operations

iv Temporary construction lighting

v Increased levels of activity and movement

6.10 Construction activity will be most perceptible within the immediate site context and along Cheetham Hill Road and Lord Street.

Mitigation of Construction Effects

6.11 A range of standard mitigation measures will be employed to minimise the potential townscape effects during construction. These measures are expected to include:

i The use of **well-designed hoarding**, potentially incorporating artwork or information boards.

ii Control of working hours in line with local authority requirements.

iii Careful siting of construction compounds to minimise visual intrusion.

iv Management of construction lighting to avoid unnecessary spill or glare.

v Phasing of construction activities to limit the duration of the most visually intrusive stages.

6.12 These measures will ensure that construction-related effects are appropriately controlled and proportionate within an urban context.

Predicted Effects During Construction

6.13 The effects of construction on townscape character will be **temporary and reversible**. While construction activity will result in a noticeable change to the immediate townscape, particularly within TCA2, these effects will be short term when compared to the operational lifespan of the completed development.

6.14 Beyond the immediate site surroundings, construction effects will largely be perceived as part of the wider pattern of ongoing development and regeneration within this part of Manchester. With mitigation in place, the overall townscape effects during construction are assessed as **temporary and Moderate Adverse**, reducing rapidly with distance from the site.

Confidential

Effects of Lighting

6.15 The Proposed Development will introduce additional sources of light associated with internal residential lighting and external building and public realm lighting. This represents a change from the current baseline, which includes a mixture of commercial, residential and highway lighting.

6.16 Given the site's urban location, night-time lighting forms an established component of the existing townscape. The development is therefore not introducing lighting into a dark or sensitive environment but rather contributing to an already illuminated city-edge context.

Mitigation of Lighting Effects

6.17 Potential effects of lighting will be mitigated through:

i Use of downward-directed and shielded luminaires to limit light spill.

ii Avoidance of excessive façade or feature lighting.

iii Use of energy-efficient lighting with appropriate colour temperature.

iv Integration of lighting within architectural and landscape elements rather than freestanding sources.

6.18 These measures will ensure that lighting contributes positively to safety and legibility without creating undue glare or visual dominance.

Predicted Effects of Lighting

6.19 With mitigation in place, the effects of lighting on townscape character are assessed as **Negligible** within the immediate site context and surrounding area. Lighting effects will read as part of the wider urban night-time environment and will not materially alter the character of surrounding Townscape Character Areas.

6.20 Overall, lighting effects are not considered significant in townscape terms and do not give rise to unacceptable residual impacts.

Townscape effects

6.21 The predicted Townscape Effect brought about by the Proposed Development on each Townscape Character Area are set out within the following tables:

Confidential

Table 6.1: Assessment of Townscape Effects – Character Area 1

Character Area 1: Cheetham Hill Road Corridor	
Proximity to Site	Medium
Townscape receptor	Linear arterial corridor characterised by mixed commercial and retail development, wide highway infrastructure, fragmented frontages and intermittent views of taller buildings; transitional urban townscape with limited heritage value.
Sensitivity	Medium
Magnitude of Change	Medium Partial alteration to the baseline character through the introduction of a new vertical element visible along the corridor. Moderate scale change within an already varied and evolving townscape. Influence upon the single character area in which the Site is located.
Significance of townscape effects	Moderate
Nature of Townscape Effects	Neutral
Description of mitigation	High-quality architectural treatment to the Cheetham Hill Road frontage; strong vertical articulation to reduce perceived mass; enhanced public realm and tree planting to improve streetscape quality and legibility.
Magnitude of change with mitigation in place	Low
Significance of townscape effects with mitigation measures in place (residual effect)	Minor - Moderate
Nature of Townscape Effects with mitigation measure in place	Beneficial

Table 6.2: Assessment of Townscape Effects – Character Area 2

Character Area 2: Lord Street / Fernie Urban Block	
Proximity to Site	Close
Townscape receptor	Immediate site context comprising fragmented low-rise commercial buildings, service areas and poor-quality urban edges; limited coherence but high susceptibility to change due to proximity.
Sensitivity	Medium
Magnitude of Change	Medium Partial alteration to the baseline character through the replacement of low value / low rise fragmented development with a Ground + 23 storey high quality building.
Significance of townscape Effects	Moderate
Nature of Townscape Effects	Neutral
Description of mitigation	Comprehensive redevelopment of site; high-quality façades to all elevations; improved street definition; public realm upgrades; introduction of planting and removal of poor-quality boundaries.
Magnitude of change with mitigation in place	Medium
Significance of townscape effects with mitigation measures in place (residual effect)	Minor-Moderate
Nature of Townscape Effects with mitigation measure in place	Beneficial

Confidential

Table 6.3: Assessment of Townscape Effects – Character Area 3

Character Area 3: Green Quarter Cluster	
Proximity to Site	Medium
Townscape receptor	Contemporary high-density residential area characterised by mid- and high-rise buildings, modern materials, established tall building cluster and upgraded public realm.
Sensitivity	Medium
Magnitude of Change	Medium Partial alteration to the baseline character through the addition of a new tall building within an existing cluster. Small to moderate scale change relative to existing built form. Influence upon the wider high-rise character area rather than a single focal point.
Significance of townscape Effects	Moderate
Nature of Townscape Effects	Neutral
Description of mitigation	Slender tower proportions; alignment with existing building heights; consistent material palette; vertical façade rhythm to reinforce cluster coherence.
Magnitude of change with mitigation in place	Low
Significance of townscape effects with mitigation measures in place (residual effect)	Minor-Moderate
Nature of Townscape Effects with mitigation measure in place	Beneficial

Table 6.4: Assessment of Townscape Effects – Character Area 4

Character Area 4: NOMA / Victoria North Transition Zone	
Proximity to Site	Medium–Long
Townscape receptor	Mixed historic and contemporary townscape including civic landmarks, heritage assets, modern commercial buildings and emerging tall residential development; strategic city-centre setting.
Sensitivity	Medium
Magnitude of Change	Low Partial alteration to the baseline skyline character, with the Proposed Development forming a secondary element behind established landmarks. Moderate scale change within a complex urban skyline. Influence upon several townscape character areas through skyline views.
Significance of townscape Effects	Minor-Moderate
Nature of Townscape Effects	Neutral
Description of mitigation	Careful height calibration; slender massing; restrained façade treatment; avoidance of skyline dominance; contribution to coherent skyline composition.
Magnitude of change with mitigation in place	Low

Confidential

Significance of townscape effects with mitigation measures in place (residual effect)	Minor-Moderate
Nature of Townscape Effects with mitigation measure in place	Beneficial

Confidential

6.22 The Proposed Development will introduce townscape effects to **four Townscape Character Areas (TCAs)**, identified and evaluated within the baseline assessment.

6.23 The assessment identifies that the predicted Townscape Effects across all four character areas are **Neutral prior to mitigation**, reflecting a balance between the scale of change introduced and the medium sensitivity of the receiving townscape. With mitigation in place, the predicted Townscape Effects across all TCAs become **Minor–Moderate Beneficial**, reflecting qualitative improvements to townscape structure, coherence and public realm.

6.24 Within the **immediate site context (TCA2 – Lord Street / Fernie Street Urban Block)**, the Proposed Development represents a **transformational change** to the baseline townscape through the replacement of fragmented, low-quality built form with a coherent, high-quality development. While the magnitude of change is assessed as **Medium**, the resulting effect is **Moderate Neutral**, given the poor baseline condition. With mitigation embedded within the design, including high-quality architecture and public realm improvements, the residual effect is assessed as **Minor–Moderate Beneficial**.

6.25 The most notable townscape change is experienced within **TCA2**, reflecting its proximity to the Site. However, this change does not result in harm to townscape character and instead delivers a clear improvement in townscape quality, legibility and function, consistent with regeneration objectives for the area.

6.26 Within **TCA1 – Cheetham Hill Road Corridor** and **TCA3 – Green Quarter Cluster**, the Proposed Development results in **Moderate Neutral Townscape Effects**, arising from a **Medium magnitude of change** acting on **Medium sensitivity** receptors. These effects reflect the introduction of a new development within an established urban context characterised by large-scale buildings and ongoing change. With mitigation in place, residual effects in both character areas are assessed as **Minor–Moderate Beneficial**, reflecting improved townscape coherence and integration with the surrounding urban fabric.

6.27 Within **TCA4 – NOMA / Victoria North**, the Proposed Development results in a **Minor–Moderate Neutral Townscape Effect**, reflecting a **Low magnitude of change** acting on a **Medium sensitivity** receptor. The development is perceived as part of the wider evolving townscape and skyline. With mitigation in place, the residual Townscape Effect is assessed as **Minor–Moderate Beneficial**.

6.28 Mitigation measures are embedded within the design of the Proposed Development and include slender massing, articulated façades, high-quality materials, comprehensive public realm enhancements, tree planting and carefully designed lighting. These measures are effective in reducing the magnitude of change and enhancing townscape quality across all character areas.

6.29 Townscape effects during construction will be **temporary and short term**, and will not exceed the long-term operational effects of the completed development. Potential night-time effects associated with lighting are limited by the urban context and controlled lighting design and do not alter the overall neutral to beneficial townscape outcome.

Confidential

Table 6.5 summarises the predicted Townscape Effects to each Townscape Character Area:

TCA	Sensitivity	Magnitude	Significance	Residual Significance
TCA1 – Cheetham Hill Road Corridor	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA2 – Lord St / Fernie St	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA3 – Green Quarter Cluster	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA4 – NOMA / Victoria North	Medium	Low	Minor-Moderate Neutral	Minor-Moderate Beneficial

Confidential

7 Assessment of visual effects

7.1 A comprehensive visual assessment has been undertaken to determine the degree of visual effect the Proposed Development would have upon the surrounding landscape. Viewpoints were initially identified through the baseline assessment, and in the field each viewpoint was visited and recorded. Not all views identified in the field have been assessed in this TVA. This is due to the following factors:

i The Site is not visible within the view due to intervening vegetation and landform;

ii The viewpoint is inaccessible due to land ownership; and

iii The demonstrable effect from the viewpoint is represented by other viewpoints identified within the vicinity.

7.2 In respect of point *i* above, the Site and site proposals may not be visible in all assessed viewpoints. However, the modelling exercise is undertaken in these instances to determine visual effects from this representative location. A total of 14 representative views within the established ZTV have been selected for the analysis of visual effects.

7.3 In order to establish the ZTV i.e. the area within which the development is theoretically visible, the Site is assessed in relation to survey maps. This provisional visual assessment is then refined in the field, at which stage visual receptors are also identified. These include highways, pylons, and public footpaths, as well as residential properties, work places and public open spaces.

7.4 The ZTV covers an area of up to 1km away from the Site. The visual baseline within the study area is characterised by a **dense urban environment**, comprising a varied mix of building types, heights and architectural styles. Views are frequently filtered or framed by existing buildings, infrastructure and street geometry, with longer-distance views typically incorporating elements of the Manchester city skyline.

7.5 The baseline visual environment already includes:

i Numerous **mid- and high-rise buildings**, particularly within the Green Quarter and Victoria North areas

ii Prominent vertical elements such as residential towers, civic buildings and historic landmarks

iii A strong presence of **movement and activity**, particularly along Cheetham Hill Road and key routes into the city centre

iv A well-established **urban night-time environment**, with widespread street lighting, building illumination and internal lighting from residential and commercial uses

7.6 Visual receptors within the study area include residents, pedestrians, motorists, cyclists and visitors to heritage assets and public open spaces.

7.7 For all views the form and massing of the development has been illustrated. Wireframe modelling is illustrated in views A, C and G-H, whilst rendered modelling in included in views B and D-F.

Confidential

7.8 Key views have been selected at strategic locations around the Site. It is considered 'best practice' to categorise views into 3 ranges depending on the proximity of the viewpoint. The categorisation is based on the scale and nature of the townscape, and is as follows:

Close: less than 250m

Medium: between 250m – 1km

Long: More than 1km

Sensitivity of visual receptors

7.9 The views have been selected in order to be representative of a range of locations and distances from which the Site is visible, and for the type of occupancies (e.g. residential properties), activities (e.g. footpath users) and the expectations of potential receptors (e.g. visitors to the locality). The sensitivity of the receptor has been recorded against each view considered based upon judgements of their susceptibility to the type of intervention proposed and the value attached to the view.

Mitigation

7.10 A detailed description of proposed mitigation measures is provided at section 6 of this document.

Visual effects

7.11 The predicted effects for each of the representative views are assessed in **Tables 7.1 to 7.14**. These effects are then summarised in **Table 7.15**.

Confidential

Table 7.1: Assessment of Visual Effects – Illustrative view A

Viewpoint A	Manchester Fort
Figure Reference	7.1
Distance	Medium
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Highway users, shoppers, pedestrians
Description of existing view	Broad urban view across large-format retail units and surface car parking, with distant elements of the Manchester skyline visible beyond the foreground-built form.
Visual Susceptibility	Medium
Value attached to view	Low
Visual Sensitivity	Medium–Low
Proposed view	There will be a minor alteration to the view. The Proposed Development will appear as a small additional vertical element within the distant skyline.
Magnitude of change	Low
Significance of visual effects	Minor
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Negligible–Low
Significance of Visual Effects with mitigation in place (residual effect)	Minor
Nature of Visual Effects with mitigation measure in place	Beneficial

Table 7.2: Assessment of Visual Effects – Illustrative view B

Viewpoint B	Manchester Jewish Museum
Figure Reference	7.2
Distance	Medium
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Visitors, heritage users
Description of existing view	View along Cheetham Hill Road with the historic museum building in the foreground and a layered urban skyline beyond.
Visual Susceptibility	High
Value attached to view	High
Visual Sensitivity	High
Proposed view	There will be a partial alteration to the view, with the proposed building visible in the background of the Manchester Jewish Museum, albeit the development does not interrupt the principal view of the Museum nor compete with its architectural primacy. The development reads as a background skyline element beyond the foreground streetscape.
Magnitude of change	Medium–Low
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low
Predicted Visual Effects with mitigation in place (residual effect)	Minor to Moderate

Confidential

Nature of Visual Effects with mitigation measure in place	Beneficial

Table 7.3: Assessment of Visual Effects – Illustrative view C

Viewpoint C	**Lord Street / Strangeways**
Figure Reference	7.3
Distance	Close
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Pedestrians, workers
Description of existing view	Fragmented low-rise commercial townscape with limited enclosure and poor-quality urban edges.
Visual Susceptibility	Medium
Value attached to view	Low–Moderate
Visual Sensitivity	Medium
Proposed view	There will be a total alteration to the view, with the proposed building becoming the dominant visual element at close range.
Magnitude of change	High
Predicted visual effects	Major
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Medium–High
Predicted Visual Effects with mitigation in place (residual effect)	Major Moderate
Nature of Visual Effects with mitigation measure in place	Beneficial

Table 7.4: Assessment of Visual Effects – Illustrative view D

Viewpoint D	**Manchester Oratory**
Figure Reference	7.4
Distance	Medium
Direction	South-East
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Visitors, heritage users
Description of existing view	Heritage building within an urban setting, with views towards the northern city skyline.
Visual Susceptibility	Medium–High
Value attached to view	High
Visual Sensitivity	Medium–High
Proposed view	There will be a partial alteration to the view, with the proposed building visible in the background of the Manchester Oratory, albeit the development does not interrupt the principal view of the Oratory nor compete with its architectural primacy. There will be a partial alteration to the view, with the development appearing as a background skyline component.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium

Confidential

Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.5: Assessment of Visual Effects – Illustrative view E

Viewpoint E	**Cheetham Hill Road / Park Street**
Figure Reference	7.5
Distance	Medium
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Highway users, pedestrians
Description of existing view	Linear arterial route with mixed commercial frontage and intermittent skyline views.
Visual Susceptibility	Medium
Value attached to view	Moderate
Visual Sensitivity	Medium
Proposed view	There will be a minor to partial alteration to the view, with the building acting as a vertical marker along the corridor.
Magnitude of change	Medium–Low
Predicted visual effects	Minor–Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low
Predicted Visual Effects with mitigation in place (residual effect)	Minor
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.6: Assessment of Visual Effects – Illustrative view F

Viewpoint F	Manchester Cathedral
Figure Reference	7.6
Distance	Medium
Direction	North
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Visitors, heritage users
Description of existing view	Highly valued heritage setting with layered city skyline beyond.
Visual Susceptibility	High
Value attached to view	High
Visual Sensitivity	High
Proposed view	There will be a partial alteration to the view, with the development visible as a secondary skyline element.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Slight to Moderate

Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.7: Assessment of Visual Effects – Illustrative view G

Viewpoint G	**Angel Gardens**
Figure Reference	7.7
Distance	Medium
Direction	North-West
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Residents, pedestrians
Description of existing view	Contemporary residential environment with multiple tall buildings.
Visual Susceptibility	Medium
Value attached to view	Moderate
Visual Sensitivity	Medium
Proposed view	There will be a partial alteration to the view, with the development read as part of the wider cluster.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.8: Assessment of Visual Effects – Illustrative view H

Viewpoint H	**Roger Street**
Figure Reference	7.8
Distance	Medium
Direction	North
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Pedestrians
Description of existing view	Urban street scene with varied building heights and glimpses of taller structures.
Visual Susceptibility	Medium
Value attached to view	Moderate
Visual Sensitivity	Medium
Proposed view	There will be a partial alteration to the view through the introduction of a new vertical element.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Confidential

Table 7.9: Assessment of Visual Effects – Illustrative view I

Viewpoint I	Blackfriars Street
Figure Reference	7.10
Distance	Medium
Direction	North
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Pedestrians
Description of existing view	Mixed historic and contemporary townscape with emerging tall buildings.
Visual Susceptibility	Medium–High
Value attached to view	High
Visual Sensitivity	Medium–High
Proposed view	There will be a partial alteration to the skyline composition.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.10: Assessment of Visual Effects – Illustrative view J

Viewpoint J	Green Quarter
Figure Reference	7.9
Distance	Close–Medium
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Residents
Description of existing view	High-density residential environment with established tall buildings.
Visual Susceptibility	Low–Medium
Value attached to view	Moderate
Visual Sensitivity	Low–Medium
Proposed view	There will be a minor to partial alteration to the view, with partial screening by existing buildings.
Magnitude of change	Low–Medium
Predicted visual effects	Minor–Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low
Predicted Visual Effects with mitigation in place (residual effect)	Slight
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.11: Assessment of Visual Effects – Illustrative view K

Viewpoint K	Greengate West
Figure Reference	7.11
Distance	Medium–Long
Direction	North

Confidential

Season and Condition	Summer
Condition and Visibility	Clear, moderate visibility
Type of Receptor	Pedestrians
Description of existing view	Dense city skyline with multiple tall buildings.
Visual Susceptibility	Medium
Value attached to view	Moderate
Visual Sensitivity	Medium
Proposed view	There will be a minor alteration to the skyline.
Magnitude of change	Low–Medium
Predicted visual effects	Minor–Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low
Predicted Visual Effects with mitigation in place (residual effect)	Minor
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.12: Assessment of Visual Effects – Illustrative view L

Viewpoint L	**Angle Meadows**
Figure Reference	7.12
Distance	Medium
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Park users
Description of existing view	Open green space with skyline views.
Visual Susceptibility	Medium–High
Value attached to view	High
Visual Sensitivity	Medium–High
Proposed view	There will be a partial alteration to the skyline backdrop.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Table 7.13: Assessment of Visual Effects – Illustrative view M

Viewpoint M	**Collyhurst Road**
Figure Reference	7.13
Distance	Long
Direction	South
Season and Condition	Summer
Condition and Visibility	Clear, moderate visibility
Type of Receptor	Highway users
Description of existing view	Distant city skyline.
Visual Susceptibility	Medium
Value attached to view	Low
Visual Sensitivity	Medium–Low
Proposed view	There will be a very minor alteration to the skyline.
Magnitude of change	Low
Predicted visual effects	Minor
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Negligible

Predicted Visual Effects with mitigation in place (residual effect)	Negligible
Nature of Visual Effects with mitigation measure in place	Negligible

Table 7.14: Assessment of Visual Effects – Illustrative view N

Viewpoint N	**Cathedral Gardens**
Figure Reference	7.14
Distance	Medium
Direction	North
Season and Condition	Summer
Condition and Visibility	Clear, good visibility
Type of Receptor	Visitors, heritage users
Description of existing view	High-value civic open space with skyline views.
Visual Susceptibility	High
Value attached to view	High
Visual Sensitivity	High
Proposed view	There will be a partial alteration to the view, with the proposed building visible in the background of Manchester Cathedral, albeit the development does not interrupt the principal views of the Cathedral nor compete with its architectural primacy. The development reads as a background skyline element beyond the foreground streetscape. There will be a partial alteration to the skyline backdrop.
Magnitude of change	Medium
Predicted visual effects	Moderate
Nature of Visual Effects	Neutral
Magnitude of Change with mitigation in place	Low–Medium
Predicted Visual Effects with mitigation in place (residual effect)	Minor Moderate
Nature of Visual Effects with mitigation measure in place	Neutral

Confidential

7.12 The Site is visible from a range of representative viewpoints identified in the previous section. These views represent a range of distances, locations, occupancies and activities within the surrounding urban environment.

7.13 Due to the intervening built form and urban context, views beyond approximately **1 km** have not been assessed. At greater distances, the Proposed Development would be perceived within the established townscape and skyline of central Manchester, where tall buildings form a defining characteristic.

7.14 The assessment demonstrates that the magnitude and significance of visual effects vary according to **distance from the Site**, **receptor sensitivity**, and the extent to which the Proposed Development is perceived within the overall composition of the view.

7.15 The **greatest visual effects** occur in **close-range views**, where the Proposed Development introduces a notable change to the existing view due to proximity and scale. In these locations, visual effects are assessed as **Major or Moderate prior to mitigation**, reducing to **Major–Moderate or Minor–Moderate** with mitigation in place.

7.16 In **medium-range views**, the Proposed Development is generally perceived as part of the wider urban skyline and existing tall building context. Visual effects in these views are typically assessed as **Moderate**, reducing to **Minor–Moderate** with mitigation.

7.17 In **longer-range views**, the Proposed Development forms a limited component of the wider city skyline. Visual effects in these views are assessed as **Minor or Negligible**, reflecting reduced prominence and the influence of intervening built form.

7.18 Overall, the majority of residual visual effects are assessed as **Neutral in nature**, reflecting the introduction of a new tall building within an urban context already characterised by buildings of scale and ongoing change. In a small number of views, residual effects are assessed as **Beneficial**, reflecting improvements to visual coherence and the replacement of poor-quality or fragmented baseline conditions. These effects are moderated by the established urban context and the design-led mitigation incorporated within the Proposed Development.

Confidential

7.19 **Table 7.15** Summarises the predicted Visual Effects to each view considered:

Table 7.15: Visual Effects Summary

View	Receptor Sensitivity	Magnitude of Change	Predicted Visual Effect	Residual Visual Effect (with mitigation)	Nature of Residual Effect
View A – Manchester Fort	Medium–Low	Low	Minor	Minor	Neutral
View B – Manchester Jewish Museum	High	Medium–Low	Moderate	Minor–Moderate	Neutral
View C – Lord Street / Strangeways	Medium	High	Major	Major-Moderate	Neutral
View D – Manchester Oratory	Medium–High	Medium	Moderate	Minor–Moderate	Beneficial
View E – Cheetham Hill Road / Park Street	Medium	Medium–Low	Minor–Moderate	Minor	Beneficial
View F – Manchester Cathedral	High	Medium	Moderate	Minor–Moderate	Neutral
View G – Angel Gardens	Medium	Medium	Moderate	Minor–Moderate	Neutral
View H – Roger Street	Medium	Medium	Moderate	Minor–Moderate	Neutral
View I – Green Quarter	Low–Medium	Low–Medium	Minor–Moderate	Minor	Neutral
View J – Blackfriars Street	Medium–High	Medium	Moderate	Minor–Moderate	Neutral
View K – Greengate West	Medium	Low–Medium	Minor–Moderate	Minor	Neutral
View L – Angel Meadows	Medium–High	Medium	Moderate	Minor–Moderate	Neutral
View M – Collyhurst Road	Medium–Low	Low	Minor	Negligible	Neutral
View N – Cathedral Gardens	High	Medium	Moderate	Minor–Moderate	Neutral

Confidential

8 Conclusions

Site proposals

8.2 The Proposed Development comprises a **Ground + 23 storey residential building** at the junction of Lord Street and Cheetham Hill Road, Manchester, supported by public realm and landscape improvements. The site occupies a highly accessible, city-centre edge location adjacent to the Green Quarter, within an area characterised by ongoing regeneration and an established presence of mid- and high-rise development.

8.3 The proposals represent the comprehensive redevelopment of a previously fragmented and low-quality townscape, introducing a coherent urban form, improved enclosure, and enhanced streetscape definition. The scale and height of the building reflect its strategic location on a key route into the city centre and its relationship with existing and emerging tall building clusters to the south and west.

Townscape effects

8.4 The assessment identifies that townscape effects vary across the **four Townscape Character Areas (TCAs)** identified within the study area, reflecting differences in baseline condition, scale and proximity to the Site.

8.5 The most notable townscape change occurs within the **immediate site context (TCA2 – Lord Street / Fernie Street Urban Block)**, where the introduction of a tall building results in a **transformational change** to the baseline character. The townscape effect is assessed as **Moderate Neutral**, reflecting a balance between the scale of change and the relatively low quality of the existing townscape. With mitigation embedded within the design, including high-quality architecture and comprehensive public realm enhancement, the residual townscape effect is assessed as **Minor–Moderate Beneficial**, reflecting an overall improvement in townscape quality, coherence and legibility.

8.6 Within **TCA1 – Cheetham Hill Road Corridor** and **TCA3 – Green Quarter High-Rise Cluster**, townscape effects are assessed as **Moderate Neutral**, arising from a **Medium magnitude of change** acting on **Medium sensitivity** townscape receptors. These areas demonstrate a clear capacity to accommodate change due to their urban character, scale and the presence of existing tall buildings. With mitigation in place, residual townscape effects within both character areas are assessed as **Minor–Moderate Beneficial**, reflecting improved townscape integration and continuity.

8.7 Within **TCA4 – NOMA / Victoria North Transition Zone**, the townscape effect is assessed as **Minor–Moderate Neutral**, reflecting a **Low magnitude of change** within a complex and evolving urban townscape. With mitigation in place, the residual townscape effect is assessed as **Minor–Moderate Beneficial**, with the development contributing positively to the evolving skyline without harm to townscape character or the setting of nearby heritage assets.

Confidential

Visual effects

8.8 The visual effects assessment has considered **14 representative viewpoints**, covering a range of distances, receptor types and visual contexts within the surrounding urban environment.

8.9 The assessment demonstrates that:

i **Close-range views** experience the greatest magnitude of change due to proximity and scale, with visual effects assessed as **Major or Moderate prior to mitigation**, reducing to **Major–Moderate or Minor–Moderate** with mitigation in place.

ii **Medium-range views** generally experience **Moderate or Minor–Moderate** visual effects, with the Proposed Development perceived as part of the wider urban skyline and established tall building context.

iii **Longer-range views** experience **Minor or Negligible** visual effects, with the Proposed Development forming a limited component of the broader cityscape.

8.10 With mitigation in place, the majority of **residual visual effects are Neutral in nature**, reflecting the introduction of a new tall building within an urban context already characterised by buildings of scale and ongoing change. In a small number of views, residual visual effects are assessed as **Beneficial**, reflecting improvements to visual coherence and the replacement of poor-quality or fragmented baseline conditions. Residual effects diminish progressively with distance from the Site, and no receptors experience unacceptable or unmitigable visual effects.

Planning policy & townscape-related designations

8.11 The site is not located within a Conservation Area or other statutory landscape designation. However, it lies within the setting of several designated and non-designated heritage assets, including Manchester Cathedral and the Manchester Jewish Museum.

8.12 The assessment demonstrates that the Proposed Development does not result in unacceptable harm to the setting of these assets and that any visual effects are appropriately managed through height calibration, massing and design quality.

8.13 In policy terms, the proposals align with national and local planning objectives that support high-density development in accessible urban locations, provided that townscape and townscape effects are appropriately assessed and mitigated. The development responds positively to local townscape character, contributes to regeneration objectives and complies with policy expectations relating to tall buildings, design quality and placemaking.

Heritage

8.14 The assessment demonstrates that the Proposed Development preserves the ability to understand and appreciate the significance of nearby heritage assets, and does not result in unacceptable harm to their settings, consistent with the requirements of NPPF Section 16.

Confidential

8.15 Where the development is visible in the setting of heritage assets, this occurs within a layered urban context already characterised by tall buildings and change. The proposal does not compete with, dominate or erode the significance of heritage assets, and is read as part of the evolving city-centre edge townscape.

Summary conclusion

8.16 This Built Heritage and Townscape effect Assessment concludes that the Proposed Development will result in a range of townscape and visual effects that are **appropriate and acceptable** within the context of a dynamic and evolving city-centre edge location.

8.17 While the development introduces significant change within the immediate site context, this change is anticipated, design-led and accompanied by clear improvements to townscape quality. Beyond the immediate surroundings, effects reduce with distance and are experienced within an environment already characterised by tall buildings and skyline change.

8.18 Overall, the Proposed Development is considered to be **acceptable in built heritage and townscape and visual terms**, with residual effects that are proportionate to the scale of development and consistent with relevant planning policy and guidance.

Table 8.1: Townscape Effects Summary

TCA	Sensitivity	Magnitude	Significance	Residual Significance
TCA1 – Cheetham Hill Road Corridor	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA2 – Lord St / Fernie St	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA3 – Green Quarter Cluster	Medium	Medium	Moderate Neutral	Minor-Moderate Beneficial
TCA4 – NOMA / Victoria North	Medium	Low	Minor-Moderate Neutral	Minor-Moderate Beneficial

Table 8.2: Visual Effects Summary

View	Receptor Sensitivity	Magnitude of Change	Predicted Visual Effect	Residual Visual Effect (with mitigation)	Nature of Residual Effect
View A – Manchester Fort	Medium–Low	Low	Minor	Minor	Neutral
View B – Manchester Jewish Museum	High	Medium–Low	Moderate	Minor–Moderate	Neutral
View C – Lord Street / Strangeways	Medium	High	Major	Major-Moderate	Neutral
View D – Manchester Oratory	Medium–High	Medium	Moderate	Minor–Moderate	Beneficial
View E – Cheetham Hill Road / Park Street	Medium	Medium–Low	Minor–Moderate	Minor	Beneficial
View F – Manchester Cathedral	High	Medium	Moderate	Minor–Moderate	Neutral
View G – Angel Gardens	Medium	Medium	Moderate	Minor–Moderate	Neutral
View H – Roger Street	Medium	Medium	Moderate	Minor–Moderate	Neutral

Confidential

View I – Green Quarter	Low–Medium	Low–Medium	Minor–Moderate	Minor	Neutral
View J – Blackfriars Street	Medium–High	Medium	Moderate	Minor–Moderate	Neutral
View K – Greengate West	Medium	Low–Medium	Minor–Moderate	Minor	Neutral
View L – Angel Meadows	Medium–High	Medium	Moderate	Minor–Moderate	Neutral
View M – Collyhurst Road	Medium–Low	Low	Minor	Negligible	Neutral
View N – Cathedral Gardens	High	Medium	Moderate	Minor–Moderate	Neutral

Confidential

Appendix B

TVA Assessment Methodology

Introduction

1. This Appendix sets out the methodology adopted within this Townscape and Visual Assessment (TVA) to assess the townscape and visual effects of the proposed intervention. The methodology is informed by guidance contained within;

    i **Guidelines for Landscape and Townscape effect Assessment** (The Landscape Institute and Institute of Environmental Assessment, 3rd Edition, 2013), often referred to as 'GLVIA 3'. Note: Terminology within GLVIA 3 (e.g. susceptibility) that is referred to within this methodology is recognised as being interchangeable between 'landscape' and 'townscape' assessment.

    ii **Townscape Character Assessment Technical Information Note 05/2017** - Revised April 2018 (The Landscape Institute).

2. As defined within GLVIA 3 'Townscape' refers to areas where the built environment is dominant and includes buildings, the relationship between them, different types of urban spaces and relationship between buildings and space. Townscape also reflects the relationship between people and place.

3. Townscape and visual matters are separate, although closely related and interlinked issues, and are dealt with as such throughout the TVA. The methodologies for assessing both are outlined separately below.

Baseline Study

4. The initial step of the TVA is to review the existing townscape and visual resource in the vicinity of the proposed intervention, known as the 'baseline' townscape and visual conditions. This is a process of gathering information, as part of a desk study and subsequent field survey work, to understand features and characteristics of the townscape, the way it is experienced, it's quality and value or importance of the visual resources in the vicinity of the proposed intervention. The data collected forms the basis from which the townscape and visual effects of the intervention are identified and assessed.

5. The baseline study records the existing elements that make up the townscape in the study area, including:

    - Urban structure and built form, including urban grain, scale, massing, density and building height;
    - Heritage assets, including listed buildings, scheduled monuments, Conservation Areas and registered parks and gardens;
    - Green infrastructure and public realm;
    - Movement and connectivity, including legibility and permeability, public rights of way and classifications (motorways, A roads, B roads etc);
    - The aesthetic and perceptual aspects of the townscape: Scale, complexity, openness, enclosure and activity;

- The condition of the townscape, i.e. the state of an individual area; and
- Reference to policy or designations as an indicator of recognised value, including specific features or characteristics that justify the designation of the area.

This informs a concise description of the existing character of the intervention site and its surrounding townscape context and enables the classification of the townscape into distinct character areas or types, which share common features and characteristics.

6. The visual baseline study records and establishes the following:

- The area in which the intervention may be visible. This is identified by a process of map interpretation and / or digital mapping to construct a map showing the area from which the proposed intervention may theoretically be visible, or its Zone of Theoretical Visibility (ZTV)
- The different types of people or townscape settings (receptors) which may experience views of the proposed intervention and the viewpoints where they will be affected
- The nature of the views at the viewpoint

Assessment of Townscape Effects

General

7. The townscape assessment considers the potential effects of the proposed intervention on the components of the townscape (as identified within the Baseline Study). Physical change to the intervention site may result in changes to the distinctive character of the townscape and it's context and how it is perceived.

8. Depending on the scale, complexity and location of the proposed intervention, the effects of demolition and/or construction on Site may also form part of the assessment process. The process of assessing the effects is the same as for the proposed intervention.

9. Townscape receptors which could be affected by a proposed intervention may include:

- Individual constituent elements and features;
- Specific aesthetic and perceptual qualities; and
- The overall character and key characteristics as experienced in different areas (e.g. townscape character areas or types).

10. The Significance of the Townscape Effects identified is determined by a consideration of the **Sensitivity** of the townscape receptors and the **Magnitude of Change** to the townscape;

- The **Sensitivity** of a townscape receptor combines judgements of their **Susceptibility** to the type of intervention proposed and the **Value** attached to the townscape receptor.

  Sensitivity = Susceptibility + Value

- The **Magnitude of Change** to the townscape receptor depends upon the size or scale of the intervention, the geographical extent of the area experiencing change and its duration and reversibility.

  Magnitude of Change = Size/scale of intervention + geographical extent of change + duration / reversibility of change

(Refer to Figure A: Townscape Assessment Process and Table 6: Significance Townscape Effects)

Townscape Susceptibility

11. Susceptibility is defined as the ability of the townscape receptor (whether it be the overall character or quality of a particular townscape type or area, or an individual element and/or feature, or particular aesthetic and perceptual aspects) to accommodate the proposed intervention without change to the underlying baseline situation and/or the achievement of townscape planning policies and strategies. The susceptibility of a townscape to change is dependent on the characteristics of the receiving townscape and the type and nature of the intervention proposed. (see paragraph 5.40 of GLVIA 3).

(Refer to Table 1: Townscape Susceptibility)

Townscape Value

12. This is defined as the relative value that is attached to different townscapes by society. Townscapes can be valued by different people for different reasons, connected to a range of factors including townscape quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and associations. This consensus can be recognised at a local, regional or national or international scale. (see paragraph 5.44 and 5.45 of GLVIA 3).

(Refer to Table 2: Townscape Value)

Townscape Quality

13. Quality is defined as a measure of the physical state of the townscape. It may include the extent to which typical character is represented in individual areas, the intactness of the townscape and the condition of individual elements.

14. A judgement of the townscape quality is considered an important consideration in determining townscape value.

(Refer to Table 3: Townscape Quality)

Townscape Sensitivity

15. The sensitivity of a townscape receptor combines judgements of their Susceptibility to the type of intervention proposed and the Value attached to the townscape. (see paragraph 5.39 of GLVIA 3).

(Refer to Table 4: Townscape Sensitivity)

Magnitude of Change (Townscape)

16. Is defined as the degree of change to the townscape receptor in terms of the following:

- Size and scale of intervention that is proposed. This relates to both physical scale of the intervention and the degree of aesthetic / perceptual qualities that are altered.

- Geographical extent over which the townscape effects will be experienced. This is distinct from size or scale, as for example there may be large scale addition to a very localised area or small-scale addition to a large geographical area. In summary, the geographical extent may be a site level or the immediate setting of the site, or to a larger extent that effects the wider townscape character area or several townscape character areas.

- Duration and reversibility of the intervention. Duration is judged as either short term, medium term or long term. Duration and reversibility are considered together and relates to permanence. E.g. construction work on Site is short term, whereas the completed intervention may be long term.

(Refer to Table 5: Magnitude of Change [Townscape])

Embedded Mitigation

17. Embedded Mitigation refers to primary measures, which have been developed through the iterative design process and have been 'embedded' into the masterplan and detailed design. This process seeks to ensure that, wherever possible, adverse effects on townscape character are designed out, and the opportunity for beneficial effects is maximised

18. Embedded mitigation should be a consideration in determining the effects of the proposed intervention on Site.

Figure A: Townscape Assessment Process

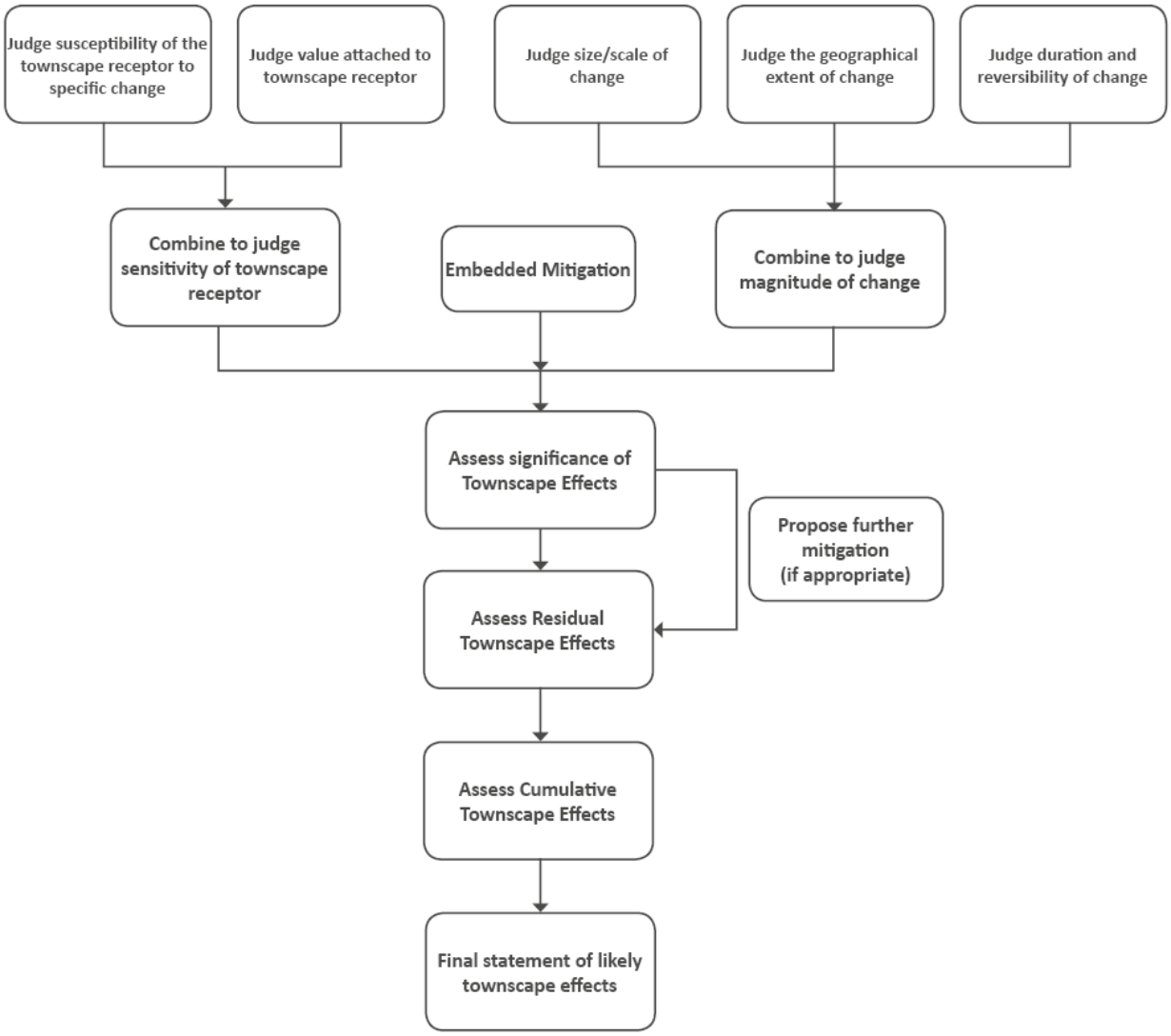


Table 1: Townscape Susceptibility

Level	Description
High	Little or no ability to accommodate the proposed intervention without considerable consequences (either adverse or beneficial) for the retention of the existing townscape baseline, or the delivery of townscape planning policies or strategies
Medium	Some ability to accommodate the proposed intervention without considerable consequences (either adverse or beneficial) for the retention of the existing townscape baseline, or the delivery of townscape planning policies and strategies
Low	An ability to accommodate the proposed intervention without considerable consequences (either adverse or beneficial) for the retention of the existing townscape baseline, or the delivery of townscape planning policies and strategies.

Table 2: Townscape Value

Level	Description	Level	Typical Examples
Exceptional	Exceptional importance and / or rarity. High / Very High Quality No or very limited potential for substitution	International, National	World Heritage Site
High	High importance and / or rarity. Good / High Quality Limited potential for substitution.	National, Regional, Local	National Park, Areas of Outstanding Natural Beauty (AONB), Conservation Area
Moderate	Medium importance and / or rarity. Medium / Good Quality Limited / some potential for substitution	Regional, Local	Undesignated but value perhaps expressed through non-official publications or demonstrable use.
Low	Low importance. Poor / Medium Quality with degradation Frequent and common with scope for substitution	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement.
Very Low	No notable importance. Poor / Very Poor Quality and widely degraded / damaged Frequent and common with scope for substitution	Local	Areas identified for recovery.

(Also see Table 3 for Quality criteria)

Table 3: Townscape Quality

Level	Description
Very High	Very strong and distinctive urban structure, with characteristic urban grain and architectural qualities, creating an overall strong sense of place Distinct and widespread features worthy of conservation Presence of large scale, high quality and widespread planned green infrastructure and public spaces, that is evidently well maintained and has a positive contribution to the character of the townscape as a whole. Very good conditions with no detracting features.
High	Strong urban structure, with characteristic urban grain and architectural qualities creating a notable sense of place. Distinct features worthy of conservation with some limited scope to improve Presence of several instances of managed green infrastructure and public spaces, that is evidently well maintained and positively contributes to the character of the townscape in most cases. Good condition with very occasional / limited detracting features
Good	Distinguishable urban structure, with some characteristic urban grain and architectural qualities Some features worthy of conservation with scope to improve Presence of some green infrastructure and public space, with instances of well-maintained elements and areas requiring improvement, that overall positively contribute to the townscape. Good condition with some detracting features
Medium	Relatively distinguishable urban structure, with an urban grain and architectural qualities that are imbalanced or considered uncharacteristic in places Limited presence of managed green infrastructure and public space, with a number of instances that require improvement. Limited features worthy of conservation with scope to improve Moderate condition with some detracting features
Poor	Weak urban structure, with mixed urban grain and no notably distinguishable architectural qualities Very isolated elements of managed greenery and lack of public space. Lack of management and intervention has resulted in degradation Limited features worthy of conservation Poor condition with frequent detracting features
Very poor	Degraded and damaged urban structure with no distinguishable urban grain or architectural qualities No managed greener or public open space. Lack of management and intervention has resulted in significant degradation Isolated / no features worthy of conservation. Degraded and damaged condition with widespread and frequent detracting features

Table 4: Townscape Sensitivity

		Townscape Susceptibility		
		Low	Medium	High
Landscape Value	Exceptional	**High Medium**	**High**	**High**
	High	**Medium**	**High Medium**	**High**
	Moderate	**Medium Low**	**Medium**	**High Medium**
	Low	**Low**	**Medium Low**	**Medium**
	Very Low	**Low**	**Low**	**Medium Low**

Note: In this TVA Townscape Sensitivity is primarily expressed on a three-point scale of High, Medium or Low. Where appropriate and in certain circumstances, intermediate levels such as High Medium is used. In this instance the higher of the two levels is adopted to provide a robust judgment of Townscape Effects. For example, where the Townscape Sensitivity is High Medium, 'High' will be taken forward to assess Townscape Effects (see Table 6).

In exceptional circumstances a reasoned narrative is set out in the TVA in order to justify instances where intermediate levels are considered appropriate for taking forward to assess Townscape Effects so that it is clear how each judgement has been made.

Table 5: Magnitude of change (Townscape)

Level	Description
High	***Total loss or substantial alteration*** *to key elements / features / characteristics of the baseline or introduction of elements considered to be* ***totally uncharacteristic*** *when set within the attributes of the receiving townscape.* The intervention is of **large physical scale that is uncharacteristic of the receiving townscape** and would impose a **totally different aesthetic and perceptual quality** to the site in comparison to the baseline conditions. The change brought about by the proposed intervention **would influence several townscape character types / areas**
Medium	***Partial loss or alteration*** *to one or more key elements/ features/ characteristics of the baseline or introduction of elements that* ***may be prominent*** *but may* ***not necessarily be considered to be substantially uncharacteristic*** *when set within the attributes of the receiving townscape.* The intervention is of a **moderate to large physical scale** and would introduce **a number of different aesthetic and perceptual qualities** to the site in comparison to the baseline conditions. The change brought about by the proposed intervention **would only influence the townscape character type/area within which the proposal lies**.
Low	***Minor loss or alteration*** *to one or more key elements/ features/ characteristics of the baseline or introduction of elements that* ***may not be uncharacteristic*** *when set within the attributes of the receiving townscape.* The intervention is of a **small or moderate scale** and would **only introduce a minor difference in aesthetic and perceptual quality** to the site in comparison to the baseline conditions. The change brought about by the proposed intervention **would be localised and at the level of the immediate townscape** setting of the site.
Negligible	***Very minor loss or alteration*** *to one or more to key elements/ features/ characteristics of the baseline or introduction of elements that are* ***not uncharacteristic*** *when set within the attributes of the receiving townscape.* The intervention is of a **small scale** and would **not introduce any discernible difference in aesthetic and perceptual quality** to the site in comparison to the baseline conditions The change brought about by the proposed intervention **would be at site level and within the intervention site itself.**

Table 6: Significance of Townscape Effects

		Townscape Sensitivity		
		Low	Medium	High
Magnitude of Change	High	**Moderate**	**Moderate - Major**	**Major effect**
	Medium	**Minor - Moderate**	**Moderate**	**Moderate - Major**
	Low	**Minor**	**Minor - Moderate**	**Moderate**
	Negligible	**Negligible**	**Negligible**	**Negligible**

19. In accordance with the methodology suggested by the GLVIA 3, the nature of effect in this assessment are classified as follows:

Major Adverse Effect: Where the proposed intervention would result in a complete variance from the scale, pattern and character of the townscape, and cause a very high quality townscape to be permanently changed and its quality diminished.

Moderate Adverse Effect: Where the proposed intervention would be out of scale with the townscape, or conflict with the local pattern and character, and cause an adverse effect on a townscape of recognised quality.

Minor Adverse Effect: Where the proposed intervention would not quite fit into the local scale and pattern of the townscape, and affect an area of recognised character.

Minor Beneficial Effect: Where the proposed intervention would fit in well with the scale, character and pattern of the area, and has the potential to improve the existing townscape quality.

Moderate Beneficial Effect: Where the proposed intervention would fit in well with the townscape character of the area, and improve the quality of the townscape.

Major Beneficial Effect: Where the proposed intervention would fit in very well with the townscape character of the area, and greatly improve the quality of the townscape.

The above levels of significance (Minor, Moderate, Major etc.) may, in some circumstances, result in neither 'beneficial' or 'adverse' nature of change. This will result in a **Neutral** outcome (e.g. Moderate Neutral Effect). This is determined where the proposed intervention would complement the scale, pattern and character of the existing townscape, and no distinctly discernible positive or negative character change is apparent.

20. Townscape effects that are Moderate and above (i.e. Moderate, Moderate – Major and Major) are considered to be 'Significant'. All other effects are considered to be 'not significant'.

Assessment of Visual Effects

General

21. The townscape assessment considers the potential effects of the proposed intervention on views from within the townscape and if necessary, from individual or isolated components, such as small grouping of, or singular properties. It also considers more distant views across a townscape.

22. When assessing the visual effect of the proposed intervention, the area from which the proposed intervention is theoretically visible is established on plan through desktop surveys (or using digital software if available). Once this Zone of Theoretical Visibility (ZTV) is established, then the true visibility of the intervention site is checked on site in order to understand the screening effect of existing buildings, vegetation and other features and the effect of distance on a receptor's perception of the site. A number of key views are then selected within these areas which are most representative of the available views of the site.

23. Viewpoints are selected in order to demonstrate representative scenarios. It is not required that the assessment describe every effect of the proposed intervention, but only the main or likely level visual effects which are required to inform the decision-making authority. If possible, the viewpoints are agreed in advance with the local authority.

24. Depending on the scale, complexity and location of the proposed intervention, the effects of demolition and/or construction on Site may also form part of the assessment process. The process of assessing the effects is the same as for the proposed intervention.

25. The Significance of the Visual Effects identified is determined by a consideration of the **Sensitivity** of the visual receptors and the **Magnitude of Change** to the view;

- The **Sensitivity** of a visual receptor combines judgements of their **Susceptibility** to the type of intervention proposed and the **Value** attached to the particular view.

  Sensitivity = Susceptibility + Value

- The **Magnitude of Change** to the view depends upon the size or scale of the intervention, the geographical extent of the area experiencing change and its duration and reversibility.

  Magnitude of Change = Size/scale of intervention + geographical extent of change + duration / reversibility of change

(Refer to Figure B: Visual Assessment Process and Table 11: Significance of Visual Effects)

Visual Susceptibility

26. As defined within GLVIA 3, the susceptibility of different visual receptors to change in views and visual amenity is mainly a function of:

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

(Refer to Table 7: Visual Susceptibility)

Value attached to Views

27. Judgements made about the value attached to views consider

- Recognition of the importance of the particular view, for example in relation to heritage or cultural assets, or through planning designations;
- Recognition of the quality of the townscape that is in view and the extent of visibility, for example wide panoramic views or restricted, narrow views;
- Indicators of the value attached to views by visitors, for example through appearance in guidebooks, provision of facilities for enjoyment of the view (including seating, parking, interpretive material) and references to them in literature or art.

(Refer to Table 8: Value attached to View)

Visual Sensitivity

28. The sensitivity of a visual receptor combines judgements of their susceptibility to the type of intervention proposed and the value attached to the view. (see paragraph 6.31 of GLVIA 3).

(Refer to Table 9: Visual Sensitivity)

Magnitude of Change (Visual)

29. As defined within GLVIA 3, the Magnitude of Change is the degree of change to the view in terms of;

Size or scale

- Size and scale of the proposed intervention in the view with respect to the loss or addition of features in the view and changes in it's composition, including the proportion of the view occupied by the proposed intervention;
- The degree of contrast or integration of any new features or changes in the townscape with the existing or remaining townscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture;
- The nature of the view of the proposed intervention, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpsed.

Geographical extent

- The angle of view in relation to the main activity of the receptor;
- The distance of the viewpoint from the proposed intervention;
- The extent of the area over which the change would be visible.

Duration and reversibility of the visual effect

Duration is judged as either short term, medium term or long term. Duration and reversibility are considered together and relates to permanence.

Embedded Mitigation

30. Embedded Mitigation refers to primary measures, which have been developed through the iterative design process and have been 'embedded' into the masterplan and detailed design. This process seeks to ensure that, wherever possible, adverse effects on visual amenity are designed out, and the opportunity for beneficial effects is maximised

31. Embedded mitigation should be a consideration in determining the effects of the proposed intervention on Site

Figure B: Visual Assessment Process

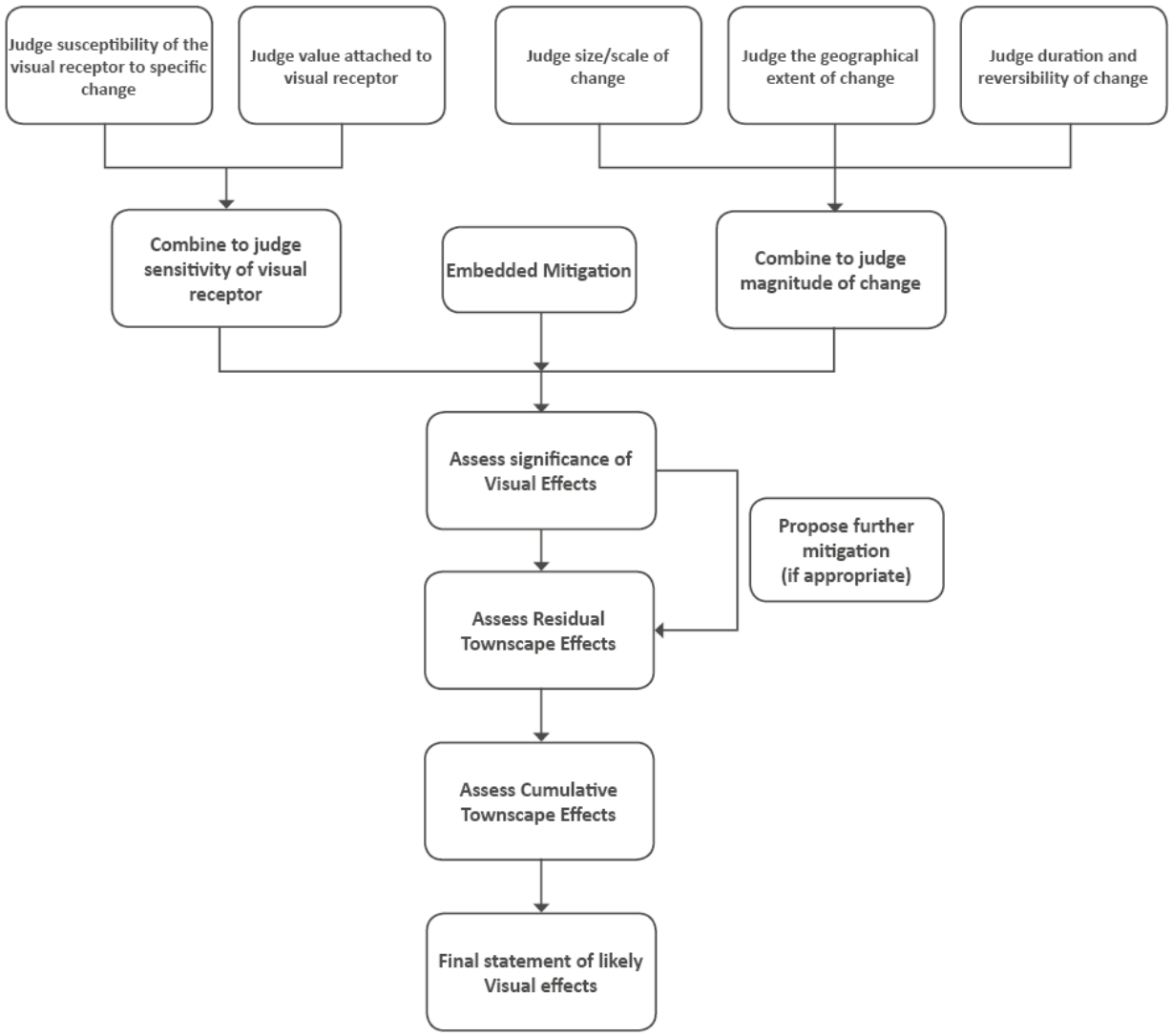


Table 7: Visual Susceptibility

Level	Description
High	Residents at home, or people who are engaged in outdoor recreation whose experience is likely to be focused on, or strongly influenced by a townscape or view with special scenic or heritage value with no, or very little, visible detracting elements. Visitors to heritage assets, or to other attractions and public spaces, where wider views of the surroundings are an important contributor to the experience. Communities where views contribute to the setting enjoyed by residents in the area.
Medium	Residents at home, or users of streets and public spaces whose experience may be influenced by a townscape or view, but the view contains some visible detracting elements and degradation. Travellers on road or rail, where the views are transient and sporadic, but have some significance in either the journey or the expression of the place being visited.
Low	Users of streets where the enjoyment of the townscape incidental rather than the main interest, and where views contain notably detracting elements and degradation. People at their place or work, whose attention may be focused on their work or activity and not their surroundings, or where the setting is not important to the quality of working life. Travellers on road or rail, where the speed of travel and nature of the views involved are short lived and have no special significance.

Table 8: Value attached to Views

Level	Description
High	Iconic, recognised or protected views through Supplementary Planning Guidance or development framework. View mentioned in the listing for a conservation area or literature / art. Largely uninterrupted, elevated, panoramic or distant views of a valued townscape(s). Views that are acknowledged or recorded in guide books or other publications and/or with references in culture such as literature or art.
Moderate	Views with distinctive features, or over a townscape of recognised character and quality, but relatively typical of the locality. Generally uninterrupted view / some minor obstruction Generally attractive with some detracting features
Low	Views of a degraded / damaged townscape or features with a low value and quality

	Restricted views with interruptions to the extent of view

Table 9: Visual Sensitivity

		Visual Susceptibility		
		Low	Medium	High
Value attached to view	High	**Medium**	**High Medium**	**High**
	Moderate	**Medium Low**	**Medium**	**High Medium**
	Low	**Low**	**Medium Low**	**Medium**

Note: In this TVA Visual Sensitivity is primarily expressed on a three-point scale of High, Medium or Low. Where appropriate and in certain circumstances, intermediate levels such as High Medium is used. In this instance the higher of the two levels is adopted to provide a robust judgment of Visual Effects. For example, where the Townscape Sensitivity is High Medium, 'High' will be taken forward to assess Visual Effects (see Table 11).

In exceptional circumstances a reasoned narrative is set out in the TVA in order to justify instances where intermediate levels are considered appropriate for taking forward to assess Visual Effects so that it is clear how each judgement has been made

Table 10: Magnitude of change (Visual)

Level	Description
High	***Total loss or substantial alteration*** *to the baseline view or introduction of* ***elements considered to be totally uncharacteristi****c to view.* The proposed intervention would **occupy a large and extensive proportion of the view** and would be **easily noticed** by the observer. The angle of the view and distance from the proposed intervention would result in **an obvious change to the existing view** and would **significantly change the character or quality** of the view. The proposed intervention **significantly breaks the skyline / roofscape** and is likely to be **visible across an extensive area.**
Medium	***Partial loss or alteration*** *to the baseline view or introduction of* ***elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic*** *of the view* The proposed intervention would **occupy a partial proportion of the view** and would **likely be noticed** by the observer. The angle of the view and distance from the proposed intervention would result in **a perceivable change to the existing view** that **will change the character or quality** of the view. A small proportion of the proposed **intervention breaks the skyline / roofscape** and is likely to be **visible across a relatively localised area.**
Low	***Minor loss or alteration*** *to the baseline view or introduction of* ***elements that may not be uncharacteristic*** *when set within the view.* The proposed intervention would **occupy only a small proportion of the view / may only be glimpsed** in part and would **unlikely to be clearly noticeable** by the observer. The angle of the view and distance from the proposed intervention would result in **a slightly perceptible change in the existing view** but this would **not affect the character or quality** of the view. The proposed intervention **does not break the skyline / roofscape** and is likely to be **visible within a confined to a very limited area**.
Negligible	***Very minor loss or alteration*** *to the baseline view or introduction of* ***elements that may not be uncharacteristic*** *when set within the view.* The proposed intervention would **not be visible / would occupy only a slight proportion of the view** and **not likely be noticed** by the observer. The angle of the view and distance from the proposed intervention **would result in no perceptible change in the existing view** and the **will not result in a change in character or quality of the view.** The proposed intervention **does not break the skyline / roofscape** and is likely to **be visible within the site extents only**

Table 11: Significance of Visual Effects

		Visual Sensitivity		
		Low	Medium	High
Magnitude of Change	High	**Moderate**	**Moderate - Major**	**Major effect**
	Medium	**Minor - Moderate**	**Moderate**	**Moderate - Major**
	Low	**Minor**	**Minor - Moderate**	**Moderate**
	Negligible	**Negligible**	**Negligible**	**Negligible**

32. The nature of effect in this assessment is classified as follows:

Major Adverse Effect: Where the proposed intervention would cause a significant deterioration in the existing view.

Moderate Adverse Effect: Where the proposed intervention would cause a noticeable deterioration in the existing view.

Minor Adverse Effect: Where the proposed intervention would cause a slight deterioration in the existing view.

Minor Beneficial Effect: Where the proposed intervention would cause a slight improvement in the existing view.

Moderate Beneficial Effect: Where the proposed intervention would cause a noticeable improvement in the existing view.

Major Beneficial Effect: Where the proposed intervention would cause a significant improvement in the existing view.

The above levels of significance (Minor, Moderate, Major etc.) may, in some circumstances, result in neither beneficial or adverse change. This will result in a **Neutral** outcome (e.g. Moderate Neutral Effect). This is determined where the proposed intervention would complement the scale, pattern and character of the existing components within view, and no distinctly discernible positive or negative change to visual amenity is apparent.

33. Visual effects that are Moderate and above (i.e. Moderate, Moderate – Major and Major) are considered to be 'Significant'. All other effects are considered to be 'not significant'.

Assessment of Cumulative Effects

34. The purpose of cumulative townscape and visual effects is to identify additional changes caused by the proposed intervention in addition to other similar developments, or as the combined effect of a set of developments taken together.

35. The assessment of cumulative effects in this report focuses specifically on the effects of the proposed intervention in addition to other developments of a similar scale and type within a distance radius defined and justified within the main report. This is based upon a ZTV (Zone of Theoretical Visibility) exercise. Beyond the extent of the defined radius, it is considered that there will be no likely perceivable change to views of the proposed intervention on Site, and no likely cumulative townscape effects in relation to the proposed intervention on Site.

36. Cumulative townscape effects are defined as effects that can impact on either the physical fabric or character of the townscape or any special values attached to it. (GLVIA 3 Chapter 7.3)

37. Cumulative visual effects are defined as effects that can be caused by combined visibility, which occurs where the observer is able to see two more developments from one viewpoint and / or sequential effects which over when the observer has to move another viewpoint to see different developments. (GLVIA 3 Chapter 7.3). Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths.

38. The approach to assessing cumulative effects is guided by the same principles as to the approach to the initial project assessment and considers a combination of susceptibility and value (sensitivity) and magnitude of change to determine the combined effects.

Appendix C:

Methodology for producing views and photomontages

Choosing the viewpoints

1. The siting of viewpoints for the visual assessment must balance 2 factors:

    a. The likely significance of effects; and
    b. How typical, or representative the view is

2. In some circumstances, a viewpoint may also be chosen due to the cumulative effects the proposed intervention will have on the landscape.

3. Whilst the choice of viewpoints is very important, the LVIA should also be based on other aspects. It is important that over-emphasis on viewpoint assessment is avoided as this may create the erroneous assumption that this is the only aspect of LVIA (SNH Visual representation of wind farms v.2.1, 2014).

4. It is important that viewpoints can be safely and legally accessed. Some viewpoints might be judged inappropriate for formal visualisations due to unacceptable health and safety risks, or limitations on access.

5. A proposal may not be visible in all viewpoints chosen. However, the modelling exercise can be undertaken in these instances in order to determine any visual effects from this representative location. The locations of all viewpoints should be recorded on file, even when these are superseded or removed at later stages of the LVIA process.

Overview on producing photomontages

6. The use of photomontages for representing an existing and proposed visual effect is a useful tool for the LVIA assessment. A photomontage consists of an existing view in combination with a computer-generated image of a proposed intervention. They are used to illustrate the likely view of a proposed intervention as it would be seen in a photograph, not as it would appear to the human eye in the field (SNH *Visual representation of wind farms v.2.1*, 2014). They provide a two-dimensional image that can be compared to the actual view of the landscape to inform the assessment of visual effects, such as scale and potential appearance of the proposed intervention.

7. It is important to recognise that photomontages can never exactly match what is experienced in reality. The purpose of photomontages is to provide a representation of the proposal that is accurate enough for the potential visual effects to be fully understood (ibid.). The visual representation will not provide the full picture with regards to potential visual effects, but rather, they inform the assessment process by which judgements are made (ibid.). They do not show other qualities of the landscape experience that can only be appreciated in the field.

Methodology for producing photomontages

8. The camera is mounted on a tripod at eye-level, which is 1.65m with a +/- 100mm tolerance. The camera is levelled on the tripod using a spirit level. The location of the camera is recorded in the field.

9. The camera lens is set to a focal length of between 35-50mm. While a camera lens with a fixed focal length of 50mm is recommended, it is recognised that there is no single best focal length that works best under all circumstances (Landscape Institute *Advice Note 01/11*, 2011). The metadata for the focal length is recorded and displayed alongside each view.

10. It is possible to have a single image to capture the necessary information for a viewpoint, however it is recognised that the field of view (usually around 40 degrees) will be insufficient to capture the breadth of information required to represent the intervention proposals and relevant context (ibid.). A series of photographs of the view, stitched together as a panorama is often more informative.

11. The view is taken as a series of photographs, with the site to the centre of the view where possible. Photographs are taken in landscape format. However, in some circumstances, such as a steep sided valley or viewpoints which are very close to the proposal, it may be necessary to use portrait format to capture the full vertical extent of the landscape within the view.

12. While taking the photos, particular care is placed on rendering all points in the scene as sharply as possible to avoid any areas of selective focus; capturing all tonal detail to avoid excessively bright or dark areas; and, avoidance of atypical feature particular in the foreground, such as a single tree. Conversely, it is also unacceptable to move too far from the most prominent viewpoint in order to avoid typical foreground objects, such as hedgerows and other boundary treatments.

13. The photographs are stitched together using suitable software such as Adobe Photoshop. The 'Automerge' function stitches the images together into one single panorama. The images must be stitched as a 'cylindrical' view to avoid distortion of the panorama at the edges which commonly occurs using the 'perspective' Automerge function.

14. There should be a minimum of post-processing image enhancement. However it is recognised that careful adjustment of contrast or sharpening of features may help make fine details, which are visible in the field, visible on printing (SNH *Visual representation of wind farms v.2.1*, 2014). The image resolution should also be sufficient in Photoshop to assist with sharpening the image. A resolution of 300 dpi is used for the panoramas.

15. Enhancement and rendering cannot compensate for photographs that have been taken in poor light or weather conditions. In these circumstances, the photographs are retaken.

16. The 3D rendering of the intervention proposals are produced in suitable software, such as Sketchup. The buildings are modelled according to their proposed heights and floor levels. If information on material colours and tone are available, these are rendered within the model. The model is set to world co-ordinates, and the viewpoints located within the model space to their correct co-ordinates, orientation and height above datum (AOD). Where possible, the site contours are modelled, and in order to assist the next stage of production, notable features (such as existing buildings, walls, masts etc.) are modelled to their correct heights and massing.

17. The scene in the 3D model space is captured from each viewpoint. This scene corresponds to the angle of view within the panorama, with the scene camera set at the same height as the panorama. The field of view in the 3D model is adjusted to match as closely as possible the field of view to the panorama. The accuracy of the matching is is dependent on the camera focal length, the number of individual photos that combine to make the panorama, and the conversion of the camera metadata into equivalent data in the modelling software. The scene is then exported as a high-resolution PDF which is then overlaid onto the panorama.

18. Matching the 3D model scene to the panorama is achieved by aligning landscape features modelled in 3D to those on the panorama, such as an existing building or topographical features. Adjustments are made, such as scaling, until a satisfactory match between the model features and the panorama are achieved across the whole width of the view, to ensure that there are no errors of scale. If this cannot be achieved, then the fields of view do not exactly match between the model and photomontage and the parameters must be adjusted (SNH *Visual representation of wind farms v.2.1*, 2014).

19. Often small rotation needs to be applied to the 3D model scene to compensate for residual errors in modelling. Other differences between 3D modelling and the panorama must be taken into account. These include: changes in perspective and angle of the camera in the 3D model; the composition of the panorama from individual photographs which affects the projection of the image on a 2D plane; and the curvature of the earth. As a result, the modelling of the proposed intervention, and subsequent adjustment and alignment of the scene to the view, requires professional judgement by the landscape professional to ensure the scale and height of the proposed intervention are appropriate within the view (Landscape Institute *Advice Note 01/11*, 2011).

20. The photomontage is exported from Photoshop at a high resolution Jpeg, typically at 300 dpi. The image is then placed in a standard A3 template. Alongside each view there will be the following information:

    a. Precise location reference (OS grid reference or UK National Gird eastings and northings)
    b. Viewpoint altitude (AOD)
    c. Camera type, make and focal length

21. Viewing the images printed on paper, it is it is recommended that photomontages are simply viewed at a comfortable arm's length.

Note for ZTV:

22. ZTVs indicate areas from where a proposal is theoretically visible within the study area, but they cannot show what it would look like, nor indicate the nature or magnitude of landscape or townscape effects. This includes for private properties and land that is not publicly accessible.

Department, Leeds Dock, Leeds
T 0113 245 4695

Beehive Mill, Jersey Street, Manchester
T 0161 397 4953

E info@re-formlandscape.com
www.re-formlandscape.com

re-form
landscape architecture

Confidential

Technical Appendix 1.1: ISEP (Formerly IEMA) Quality Mark Checklist

Table 1.1: IEMA Quality Mark Check	
EIA Commitment and ES Review Criteria	
EIA Commitment 1: Regulatory Compliance[1]	
a) Does the ES, in the light of the project being assessed, identify, describe and assess effects on:	√
- Human Beings	√
- Fauna & Flora	√
- Soil	√
- Water	√
- Air	√
- Climate	√
- Landscape	√
- Cultural Heritage	√
- Material Assets	√
b) Does the ES attempt to set out the interaction between the factors set out under criteria 1.a)?	√
c) Does the ES contain a clear section, or sections, providing a description of the project comprising information on the site, design and size of the project?	√
d) Does the ES contain a section, or sections, that describe the likely significant effects of the proposed project on the environment?	√
e) Does the ES contain a clear section, or sections, that provide a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects?	√
f) Does the ES contain a clear section, or sections, that provides the data required to identify and assess the main effects which the project is likely to have on the environment?	√
g) Does the ES contain a section, or sections, that outline the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects?	√
h) Has a Non-Technical Summary been produced containing an outline of the information mentioned in 1c) to 1h)?	√
EIA Commitment 4: EIA Context	
A) Scoping	
i) Has the ES clearly stated what effects will be addressed and how this decision was reached?	√
ii) Are the main environmental concerns and their locations, where relevant, clearly identified with an explanation of the risks posed from the project? Including relevant environmental issues beyond the boundary of the proposal?	√
iii) Does the ES identify the environmental issues that will not be assessed and explain why they are not being considered further?	√

[1] A number of the criteria under this Commitment cover similar issues to criteria set out in the other three Commitments, below. Where this occurs IEMA recognise that there will inevitably be some overlap between the criteria. However, the assessment of the criteria under this Commitment is focussed on the presence or absence of the issue, whereas the assessment of similar criteria, within the other three Commitments, will focus on the quality of the consideration of the issue in question.

Table 1.1: IEMA Quality Mark Check	
EIA Commitment and ES Review Criteria	
iv) Is the sub-topic scope undertaken in relation to each of the topics included in the EIA appropriate and focussed	√
B) Alternatives, including iterative design	
i) Does the ES set out the main alternatives that were considered at different points during the development of the proposal?	√
ii) Are the main reasons for the selection of the proposal over distinct alternatives and design iterations easily identifiable?	√
iii) Does the ES clearly indicate how the EIA process, environmental issues and consultee responses influenced the iterative design process that led to the proposed project?	√
EIA Commitment 5: EIA Content	
A) Baseline	
i) Does the ES describe the current condition of those aspects of the environment that are likely to be significantly affected by the development?	√
ii) Is the sensitivity / importance of the baseline environment clearly evaluated?	√
iii) Are limitations in the baseline information identified and clearly set out?	√
B) Assessment	
i) Are the methods for establishing the magnitude of impacts on the receiving environment clearly defined?	√
ii) Does the ES set out a generic methodology for the assessment and evaluation of significance OR clearly explain and justify a specific method for each environmental issue?	√
iii) Does the assessment of significance consider the impact's deviation from the established baseline condition? (e.g. the sensitivity of the environment, the extent to which the impact is reversible, etc.).	√
iv) Does the ES identify the significance of impacts that would be anticipated to remain following the successful implementation of any mitigation set out in the ES?	√
vii) Does the ES give appropriate prominence to both positive and negative effects relative to their significance?	√
C) Environmental Management	
i) Does the ES describe the measures proposed to be implemented to avoid, reduce, and if possible, remedy significant adverse impacts of the proposed development?	√
ii) Is an indication of the effectiveness of the stated mitigation measures provided?	√
iii) Are details provided related to any management plans that the ES indicates should be implemented to deliver the mitigation measures and/or monitor the environmental impact of the project?	√
iv) Does the ES identify the general groups who will be responsible for the follow-up programme?	√

Table 1.1: IEMA Quality Mark Check	
EIA Commitment and ES Review Criteria	
EIA Commitment 6: EIA Communication	
A) Consultation	
i) Does the description of any consultation include details of those who were contacted, including statutory and non-statutory consultees, and the public?	√
ii) Does the main text of the ES provide a summary of the main issues raised by consultees?	√
iii) Does the ES set out if any of the issues raised by consultees will not be dealt with in the ES?	√
If so is clear justification set out as to why the issue has been scoped out?	√
B) ES Quality	
i) Does the ES provide appropriate illustrations through the use of maps and/or diagrams? In particular this should cover:	
- the location of the site, site layout and boundary,	√
- operational appearance,	√
- main environmental receptors and	√
- impacts displayed in a visual format where appropriate.	√
ii) Is the area of proposed land clearly described and indicated on an appropriate map or diagram?	√
iii) Are the anticipated timescales of construction, operation and (where appropriate) decommissioning of the proposal clearly set out in the main text?	√
iv) Is the information in the ES presented in a manner in which a non-specialist would be able to logically identify information they were seeking?	√
v) Are technical terms kept to a minimum, with a glossary provided?	√
C) Non-Technical Summary (NTS)	
i) Does the NTS provide sufficient information for the non-specialist reader to understand the main environmental impacts of the proposal without reference to the main ES?	√
ii) Are maps and diagrams included in the NTS that, at a minimum, illustrate the location of the application site, the footprint of the proposed development, and the location of relevant key features?	√
iii) Is it clear that the NTS was made available as a separate, stand-alone document to facilitate a wider readership?	√



November 2025

Lord Street
EIA SCOPING OPINION REQUEST REPORT

RAMBOLL Bright ideas. Sustainable change.

Confidential

LORD STREET
EIA SCOPING OPINION REQUEST REPORT

https://uk.ramboll.com

Project name **Lord Street**
Project no. **162TG_T12089**
Recipient **Linear Living**
Document type **Report**

Revision	Date	Prepared by	Checked by	Approved by	Description
1.0	17/11/2025	Campbell Risdon	Charlie Irwin	Harry Parker	First version for client review

This report is produced by Ramboll at the request of the client for the purposes detailed herein. This report and accompanying documents are intended solely for the use and benefit of the client for this purpose only and may not be used by or disclosed to, in whole or in part, any other person without the express written consent of Ramboll. Ramboll neither owes nor accepts any duty to any third party and shall not be liable for any loss, damage or expense of whatsoever nature which is caused by their reliance on the information contained in this report.

Ramboll UK Limited
Registered in England & Wales
Company No: 03659970
Registered office:
240 Blackfriars Road
London
SE1 8NW

CONTENTS

1.	**Introduction**	**3**
1.1	Introduction	3
1.2	Consultation	4
2.	**Planning Context**	**5**
2.1	Planning History	5
2.2	Planning Application Documents	5
2.3	Legislation, Planning Policy and Guidance	6
2.4	National Policy and Guidance	6
2.5	Regional Planning Policy	6
2.6	Local Policy	7
2.7	Other Policy and Guidance Considerations	7
3.	**EIA Process and Approach**	**8**
3.1	Need for Environmental Impact Assessment	8
3.2	Content and Format of Environmental Impact Assessment	8
3.3	Assessment Methodology	8
3.4	Basis of Environmental Impact Assessment	9
3.5	Baseline Conditions	9
3.6	Assessment Scenarios	10
3.7	Demolition and Construction Stage Effects	10
3.8	Completed Development Stage Effects	11
3.9	Cumulative Stage Effects	11
3.10	Significance Criteria	13
4.	**Site Description**	**15**
4.1	Site Location	15
4.2	Site Description	16
4.3	Current Uses	16
5.	**Description of the Proposed Development**	**17**
5.1	Overview	17
5.2	Demolition, Construction and Operation Programme	17
5.3	Completed Development	18
6.	**Topics Scoped into the EIA**	**19**
6.1	Daylight, Sunlight and Overshadowing	19
6.2	Wind Microclimate	22
6.3	Socioeconomics and Human Health	23
6.4	Climate Change and Greenhouse Gases	29
6.5	Townscape and Visual Impact	32
7.	**Topics Scoped out of the EIA**	**37**
7.1	Ecology	37
7.2	Water Resources and Flood Risk	38
7.3	Ground Conditions	38

Confidential

7.4	Transport	39
7.5	Air Quality	41
7.6	Noise and Vibration	43
7.7	Materials and Waste	44
7.8	Aviation	45
7.9	Archaeology	45
7.10	Major Accidents and Disasters	46
8.	**Summary of the Proposed Scope of EIA**	**47**
8.1	Summary of the Proposed Scope of EIA	47
8.2	Proposed Content and Format of Environmental Statement	47
8.3	Structure of the ES	48
9.	**Conclusion and summary**	**49**

APPENDICES

Appendix 1
ASSESSMENT CRITERIA

Appendix 2
PROPOSED CUMULATIVE SCHEMES
Table A2.1: Proposed Cumulative Schemes

Appendix 3
CONTENT OF ES

Appendix 4
Air Quality Assessment

Appendix 5 Preliminary Ecological Appraisal

1. INTRODUCTION

1.1 Introduction

1.1.1 Linear Living Limited, ('the Applicant') intends to submit a detailed planning application for a new residential development of an approximate 0.18 hectares (ha) site off Lord Street, Cheetham Hill, Manchester. The site currently comprises a vacant brownfield land site previously occupied by seven commercial units (the 'site').

1.1.2 This report has been prepared by Ramboll to inform a Regulation 15 request for a formal scoping opinion under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended).

1.1.3 The site location and boundary is shown in Figure 1.1. The determining authority for the planning application is Manchester City Council (MCC) and the site is located to the northwest of Manchester City Centre, centred on Ordnance Survey (OS) National Grid Reference (NGR) SJ841994.

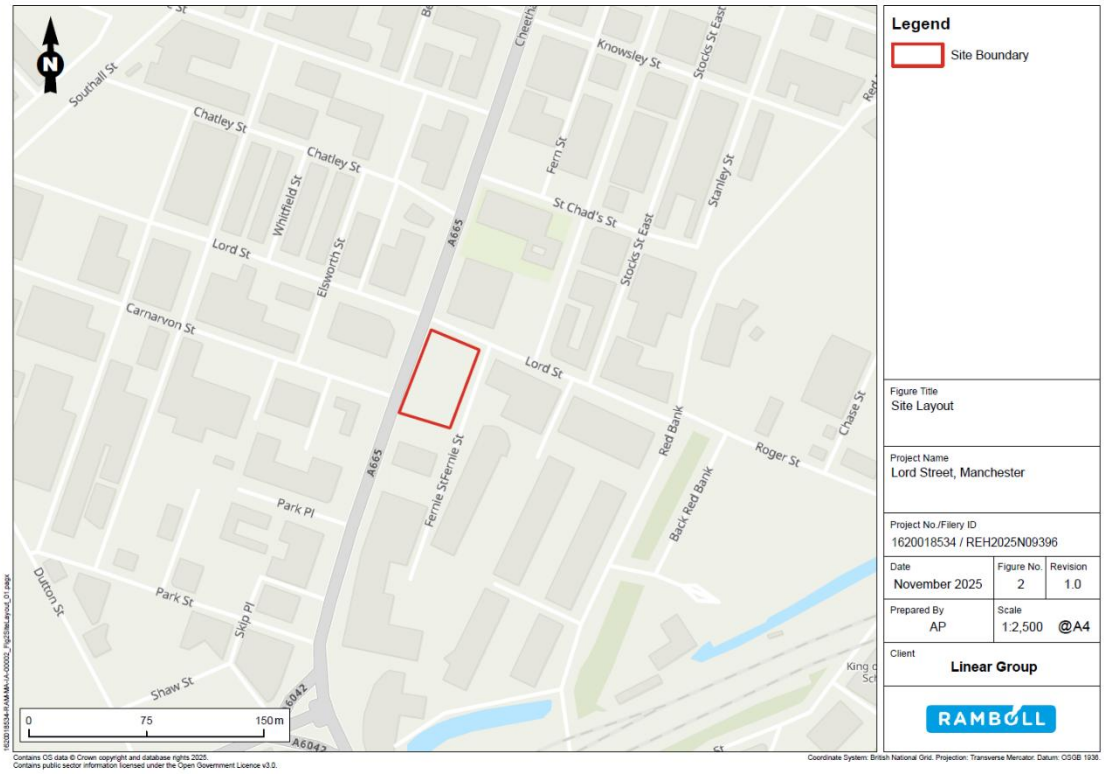


Figure 1.1 Site Location

1.1.4 The purpose of this EIA Scoping Report is to confirm with MCC the proposed scope of the EIA and the content of the Environmental Statement.

1.1.5 This EIA Scoping Report consists of the following sections;

- Section 1 – Purpose of the Scoping Report;
- Section 2 - Planning Context;
- Section 3 – EIA Process and Approach. This section summarises the key considerations of the EIA process and the general approach that will be taken for the EIA;

- Section 4 – Site Description. This section describes the site location, the key characteristics and the surrounding context of the site;
- Sections 5 – Description of the Proposed Development;
- Section 6 – Topics scoped into the EIA. This section identifies the environmental topic areas and their assessment methodologies where the potential for likely significant environmental effects arises and have therefore been scoped into the EIA;
- Section 7 – Topics scoped out of the EIA. This identifies the environmental topic areas where potential significant environmental effects are unlikely to arise and which are therefore proposed to be scoped out of the EIA and ES chapters;
- Section 8 – Summary of the Proposed Scope of the EIA;
- Section 9 – Conclusion and Summary.

1.2 Consultation

1.2.6 The process of consultation is a key requirement of EIA and the views of statutory consultees and stakeholders help identify specific issues.

1.2.7 As part of the consultation process for the EIA, MCC will identify relevant statutory and non-statutory consultees to be consulted.

1.2.8 As part of the design and EIA process, mitigation measures will be developed and discussed with consultation bodies where necessary to avoid, reduce and mitigate likely significant adverse environmental effects, or to provide enhancements.

1.2.9 Further, each technical assessment chapter of the ES will include a summary of the relevant consultations undertaken as part of the EIA process.

2. PLANNING CONTEXT

2.1 Planning History

2.1.1 This section summarises the key planning history of most relevance to the site and provides background to the existing and consented land uses at the site.

2.1.2 Planning permission was first granted on 21 November 2016 under application reference 113914/FO/2016 for the development of a 16 storey building consisting of 192 apartments and a ground floor commercial unit. Since this application, multiple applications have been filed for the proposed development in order to discharge the planning conditions associated with the permission. These are detailed in Table 2.1.

2.1.3 The scheme was later amended through a non-material amendment application (138553/NMC/2023) which retained the same number of residential units but reduced the level of onsite parking.

Table 2.1: Site Planning History

Reference	Description
113914/FO/2016	Erection of a 16 storey building to form 192 residential apartments (Use Class C3a) together with ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings
CDN/19/0095	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0182	Discharge of Conditions 5 and 6 – Construction Management Plan and Local Labour
CDN/19/0330	Discharge of Condition 3 - Drainage
CDN/19/0418	Discharge of Condition 4 Part A – Ground Conditions
CDN/19/0536	Discharge of Condition 3 - Drainage
124193/JO/2019	Variation of Condition 10 – Replacement Environmental Standards.
138553/NMC/2023	Non-material amendment to planning permission 124193/JO/2019 to amend condition 2 (Approved drawings) to insert an additional internal staircase and AOV, amend number of car parking spaces, remove sub-basement and change the commercial space to residents' amenity space

2.2 Planning Application Documents

2.2.4 The list of documents and reports that is anticipated at this stage will be required to accompany the planning application, is provided below:

- Cover Letter and Application form;
- Site Plans and Development Plans and elevations;
- Noise Impact Assessment;
- Affordable Housing Statement;
- Air Quality Assessment;
- Archaeology and Heritage Statement;
- Broadband Connectivity Assessment and TV/Radio Impact;
- Crime Impact Statement;
- Community Involvement Statement;
- Fire Statement;

- Draft Construction Management Plan;
- Construction Waste Management Plan;
- Design and Access Statement;
- External Lighting Assessment;
- Energy Statement
- Environmental Standards Statement;
- Embodied Carbon Proforma
- Preliminary Ecological Appraisal;
- Biodiversity Net Gain Assessment;
- Land Contamination Phase 1 Preliminary Risk Assessment;
- Local Labour Agreement;
- Planning Obligations and Heads of Terms (Section 106);
- Planning Statement;
- Flood Risk and Sustainable Drainage Systems (SuDS) Strategy;
- Transport Assessment and Travel Plan;
- Ventilation Strategy;
- Viability Statement; and
- Waste Strategy.

2.3 Legislation, Planning Policy and Guidance

2.3.5 Legislation, planning policy and guidance will inform the scope of technical assessments within the EIA and the identification of sensitive receptors.

2.3.6 The proposed development's compliance to and performance against legislation, planning policy and guidance (together with associated planning standards/targets) will be appraised within the Planning Statement for the planning application, and not within the EIA. Accordingly, the ES will not provide an exhaustive discussion of legislation, policies and guidance. Instead, a summary of the key relevant legislation and policies that have been considered in preparing the technical assessments will be presented in each technical ES technical chapter where relevant.

2.4 National Policy and Guidance

2.4.7 The EIA will have regard to the following national policy and guidance in scoping the technical assessments, informing the assessment methodologies and identifying sensitive receptors, as appropriate:

- National Planning Policy Framework (NPPF) (2024); and
- Planning Practice Guidance (PPG).

2.5 Regional Planning Policy

2.5.8 The ES will have regard to the Places for Everyone Joint Development Plan. The Joint Development Plan is a plan for nine of the ten Greater Manchester districts, which will determine the type of development that will take place within the districts, maximising the use of brownfield land and urban spaces, whilst protecting Green Belt land from the risk of unplanned development. It will also ensure all new developments are sustainably integrated into Greater Manchester's transport network or supported by new infrastructure.

2.5.9 The Joint Development Plan Document:

- Sets out how the nine districts should be developed up until 2037;
- Identifies the amount of new development that will come forward, in terms of housing, offices, and industry and warehousing, and the main areas in which this will be focused;
- Supports the delivery of key infrastructure, such as transport and utilities;

- Protects the important environmental assets across the city region;
- Allocates sites for employment and housing outside of the existing urban area; and
- Defines a new Green Belt boundary for Greater Manchester.

2.6 Local Policy

2.6.10 The ES will have regard to Manchester City Council's Local Development Framework Core Strategy Development Plan Document and any relevant Supplementary Planning Documents (SPDs) and Supplementary Planning Guidance (SPGs).

2.7 Other Policy and Guidance Considerations

2.7.11 There are a number of supporting policy and guidance documents that are relevant to each environmental discipline and will be considered on a topic-by-topic basis within the ES.

3. EIA PROCESS AND APPROACH

3.1 Need for Environmental Impact Assessment

3.1.1 EIA is a formal process by which the effects on the environment generated by certain types of development projects are identified, assessed and reported upon, including the identification of mitigation, in order for the effects to be taken into account by the relevant planning authority when considering whether to grant planning permission.

3.1.2 The EIA Regulations set out the content of an ES in general terms and allow an applicant to obtain a formal EIA Scoping Opinion from the relevant planning authority regarding the issues to be considered within the EIA for a specific development proposal; what information should be contained in the ES; and what effects are likely to be more significant than others. EIA good practice encourages applicants to consult other organisations likely to have an interest in a development proposal.

3.2 Content and Format of Environmental Impact Assessment

3.2.3 The specified information to be included in the ES of the proposed development will comply with Regulations 18(3) to 18(5) and Schedule 4 of the EIA Regulations.[13]

3.2.4 The ES that will accompany the planning application will comprise the following four volumes:

- ES Volume 1: Non-Technical Summary NTS: this document will provide a concise summary of the Proposed Development, alternative designs that were considered, environmental impacts and mitigation measures;
- ES: Volume 2: Main Text: this will contain the main body of the ES.
- ES Volume 3: Townscape and Visual Impact Assessment (TVIA): the methodology and findings of the TVIA accompanied by a full set of views and verified images; and
- ES Volume 4: Technical Appendices: these will provide supplementary details of the environmental studies conducted during the EIA including relevant data tables, figures and photographs.

3.2.5 The EIA Regulations require that the ES provides an outline of the reasonable alternatives that have been considered by the Applicant and the reasons for the selection of the preferred option. The alternatives considered in the course of the design process, such as site location, land uses, layouts and design evolution, will be presented in the Alternatives and Design Evolution introductory chapter. The environmental factors that informed each of the options will be presented, as appropriate. In addition, the Alternatives and Design Evolution chapter will consider the 'Do Nothing' scenario (the likely evolution of site conditions if the proposed development was not to proceed).

3.3 Assessment Methodology

3.3.6 The EIA will be undertaken by reference to good practice guidance, which includes, but is not limited to, the following publications from the Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment):

- ISEP: Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance
- ISEP: Social Impact Assessment in EIA in the UK;
- ISEP: Guide to Climate Change Resilience and Adaptation;
- ISEP: Demystifying Cumulative Effects;
- ISEP: Major Accidents and Disasters in EIA: A Primer
- ISEP: Delivering Proportionate EIA;
- ISEP: Determining Significance for Human Health in Environmental Impact Assessment;

- ISEP: Shaping Quality Development;
- ISEP: Special Report into the State of Environmental Impact Assessment Practice in the UK; and
- ISEP: Guidelines for Environmental Impact Assessment.

3.3.7 The EIA will assess the environmental effects that are likely to arise as a consequence of the proposed development.

3.3.8 The EIA will employ a range of tools and methods to predict the likely scale and nature of environmental effects. These tools and methods will be either quantitative or qualitative or, in certain instances, both.

3.3.9 Quantitative methods include:

- Mathematical models and calculations which provide numerical estimates of the environmental impacts or effect, such as the levels of daylight lost or the expected average wind speeds as a result of the Proposed Development;
- Three-dimensional and/or illustrative/ map-based techniques to model/ plot the environmental conditions and the extent of change, such as the appearance of the proposed development from a particular viewpoint.

3.3.10 Qualitative methods rely on expert professional judgement and experience. These methods are exercised within a structured framework and to ensure transparency and consistency of conclusions drawn. Clear distinctions are made between matters of fact, judgement and opinions with all sources identified.

3.3.11 The predictions of the EIA may be subject to a degree of uncertainty. As such, the tools and methods employed, the assumptions made in each case, degrees of confidence and areas of uncertainty will be clearly set out.

3.4 Basis of Environmental Impact Assessment

3.4.12 As previously set out, the EIA will be undertaken based on the proposed development as described in the introductory chapters of ES Volume 1 (in particular Chapter 4: Proposed Development Description and Chapter 5: Demolition and Construction Description), including any reasonable assumptions, in the absence of information.

3.4.13 The proposed development will be principally defined by means of the following:

- Demolition and construction methods and control measures;
- Detailed planning application drawings;
- Detailed 3D model;
- Detailed area schedule; and
- Detailed residential unit mix and tenure.

3.4.14 The following supporting documents will accompany the application and will be considered during the EIA:

- Design and Access Statement;
- Energy Statement; and
- Sustainability Statement.

3.5 Baseline Conditions

3.5.15 The EIA will predict the likely scale and nature of change in environmental conditions as a result of the proposed development. The assessment of the predicted change will be undertaken against a reference condition, known as the baseline. The following baseline conditions will be considered within the EIA, as appropriate (and subject to the development programme):

- Existing Baseline (2025): the existing on-site conditions, identified through site surveys, desk-based data collection and or modelling;
- Future Baseline, defined by means of, for example:
    - The year when peak demolition and construction works (e.g. in terms of the number of vehicle movements and on-site demolition and construction works) are predicted to occur, established by means of desk-based prediction, calculation and modelling for transport impacts, air quality and noise and vibration;
    - The year of first on-site residential occupation based on the Applicant's development programme;
    - The year by when it is cumulative schemes have been delivered;
    - The year when the proposed development is predicted to be completed, excluding the proposed development, established by means of desk-based prediction, calculation and/ or modelling.

3.5.16 Various baseline surveys have been and will be undertaken at the site to inform the emerging development proposals and to characterise the existing baseline conditions at the site.

3.5.17 Cumulative schemes that are at an advanced stage of construction may be considered to form part of the existing or future baseline, where appropriate. Desk-based collection, prediction, calculation and modelling undertaken during the course of the EIA process will utilise information already available, as well as new information provided in response to this EIA Scoping Report. Collectively the information will establish existing and future baselines against which impacts introduced by the proposed development will be assessed.

3.6 Assessment Scenarios

3.6.18 The EIA will consider the proposed development's likely effects during the development works (the 'Demolition and Construction' stage), upon completion and operation (the 'Completed Development' stage), as well as cumulatively in combination with (or in addition to) 'approved' schemes (the 'Cumulative' stage).

3.6.19 The assessment scenarios will be defined on a topic specific basis; however, the main assessment scenarios will comprise the following:

- Demolition and Construction phase
- Completed Development phase

3.6.20 Within the demolition and construction and completed development phases, the cumulative schemes scenario will be considered and reported.

3.7 Demolition and Construction Stage Effects

3.7.21 Chapter 5: Demolition and Construction will describe the proposed development's anticipated development programme and the key activities which are expected to be undertaken during demolition and construction works. The content of this chapter will form the basis for the assessment of demolition and construction effects.

3.7.22 Final details of the demolition and construction works (methods, techniques, equipment and phasing) is unavailable at the planning application stage. Where detailed information is not available, 'reasonable worst-case' scenarios will be adopted based on the applicant's experience of projects of a similar scale and nature. Where this is the case, the assumptions adopted will be clearly identified in the relevant technical chapters of the ES.

3.7.23 The chapter will also outline the measures that will be adopted/ incorporated as part of the proposed development to avoid, reduce and mitigate typical environmental impacts and effects during the demolition and construction stage.

3.7.24 Standard measures that will be explored by the Applicant will include:

- Re-use and recycling of demolition materials and excavated waste materials;
- Appropriate selection and sourcing of construction materials;
- Appropriate on-site management and siting of activities in relation to sensitive receptors;
- Public safety;
- Amenity and site security;
- Operating hours;
- Noise and vibration controls;
- Air and dust management;
- Noise and air emissions monitoring;
- Hazardous substances storage and control;
- Stormwater and sediment control; and
- Public liaison.

3.7.25 Standard industry practice will be considered as embedded mitigation measures within the technical assessments and would therefore not be subject to pre- and post-mitigation assessments. Any measures adopted that are tailored in some way or otherwise 'non-standard' will be considered as additional mitigation and would therefore be subject to pre- and post-mitigation assessment to determine the predicted effectiveness of the mitigation measure and the residual effect. The means of securing these measures will also be made clear within the assessment, e.g. through appropriately worded planning condition or through a control document, such as the construction environmental management plan.

3.7.26 ES Chapter 5 will set out the embedded mitigation measures included within the design or control documents for the proposed development. It is anticipated that the measures identified will be secured by means of a suitably worded planning condition and further developed by the appointed principal contractor.

3.8 Completed Development Stage Effects

3.8.27 ES Volume 1 will contain an introductory ES chapter; Chapter 4: Proposed Development Description, which will describe the proposed development's physical characteristics, access arrangements, landscaping strategy, estimated emissions, effluents and waste arisings. The description will include mitigation measures embedded within the development proposals. The content of this chapter will form the basis for the assessment of completed development effects.

3.8.28 Information will be drawn from relevant planning submission documents as listed in Section 2.2.

3.9 Cumulative Stage Effects

3.9.29 The cumulative effects assessment will consider both intra-project cumulative effects and inter-project cumulative effects.

Intra-Project Cumulative Effects

3.9.30 Impact interactions from the proposed development itself on receptors at the site and/or within the study area will be considered during the demolition and construction works, and once the proposed development is completed and operational. Potential impact interactions can include, for example, the combined effects of noise, dust and visual impacts during the demolition and construction works of the proposed development on a sensitive receptor.

3.9.31 A qualitative assessment approach will be adopted, comprising the following steps:

- First, a review of the likely residual effects (and in particular, the likely significant environmental effects) of each technical assessment within the EIA;
- Second, the likely receptors or receptor groups will be identified;
- Third, the individual effects which may impact a singular receptor or receptor group will be listed in a tabular/ matrix format;
- Fourth, the potential for individual effects to interact will be identified; and
- Fifth, the scale of the combined intra-project cumulative effects will be assessed qualitatively.

3.9.32 Dependent on the relevant sensitive receptors, the assessment will focus either on key individual receptors or on groups considered to be most sensitive to potential interacting effects. The criteria for identifying those receptors which are potentially sensitive will include, but not be limited to, existing land uses, proximity to the demolition and construction works, and likely duration of exposure to effects.

3.9.33 To ensure a proportionate assessment of intra-cumulative effects, only residual effects that are minor, moderate or major in scale will be considered within the assessment. This is because negligible effects are, by definition, imperceptible in scale.

3.9.34 Due to the 'cross-boundary' and 'overlapping' nature of these effects across various environmental topics, and the assessment approach adopted, the results of intra-project cumulative effects will be holistically presented within a separate Cumulative Effects chapter, and not within each of the technical assessment chapters. This approach avoids unnecessary duplication and repetition, presenting a proportionate approach. All technical topics scoped within the ES as technical assessment chapters will be considered in this assessment.

Inter-Project Cumulative Effects

3.9.35 To ensure a proportionate assessment of inter-project (in-combination/in-addition) cumulative effects, the EIA will focus on the consideration of "existing and/ or approved projects" as required in the EIA Regulations. The following criteria for the selection of such existing or approved projects has been used to enable a proportionate assessment:

- Schemes which are consented or approved or have a 'resolution to grant' or which are currently at an early stage of construction; and
- Schemes which have a minimum total floor space area of approximately 10,000 sqm GEA and comprise at least approximately 150 residential units; and
- Schemes either:
    - Within 1 km of the site redline boundary; or
    - Outside 1 km of the site redline boundary that are:
        - Spatially linked to the proposed development; and/or
        - Visible in protected/important views to and from the site.

3.9.36 These criteria are widely accepted for EIAs of a similar nature and scale.

3.9.37 For consented schemes which have had subsequent amendments, the latest known iteration will be assessed within the EIA. Where a cumulative scheme benefits from multiple unimplemented consents, the consent representing the worst-case will be considered as appropriate to the technical assessment.

3.9.38 It is proposed that schemes that fall within the spatial and quantum parameters defined above, and which are likely to lead to significant cumulative effects, are quantitatively assessed on a topic-by-topic basis, subject to the availability of scheme information in the public domain.

3.9.39 Appendix 2 lists the cumulative schemes which are proposed to be considered within the EIA. It is requested that MCC review this list and provide comments on the completeness and acceptability of the list.

3.9.40 Information on the cumulative schemes will be drawn from the MCC and neighbouring authorities (specifically Salford City Council) planning application portals at the time of undertaking the assessments. Where detailed information on schemes is not available to enable quantitative assessment, qualitative assessments would be undertaken.

3.9.41 Inter-project cumulative effects will be addressed within each of the individual technical assessment chapters in ES Volume 1 and ES Volume 2. All technical ES chapters will clearly state which cumulative schemes have been included within their assessment and will provide justification for those cumulative schemes not considered. Where schemes are at an advanced stage of construction, these may be considered within the existing and future baseline as opposed to the cumulative assessment. This will be made clear within each technical assessment chapter.

3.10 Significance Criteria

3.10.42 Significance is usually a function of the sensitivity (susceptibility or vulnerability/ value or importance) of the resource affected (receptor) and the magnitude of the potential impact.

3.10.43 The value or importance of a receptor could be a function of designation, whereas the susceptibility or vulnerability could be a function of carrying capacity and ability to respond to, withstand or accept change. Receptor sensitivity will typically be defined based on a rating of high, medium or low.

3.10.44 The magnitude of impact refers to the degree of change and will typically be defined based on a rating of high, medium and low.

3.10.45 In assessing the scale and significance of resulting effects, regard will be given to the following:

- Likelihood of the effect occurring, based on a scale of certain, likely or unlikely;
- Duration of the effect, based on a scale of long-term (more than 10 years), medium-term (five to 10 years) and short-term (less than five years);
- Geographical extent of the effect at site, local, borough, regional, national and international levels;
- Reversibility of the effect, being either reversible or irreversible; and
- Scale of effect.

3.10.46 Scale of effects will be determined by means of published guidance, matrices and/ or application of professional judgement and defined based on a rating of major, moderate, minor, negligible, unless otherwise specified within the individual technical chapters.

3.10.47 Where published industry guidance and terminology do not exist and to provide a consistent approach to the presentation of likely effects, the following terminology will be used throughout the ES:

- Nature and type of Effects:
  - Adverse: Detrimental or negative effect to a receptor;
  - Neutral: An effect that on balance, is neither beneficial nor adverse to a receptor OR an effect that is equally beneficial and adverse to a receptor; and
  - Beneficial: advantageous or positive effect to a receptor.
- Scale of effects:
  - Negligible: effects which are beneath levels of perception;
  - Minor: slight, very short or highly localised effects;

- Moderate: limited effects (by magnitude, duration, reversibility, value and sensitivity of receptor) which may be considered significant; and
- Major: considerable effect (by magnitude, duration, reversibility, value and sensitivity of receptor, which may be more than of a local significance or lead to a breach of a recognised environmental threshold, policy, legislation or standard).

3.10.48 Where a particular absolute value, target criteria or threshold is achieved, negligible will be used in isolation to describe the effect.

3.10.49 Residual effects will be defined as either 'significant' or 'not significant'. Significant effects would be considered material to the planning decision making process. Based on the above, residual effects of moderate and major scale may be considered significant, but would be dependent on the relevant technical assessment, as well as the existence of published assessment guidance.

3.10.50 Where published assessment guidance is not definitive in respect of categorising/determining significant environmental effects, or where no published guidance is available, professional judgement will be applied, considering the duration, extent and context of the effect, to determine significant effects.

3.10.51 Where there are any deviations to the terminology set out above (e.g. due to published industry guidance or professional judgement), this will be clearly identified and explained within the relevant technical assessment of the EIA.

4. SITE DESCRIPTION

4.1 Site Location

4.1.1 The site is located on the northwestern portion of Manchester City Centre, centred on Ordnance Survey (OS) National Grid Reference (NGR) SJ841994. Indicative site locationis shown in Figure 4.1.

4.1. 2 The site is bounded by Fernie Road to the east, Lord Street to the north, Cheetham Hill Road to the west and by a Texaco Petrol Station and associated car park to the south.

4.1.3 The site consists of brownfield land on is on the southeastern side of the intersection of Lord Street and Cheetham Hill Road.

4.1.4 The immediate surroundings of the comprises the following:

- North: Immediately north of the site is Lord Street. Following Lord Street is a small commercial unit containing multiple businesses and a car park in the real. On the north side of this retail unit lies a small garden and Manchester Oratory Catholic Church, which contains two separate Grade II Listed Buildings within its perimeter.
- South: The site is bordered by a car park and associated Texaco Petrol station located along Cheetham Hill Road. Further south are residential properties located within an apartment complex. Park Place Bus Station is situated outside of this complex, providing services to Piccadilly Gardens and Sale through bus routes 135 and 41.
- West: The west of the site is completely bound by the A665 Cheetham Hill Road. Beyond this lies the connection to Carnarvon Street and Topps Tiles Clearance Outlet and its associated car park.
- East: the site is bound by Fernie Street to the east with residential and commercial properties located further beyond the road.

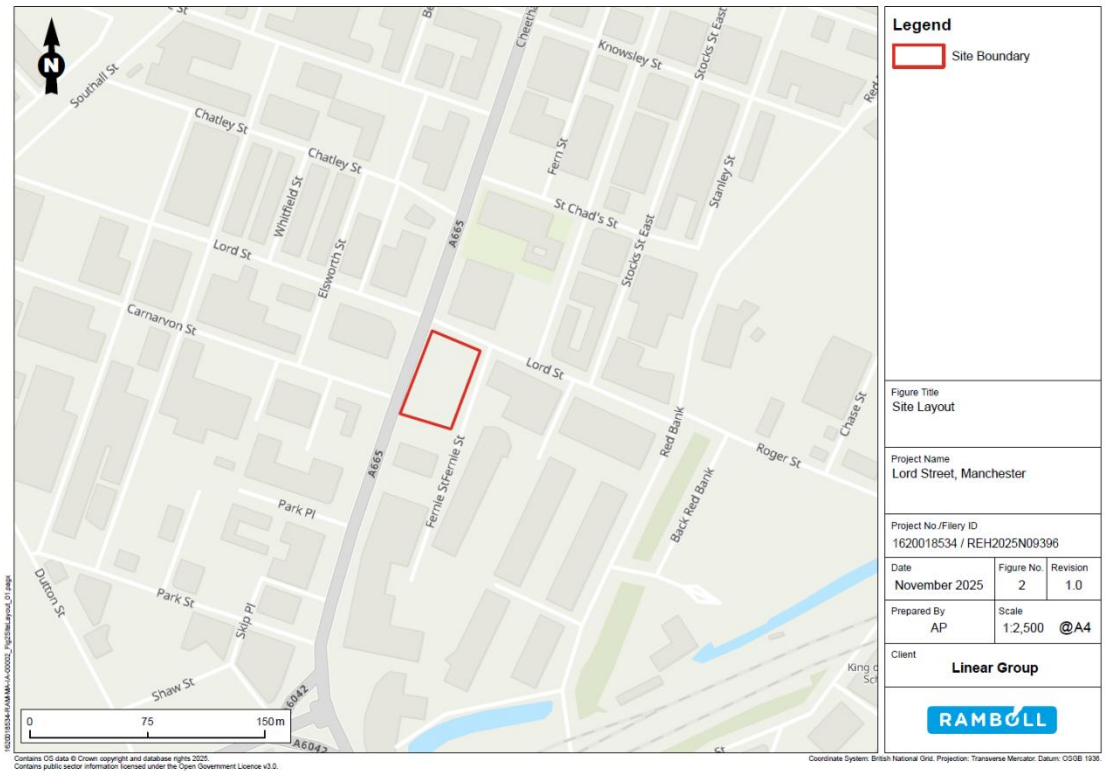


Figure 4.1- Site Location

4.2 Site Description

4.2.5 As presented in Figure 4.1, the site is made up of a rectangular parcel of land and comprises vacant, derelict land with one disused building. There are no statutory or non-statutory land-based designations within the site boundary, nor does the site contain any historic statutory or non-statutory designations. The site is however located within the Impact Risk Zone of the Rochdale Canal Site of Special Scientific Interest and Special Conservation Area. There are no further statutory or non-statutory designations located within 1km of the site.

4.2.6 The site falls within the Salford Air Quality Management Area, which has measured NO_2 exceedances since 2005.

4.2.7 The underlying geographic formation of the site consists of the Chester Formation of sandstone and sedimentary bedrock. The Till, Devensian superficial deposit is also present underneath the site. The site is not located within a Groundwater Source Protection Zone. There are no boreholes present within the site boundary.

4.2.8 The EA Flood Mapping confirms that the site is not located within Flood Zone 1 or 2. There are portions of the site located within the northern and northwestern boundaries that are within a 1 in 1000 year annual likelihood of surface water flooding.

4.2.9 The site and its surrounding context are shown below in Figure 4.2.

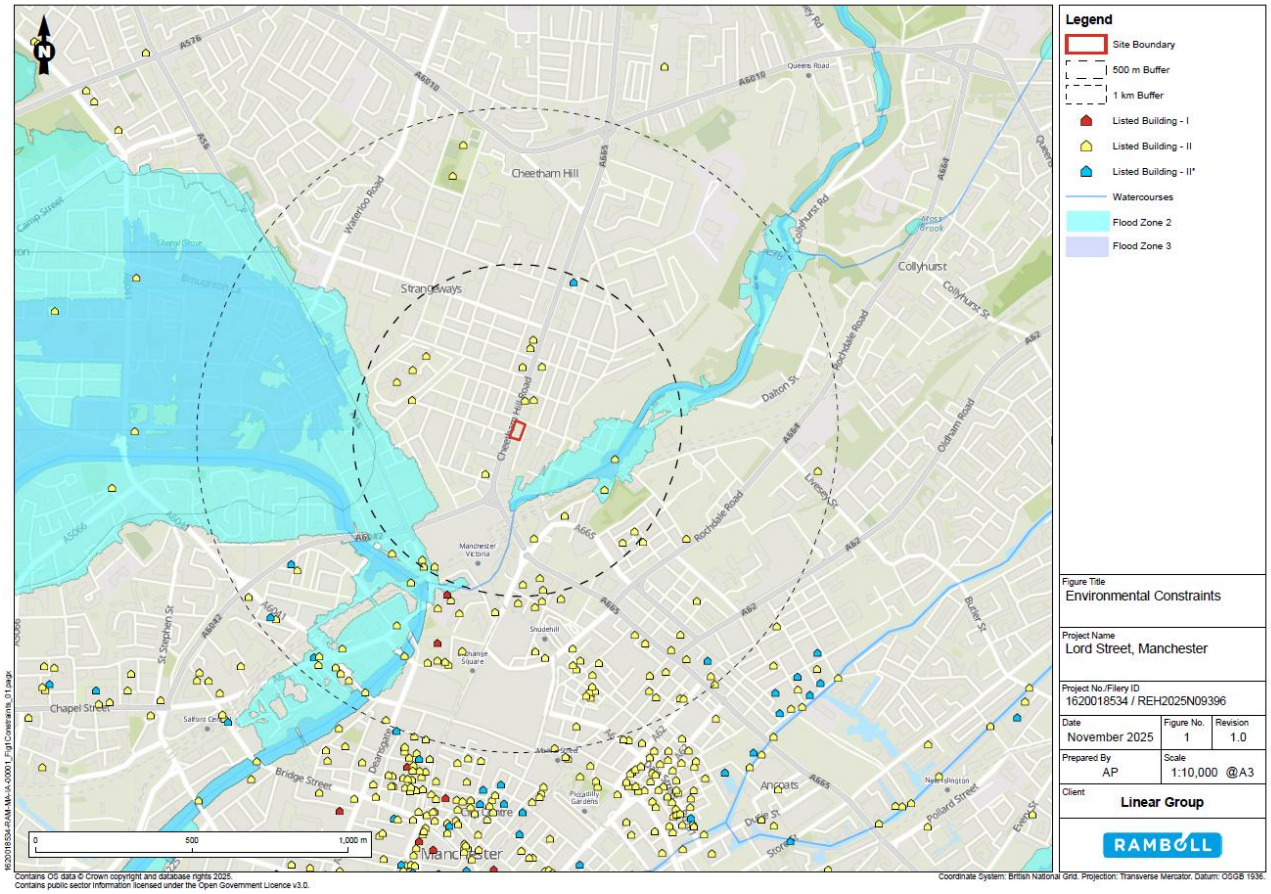


Figure 4.2: Site Context Map

4.3 Current Uses

4.3.10 The site has no current uses and is vacant, derelict land.

5. DESCRIPTION OF THE PROPOSED DEVELOPMENT

5.1 Overview

5.1.1 The proposed development seeks to deliver a 23-storey tower, including a 935 sqm basement, to provide 221 residential units, including a mix of one and two bedroom apartments and townhouses. Four townhouses will be provided at the ground level, with the remaining levels supporting the 217 residential units. The proposed development will be a car free development and will include dedicated cycle facilities at the basement level.

5.2 Demolition, Construction and Operation Programme

5.2.2 It is anticipated that construction of the proposed development will be between 140 and 150 weeks with a construction start in 2027, with completion of the proposed development expected for quarter 4 (Q4) 2029 or Q1 2030.

5.2.3 Table 5.1 below provides an overview of the different stages of construction expected and the indicative plant and equipment required to complete each stage:

Table 5.1: Construction Stages and Plant Required

Work Phase	Plant Required
Mobilisation	Delivery vehicles
Site Preparation	Delivery vehicles; excavator; forklift
Piling	Piling rig; excavator; concrete pump; dumper trucks; muck away wagons; delivery vehicles; concrete bowsers
Groundworks/Substructure/Waterproofing	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; mobile crane
Below ground drainage incl. connections	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
Structural Frame	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; mobile crane; tower crane; goods hoist; passenger hoist
Building Envelope	Delivery vehicles; mobile crane; tower crane; goods hoist; passenger hoist; mast climbers
Roof	Delivery vehicles; tower crane; goods hoist; passenger hoist;
Incoming Utilities	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
Mechanical and Electrical	Delivery vehicles; tower crane; scissor lift; MEWPS
Plumbing, Sprinklers and Drainage	Delivery vehicles; tower crane; scissor lift; MEWPS
Vertical Transportation (Lifts)	Delivery vehicles; scissor lift

Work Phase	Plant Required
Ceiling and Partitions	Delivery vehicles; scissor lift
Internal fit-out	Delivery vehicles; scissor lift
Communal Spaces	Delivery vehicles; scissor lift
Externals	Delivery vehicles; excavators; dumper trucks; concrete pump; dumper trucks; muck away wagons; concrete bowsers; trenching equipment; traffic controls
Test and Commissioning	Specialist testing equipment

5.2.4 It is estimated that the peak construction period will be between weeks 60 and 140 of the build programme likely within 2028-2029.

5.2.5 Construction traffic is expected to reach the site via Cheetham Hill Road before turning onto Lord Street. This will be agreed with local highways authority and will furthermore be included within the Construction Management Plan. Consultation has begun with a local traffic management company to help develop the traffic solution to service the project whilst being sympathetic to the local area and beyond.

5.2.6 The construction of the proposed development is estimated to bring forward approximately 120-140 full time roles, with a peak on-site workforce of around 130-150 personnel.

5.2.7 Throughout construction of the project, it will be ensured that all site staff, subcontractors and waste management contractors will act in accordance with all environmental legislation in relation to waste management. All movements of waste will be accompanied by waste transfer notes. Site staff will ensure that the waste is described as accurately as possible and that the waste transfer note is signed by both the waste producer and the waste carrier. The waste carrier will hand over a copy of the note to a member of Linear site staff prior to leaving the site.

5.2.8 Only registered carriers of waste will be employed for transport purposes and copies of all waste management licenses and exemptions will also be obtained and held on site prior to any movement of waste taking place. For all waste transfers, a copy of the receipt, or a copy of the invoice, from the authorised disposal site as proof that the waste reached the proposed destination.

5.3 Completed Development

5.3.9 Once the proposed development is fully operational, it will be occupied by the future residents of the site. This will be detailed further within the ES.

6. TOPICS SCOPED INTO THE EIA

6.1 Daylight, Sunlight and Overshadowing

Consultations

No consultations are proposed.

Baseline Information

The site is an open parcel of land.

No quantitative assessment of the daylight and sunlight amenity has been undertaken in the baseline condition. Daylight and sunlight amenity of the sensitive receptors, identified below, will be measured as part of the assessment.

Sensitive Receptors

Daylight and sunlight receptors have been identified with reference to the BRE Guidance.

The BRE Guidance emphasises the assessment of residential accommodation, specifically habitable rooms within residential buildings. A non-residential building may be assessed if there is a reasonable expectation of daylight and sunlight, such as hospitals or schools.

The following neighbouring receptors rely on the site for the receipt of daylight and sunlight. Construction of the Proposed Development has the potential to reduce daylight and sunlight amenity of these buildings:

- Britton House, 21 Lord Street, Manchester M4 4FN;
- Jefferson Place, 1 Fernie Street, Manchester M4 4AZ;
- The Hallmark, 6 Cheetham Hill Road, Manchester M4 4GA;
- Melia House, 19 Lord Street, Manchester, M4 4AX; and
- St. Chads Presbytery, Stocks Street, Manchester, M8 8GG

The relevant or sensitive daylight and sunlight receptors around the site are therefore those windows that serve anticipated habitable room uses in the neighbouring buildings noted above.

There are two external amenity spaces in the vicinity of the site. These are area of lawn associated with Britton House, and the garden and landscaping associated with St. Chads Presbytery. We consider that both of these are "external amenity spaces" that would justify time in sun impact appraisal.

Scoped In Impacts	Effects	Assessment Guidance	Study Area

Adverse impacts on Daylight and Sunlight Amenity	Reduction in Daylight and Sunlight Amenity of habitable rooms within sensitive receptor buildings.	Building Research Establishment ("BRE") Digest 209 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice'	The sensitive receptor buildings identified above.
Adverse impacts on Sunlight Amenity	Reduction in Sunlight Amenity of identified external amenity spaces		The external amenity spaces identified above
Scoped out Impacts	**Effects**	**Justification**	
Adverse impacts on Daylight and Sunlight Amenity Impacts of other residential buildings not identified above.	n/a	Due to their distance from the site and spatial relationship with it, habitable rooms of other buildings in the wider vicinity of the site and beyond will not experience any significant adverse impacts on daylight and sunlight amenity.	
Adverse impacts on Daylight and Sunlight Amenity Impacts of commercial buildings	Reductions in daylight and sunlight	In accordance with the BRE Guidance, commercial buildings are not generally considered to be sensitive receptors. None of the non-residential buildings in the vicinity of the site merit further impact assessment.	

Assessment Method

A technical assessment of the daylight and sunlight amenity impact of the Proposed Development will be undertaken to acknowledge the baseline, proposed, and cumulative massing conditions of the site and its surroundings in accordance with the Building Research Establishment's ("BRE") Digest 209 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice'.

A topographically accurate digital 3D massing model of the site and surrounding will be constructed to reflect the baseline, proposed, and cumulative massing scenarios.

The technical modelling will be informed by the following information:

- A photogrammetric model of the site and its surroundings;
- Researched detail of existing and proposed buildings in the vicinity.
- Specialist computer software ("Waldram Tools") will be used to perform the following BRE tests:
- Vertical Sky Component ("VSC") – a measure of sky visibility (from which daylight is derived) and daylighting potential, calculated at the midpoint of a window;
- The measurement of the 'No Sky Line' ("NSL") – a contour line separating those parts of a room that receive direct skylight from that part which does not;

- Probable Sunlight Hours received by neighbouring habitable rooms, measured both annually ("APSH") and during the Winter months ("WPSH"); and
- Time in Sun – the extent to which an external amenity area receives 2 hours of direct sunlight on 21 March. Used to determine whether an external amenity space would appear to adequately sunlit throughout the year and be substantially free of permanent shade.

The BRE Guidance confirms that the numerical targets set out within it are purely advisory, and that alternative targets may be established where appropriate to do so. The methodology for the setting of any alternative targets will be confirmed in the Chapter.

Assessment Scenarios

The impact assessment will consider the following scenarios:

- Baseline conditions;
- Baseline vs Proposed Development; and
- Baseline vs Proposed + Cumulative Schemes.

Assumptions and Limitations

An inspection of the site and its surroundings will be undertaken to identify the window provision of the neighbouring buildings that overlook the site (to the extent that such windows are capable of being observed from the adjacent public highways).

This inspection will be supplemented with a review of Google Earth Imagery.

The interior of the neighbouring buildings will not be inspected. It will, therefore, be necessary to make assumptions regarding the internal arrangement of the neighbouring buildings.

The height between the internal floor level and the window cill in each room of the neighbouring buildings will influence the position of the working plane, which is the level at which the distribution of light is measured. The position of the working plane will be assumed.

Assumptions will be made as to the use and function of the neighbouring buildings. Assumptions will be primarily influenced by observations made during the site inspection.

Neighbouring buildings of residential use will also be identified by reference to Valuation Office Agency records – neighbouring buildings with a Council Tax Band being of residential use.

All assumptions will, where possible, be informed by information available from Manchester City Council's Public Access Planning Portal, as well as other sources available in the public domain including Land Registry plans and sales particulars from the internet.

Future, planning-approved developments to be considered as part of the cumulative impact assessment are yet to start on site. The modelling of these neighbouring buildings and future developments will be based on information that can be downloaded via Manchester City Council's Public Access Planning Portal.

6.2 Wind Microclimate

Consultations

No consultation has been carried out to date on wind microclimate.

Baseline Information

Wind climate data from the northwest region has been acquired from Manchester International Airport, and transposed to the site of interest.

Sensitive Receptors

The sensitive receptors of the wind microclimate are pedestrians users both within the proposed site, and within the immediate surrounds.

Scoped In Impacts	Effects	Assessment Guidance	Study Area
Pedestrian users within the site.	Potential for long term conditions in exceedance of the safety and/or comfort criteria.	Lawson Comfort Criteria	The site
Pedestrian users within the immediate surrounds of the site	Potential for long term conditions in exceedance of the safety and/or comfort criteria.	Lawson Comfort Criteria	The immediate surrounds
Users of the site and immediate surrounds during construction.	Potential for short term exposure to accelerated winds during construction.	Lawson Comfort Criteria	The site and immediate surrounds

Scoped out Impacts	Effects	Justification
N/A	N/A	N/A

Assessment Method

The proposed development will be assessed via CFD modelling against the industry standard Lawson criteria. This will involve the below:

- The construction of a digital model of the site and up to 450m radius distance of the surrounding area.
- Development of a wind climate model, based of nearby weather stations and translated to the site in line with methods set out in ESDU Item 01008.
- CFD modelling of a full range of 16 angles at 22.5 degree increments.

Combination of CFD modelling and wind climate model to assess the impacts in line with the Lawson criteria.

Assessment Scenarios
The assessment will consider the following scenarios: • Existing site conditions, • Proposed development within existing surrounding context, • Proposed development within future surrounding context (cumulative scheme scenario).
7. Assumptions and Limitations
The studies will be carried out computationally via computational fluid dynamics (CFD) methods. The particular method adopted 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. ArcAero conducts regular validation of proprietary CFD processes against experimental results.

6.3 Socioeconomics and Human Health

Consultations
No consultations have been undertaken on the scope of the socioeconomic and human health chapter. Consultation through the scoping process only.
Baseline Information
The site is located within Manchester City Council's Cheetham ward. The Lower Super Output Area (LSOA) in which the project is located is Cheetham Hill, which is within the 50% least deprived LSOAs in England – however is adjacent to the Strangeways LSOA, which is within the 20% most deprived LSOAs in England[1]. Cheetham ward is relatively young - it has a higher proportion of young people than Manchester as a whole (24% when compared with 20% for Manchester) and a lower proportion of older people age 65+ (7% of the population when compared with 10% for Manchester[2]). The city of Manchester has a life expectancy of birth for females of 79.9 (78.2 for all England) for males at 75.2 (73.4 for all England) and a healthy life expectancy at birth for both sexes of 57.6 (51.8 for all England)[3]. It performs worse than the England average for some determinants of human health such as night-time noise exposure, air pollution, access to fast food outlets and fuel poverty[4]. There are five GP surgeries within a 1.5km radius distance. The nearest hospital (with Accident and Emergency Department) is North Manchester General Hospital. There are 12 state primary schools within the Department for Education's recommended 2 mile walking distance to school, and 9 secondary

[1] English Indices of Multiple Deprivation available at: https://imd.localinsight.org
[2] ONS (2020). Population estimates - small area based by single year of age - England and Wales
[3] PHE Fingertops tool – Public Health Outcomes Framework
[4] PHE Fingertips tool - Wider Determinants of Health

schools within the recommended 3 mile walking distance. The nearest public open space is St. Michael's Flags and Angel Meadow Park, 0.8 km walk from the site.

The baseline will be established by means of desk-top review using publicly available data (as detailed below) to present the current demographic, housing, economic and health statistics.

The baseline socio-economic profile will be established as follows:

- Demographic, economic and housing baseline will be determined using the most up-to-date publicly available data including Census data (where possible 2021 Census, where not 2011), Business Register and Employment Survey (BRES), Claimant Count, Housing delivery data from the GLA's Residential Completions Dashboard and Indices of Multiple Deprivation (IMD);
- Open space and playspace baseline will be established using MCC information and open source data.

Sensitive Receptors

As well as the population of the site and surrounding area as a whole, consideration will be given to the key identified vulnerable groups in the local area. The assessment will establish whether the sensitivity of these vulnerable groups and the significance of effect on them would differ from that of the general population.

Scoped In Impacts	Effects	Assessment Guidance	Study Area
Housing	Provision of housing to meet local needs	Manchester policy	Manchester (local) and Greater Manchester (regional)
Open space, leisure and play	Increased demand for open space, leisure and play	Manchester policy	Local area (Cheetham Ward)
Employment and income	Will the proposed development increase or reduce employment opportunities for construction workers	Quantitative assessment based upon project costs, output from construction employment and additionality/displacement factors; Department for Business, Energy and Industrial Strategy; ONS (Sub-Regional Productivity); and HCA Additionality Guidance.	Manchester (local) and Greater Manchester (regional)
Built environment	Will the proposed development lead to a reduction in daylight and	See daylight, sunlight and overshadowing (DSO) and wind micro scoping text	See proposed study radiuses for DSO and wind.

	sunlight experienced by surrounding residents Will the proposed development lead to unsuitable or unsafe wind microclimate conditions. Will the proposed development be designed in a way that contributes to health, including principles of inclusive design.	HUDU guidance	Local area (Cheetham Ward)
Scoped out Impacts	**Effects**	**Justification**	
Risk-taking behaviour	Increased risk taking behaviour as a result of the Proposed Development.	The Proposed Development will comprise a single tower building with private residential amenity. No aspects of the Proposed Development when operational are expected to encourage risk taking behaviour. Access to the construction site will continue to be prevented by hoarding preventing trespassing on the construction site. Therefore there is not expected to be an increase in risk taking behaviour as a result of the Proposed Development.	
Diet and nutrition	Increased or decreased access to healthy / unhealthy food for existing residents. Introducing new residents to a 'food desert'.	The site is located within the lowest scoring decile for food deserts according to the Consumer Data Research Centre[1], indicating a good level of access to grocery stores and healthy food. The Proposed Development would not introduce fast food establishments or takeaways to the location, and no food establishments are lost by the Proposed Development.	
Employment and income	Will the proposed development increase or reduce employment opportunities.	There will be some employment as a result of construction of the Proposed Development. Our calculations for a similar scheme in Manchester indicated a potential for 305 net direct construction jobs for Greater Manchester residents	
Transport modes, access and connection	Increased traffic Support for new residents to access public and active transport.	As noted in the transport and access section of the Scoping Report, no likely significant effects on pedestrians, cyclists, drivers and public transport users are anticipated. The Proposed Development is car free with a cycle parking space per apartment. The Proposed Development provides	

		access to Cheetham Hill Road adjacent to a traffic light controlled crossing. Therefore, local residents will be able to access public transport and will be able to walk safely around the local area.
Relocation	Relocation of existing residents, businesses or service users from a site prior to demolition.	The site is cleared, vacant land with no site users.
Community identity, culture, resilience and influence	Removal or reduction of access to community venues. Introduction of a large external population to a close community	The proposed development would be located in central Manchester in Cheetham Hill, a culturally diverse area of Manchester that is undergoing substantial transformation under Manchester City Council's long term regeneration strategy. The immediate surroundings comprise a number of similar new, taller residential buildings, as well as larger retail stores and industrial units. The built form of the area is therefore unlikely to be a key factor in community identity in the immediate surroundings. The site is also derelict and does not contribute to community identity.
Social participation, interaction and support	Provision or removal of opportunities for social participation and interaction.	As the site is currently derelict there would be no opportunities for social participation, interaction or support removed as part of the development. No community or commercial uses or public open space are proposed as part of the Proposed Development and therefore no new opportunities would be provided.
Education and training	Increased strain on primary and secondary resources from introduced population.	The Proposed Development comprises 221 residential units however most units comprise bedroom and two bedroom apartments. Child yield is therefore anticipated to be low. There are 228 spaces in primary schools in the surrounding area therefore even on a highly conservative estimate of one child per apartment there would be sufficient spaces to accommodate primary school age children. There are 536 secondary schools in the local area (although only 173 are of no religious character) and on a highly conservative estimate of one child per apartment there would be sufficient spaces to accommodate secondary school age children, assuming that some of these children would be accommodated in the Muslim and Christian character open intake schools in the area. Therefore, there are no likely significant effects on primary or secondary education and therefore no likely associated health effects.

Air Quality	Increased pollution (Nitrogen dioxide and particulate matter) due to the proposed development. Introduction of new residents to an area of poor air quality.	An Air Quality Assessment has been undertaken by Redmore environmental consultants **(Appendix 4)** which has considered the potential air quality impacts associated with construction dust, operational transport, and the introduction of new receptors. Provided the site specific dust risk mitigation measures set out in that report – which will be detailed in this ES – are secured, all air quality effects are expected to be negligible and there would be no likely significant effects on human health.
Water Quality	Contamination of surface water and groundwater	The site is 240m from the River Irk and 600m from the River Irwell however there is substantial intervening development. Construction will follow all standard pollution control measures. As set out in the scoping section for water resources and flood risk below, no likely significant effects on water quality are expected.
Land Quality	New contact with existing contaminated soil. Contamination of soil.	As set out in the scoping section for contaminated land and ground conditions, no likely significant effects on land quality are expected.
Noise and Vibration	Exposure of site users and surrounding receptors to elevated noise or vibration during construction or operation.	As set out the scoping section for noise and vibration, no likely significant effects on noise and vibration are expected.
Radiation	Exposure of site users and surrounding receptors to radiation during construction or operation	The Proposed Development will not be a source of radiation during either construction or operation
Crime and community safety	Increased rates of crime or increased perception of crime.	The site security arrangements for the Proposed Development during the construction phase will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015. The design of the Proposed Development will be informed by 'Secured by Design' principles and appropriate measures to ensure safety for residents, workers and all others accessing and using on-site spaces.

Climate change mitigation and adaptation	Greenhouse gas emissions and impact of climate change on sensitive populations Adaptation to climate change	As set out the scoping section for climate change and greenhouse gases, no likely significant on climate change mitigation and adaptation are expected.
Health and Social Care Services	Increased demand for health and social care services from introduced residents.	The Proposed Development would include 221 residential units – a mix of 1 and 2 bedroom apartments and townhouses. Using a conservative assumed average of 2.5 residents per residential unit, this would lead to an anticipated population of 553 leading to the requirement for an extra 0.3 FTE GP on the basis of the NHS HUDU unit's recommendation for one GP per 1,800 patients. There are five medical practices with a total of 35.6 FTE GPs within 1km, serving a total of 45,915 patients. This leads to GP:patient ratio of 1:1,290, within the recommended GP:patient ratio and with space to accommodate an additional 553 patients. Therefore there is not anticipated to be any likely significant effect on demand for health and social care services.

Assessment Method

The determinants of health above are as set out in IEMA (now ISEP)'s 2022 Guide to Scoping in Human Health Assessment, and are considered the most relevant determinants of human health in the wider framework for developments of this nature.

The approach to sensitivity, magnitude and significance will be as set out in IEMA (now ISEP)'s 2022 Guide to Determining Significance for Human Health in Environmental Impact Assessment. The assessment will utilise professional judgement to assign sensitivity, magnitude and significance.

The assessment will be based on quantitative estimates of population and child yield from the proposed development.

Assessment Scenarios

The construction phase assessment will focus on employment creation from construction only, as all other relevant impacts such as noise, air quality and transport are not anticipated to generate likely significant effects as set out in the relevant topics of this Scoping Report. This will consider the duration of the construction phase.

The operational phase assessment will focus on the three determinants of human health likely to be significant (built environment, open and play space, and housing) identified above.

The assessment scenarios will be as follows:

Demolition and Construction Stage:

- Scenario 1: Existing Baseline

• Scenario 2: Existing Baseline + Proposed Development • Scenario 3: Existing Baseline + Proposed Development + Cumulative Schemes (based on information in the public domain, if available) **Completed Development Stage:** • Scenario 1: Existing Baseline • Scenario 2: Existing Baseline + Proposed Development • Scenario 3: Existing Baseline + Proposed Development + Cumulative Schemes (based on information in the public domain, if available)
Assumptions and Limitations
• The assessment would not seek to demonstrate policy compliance in respect of affordable housing provision as this will be covered in the Planning Statement and/Affordable Housing Statement/Viability Assessment. • The assessment will be desk-based and uses published public sources of information.

6.4 Climate Change and Greenhouse Gases

Consultations

No consultations have been undertaken to date relating to climate change and greenhouse gases.

Baseline Information

The site is currently vacant and provides no uses. It is therefore assumed that GHG emissions associated with the site are zero.

Sensitive Receptors

Global atmosphere from emission of greenhouse gases associated with the proposed development during construction and operation; and

Human health from impacts to construction workers and future on-site residents and visitors.

Scoped In Impacts	Effects	Assessment Guidance	Study Area
Demolition and clearance of the existing derelict structure and habitat on site and construction of the proposed development	Increase in GHG emissions into the global atmosphere	ISEP Guide to 'Assessing Greenhouse Gas Emissions and Evaluating their Significance'	GHG emissions arising from demolition, construction and operational activities within the site and proposed development.

Operation of the proposed development in relation to greenhouse gas emissions	Increase in GHG emissions into the global atmosphere	ISEP Guide to ' Assessing Greenhouse Gas Emissions and Evaluating their Significance'	GHG emissions arising from demolition, construction and operational activities within the site and proposed development.
Scoped out Impacts	**Effects**	**Justification**	
Demolition, construction and operation of the proposed development and the resilience of the proposed development to climate and climate change impacts	Increased rainfall and associated water effects including flooding and drainage increases Increases in heatwaves and drought resulting in changes to water availability, working conditions Increased windstorms and conflict with construction and construction programme	The ISEP Guidance includes the following with regard to EIA scoping of climate change resilience: 'In order to complete Scoping of the EIA, agreement with key stakeholders on the most appropriate climate change projection is required to adopt for the assessment and any necessary methodological considerations to ensure climate change is appropriately considered. This may include the exclusion of explicit consideration of climate adaptation and resilience issues if it is agreed that existing design codes or standard assessment methodologies contain adequate in-built consideration of adaptation and resilience issues[5]'. The climate change resilience assessment has been scoped out on the basis that potential impacts from extreme weather and projected impacts on the proposed development as a result of climate change would be sufficiently considered within the other relevant disciplines or standalone planning documents. These include but are not limited to: • Construction Management Plan; • Design and Access Statement; • Flood Risk Assessment and Drainage Strategy; • Landscape Strategy; • Air Quality Assessment; and • Construction and Operational Waste Management Plans.	
Assessment Method			
The Climate Change assessment and ES chapter will draw upon relevant guidance, principally from ISEP's 'EIA Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance'. This will include:			

[5] ISEP, Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation

- Estimate GHG emissions from the clearing of the vacant site and demolition of derelict structure using appropriate benchmarks such as BRE[6]
- Estimate GHG emissions from the construction of the Proposed Development from any construction carbon lifecycle assessment (LCA) previously undertaken or using appropriate benchmarks (RICS, LETI).
- Estimate annual operational GHG emissions from the Proposed Development drawing on information on electricity and gas (if proposed) demand provided by the Environmental Standards Statement
- Review the GHG emissions mitigation proposed for the construction and operational phases and support the development of additional mitigation as appropriate;
- Estimate residual construction and operational phase GHG emissions and report the in the context of baseline GHG emissions from within the local authority area, and also future carbon budgets proposed for Manchester, in order to establish their magnitude;
- Evaluation the contribution or otherwise of the proposed development and associated GHG mitigation measures to the UK and Manchester's net zero targets; and
- Report the approach to, and findings of the above within a Climate Change ES Chapter including a summary of mitigation measures, residual GHG effects and whether these are considered significant.

The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible), the magnitude of change (on a scale of large, medium, small and negligible), contribution of the Proposed Development to UK and Manchester net zero targets and also professional judgement in order to determine significance of residual effect on a scale of major adverse, moderate adverse, minor adverse, negligible or beneficial.

Assessment Scenarios

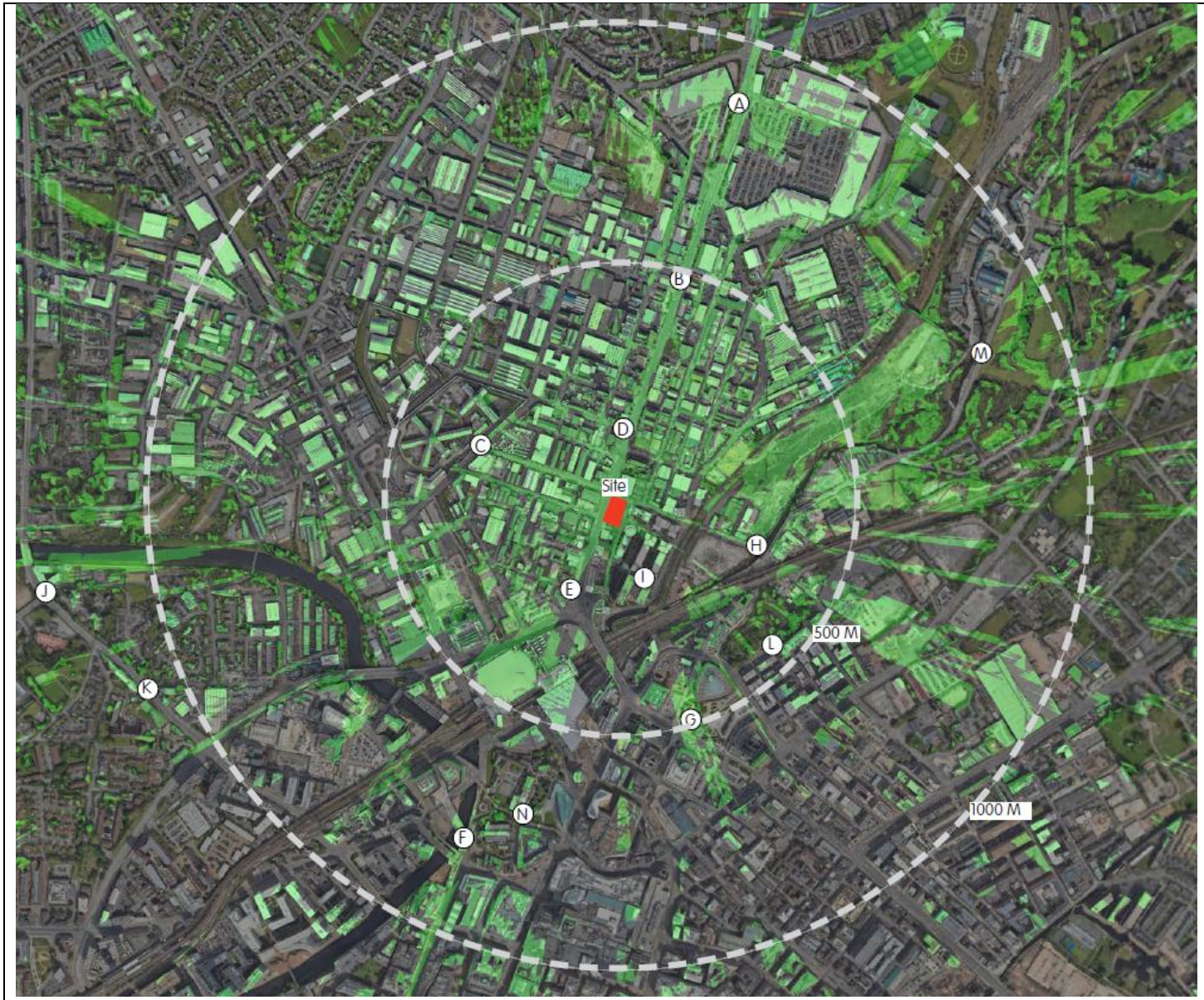
- Demolition and Construction Stage (and Cumulative Stage):
- Scenario 1: Existing Baseline
- Scenario 2: Existing Baseline + Proposed Development
- Scenario 3: Existing Baseline + Proposed Development + Cumulative Schemes (based on information in the public domain, if available).
- Completed Development Stage (and Cumulative Stage):
- Scenario 1: Existing Baseline
- Scenario 2: Existing Baseline + Proposed Development
- Scenario 3: Existing Baseline + Proposed Development + Cumulative Schemes (based on information in the public domain, if available).
- End Of Design Life
- Scenario 1: Completed Proposed Development End of Design Life (60 years)

[6] Benchmarks for Predicting and Forecasting Construction Waste; Annex 3 (BRE 2009).

Assumptions and Limitations
• Future UK electricity grid factors published by the Department for Business, Energy and Industrial Strategy (BEIS) are projections which may not reflect the actual carbon emissions associated with grid electricity consumption in future. That said, BEIS projections have slightly underestimated the rate of grid decarbonisation in recent years, and as a result any inaccuracy in these projects may actually over-estimate GHG emissions associated with the proposed development. • Annual GHG emissions for the proposed development are estimated from information on the Dwelling Emissions Rate as provided by the Energy Strategy Report. It is possible that the energy strategy further develops as part of detailed design; however any such changes are considered unlikely to materially change the determined magnitude of change or significance of effect identified within this chapter. • The proposed development will generate vehicle trips on the local road network during demolition and construction and operational phases. Demolition and construction phase transport CO2 emissions are accounted for in the embodied carbon LCAs undertaken for the project (RICS lifecycle stage A4).

6.5 Townscape and Visual Impact

Consultations
Manchester City Council Planning Officers have confirmed proposed the zone of theoretical visibility (ZTV) and Viewpoints on 03/11/2025.
Baseline Information
Townscape baseline – This will set out Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) definitions of townscape character, conservation areas, landmark corridors, legibility, skyline, grain, height, massing. **ZTV and Viewpoint –** A ZTV, and viewpoint locations within a 1km radius of the site, are shown in the plan below.


A
B
C
D
Site
E
F
G
H
I
J
K
L
M
N
500 M
1000 M

The proposed verified views are to include:

A. Manchester Fort.
B. Manchester Jewish Museum.
C. Lord Street and Strangeways.
D. Manchester Oratory.
E. Cheetham Hill Road and Park Street.
F. Manchester Cathedral.
G. Angel Gardens.
H. Roger Street.
I. Green Quarter.
J. Blackfriars/Silk Street.
K. Blackfriars/Greengate West.
L. Cathedral Gardens.
M. Angel Meadows.
N. Collyhurst Road.

Policy/context:

The following policies are relevant to the TVIA:

- National Planning Policy Framework
- Place for Everyone
- Manchester Local Plan
- Strangeways SRF
- Great Ducie Street SRF

Sensitive Receptors

Residents on Lord Street, Roger Street, Park Street, Angel Gardens and wider Cheetham Hill and Red Bank neighbourhoods.

Users of public spaces/routes: Angle Gardens, Cheetham Hill Road corridors, local centres, cathedral precinct, Manchester Fort retail park, pedestrian/cycle links.

Heritage/townscape receptors: Manchester Cathedral, Manchester Jewish Museum, Manchester Oratory; designated conservation areas/landmarks contributing to city identity.

Scoped In Impacts	Effects	Assessment Guidance	Study Area

Townscape character effects (height/scale, massing, grain, skyline contribution)	Altered character, legibility and landmarking; potential beneficial legibility vs adverse scale in fine-grain streets	GLVIA3	1 km
Visual amenity of the public realm	Changes to composition, enclosure, focal points, sky visibility		1 km
Heritage-related views (setting experienced visually)	Changes to how assets are seen in their townscape (e.g., Cathedral, Jewish Museum, Oratory)		1 km
Cumulative visual/townscape effects	Combined skyline and sequential effects with consented/proposed tall buildings		1 km
Scoped out Impacts	**Effects**	**Justification**	
Views beyond 1km	Negligible (the site will read as part of the existing skyline)	Not applicable in inner-city context per GLVIA3 townscape definitions.	
Private interior views	Not assessed	Planning considers outdoor visual amenity and outlook; no "right to a view"	
Glare/reflectivity studies	Not material	Façade specs handled under lighting/daylight/solar glare disciplines; TVIA addresses perceptual night presence only	

Assessment Method

The assessment will be undertaken in line with GLVIA3 (LI/IEMA) and will be significance-led, proportionate TVIA with the following aspects: baseline characterisation; receptor sensitivity; magnitude of change; significance (adverse/beneficial/neutral). This will be based on Accurate Visual Representations (AVRs) from agreed viewpoints using LI TGN 06/19 (camera/lens metadata, survey control, horizon matching; AVR Level 2/3 photomontages as appropriate. The cumulative assessment will include consented/under-construction/allocated tall buildings in the visibility envelope; this will assess combined/sequential effects.

Assessment Scenarios

- Baseline (existing).
- Demolition and construction phase (cranes/temporary lighting/hoardings).
- Completed development phase.

• Completed development + cumulative schemes (with relevant tall buildings pipeline within the ZTV).
Assumptions and Limitations
The ZTV is prepared to building metres above ordnance datum (AOD) plus typical rooftop plant; tree foliage modelled leaf-on/leaf-off as appropriate; ZTV shows theoretical visibility only. Photography and AVRs are prepared in line with TGN 06/19: with calibrated cameras/lenses, tripod heights, control points; weather/air clarity within LI tolerances; inevitable limits re transient street clutter. Access and safety may restrict some exact camera positions; nearest safe public proxy will be used and reported.

7. TOPICS SCOPED OUT OF THE EIA

7.1 Ecology

7.1.1 A Preliminary Ecological Appraisal (PEA – **Appendix 5**) was undertaken for the site on 18th September 2025 alongside a desktop study. Features within the site boundary and accessible features immediately bordering it were evaluated and the extent and distribution of habitats and plant communities were recorded. Fauna using the area were recorded and areas of habitat suitable for statutorily protected species were identified where present, with an active search carried out for evidence of such use. In addition, a review of readily available ecological information and other relevant environmental databases (included Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website) was undertaken for the site and vicinity. In addition, a biological records search from Greater Manchester Local Records Centre (GMLRC) were reviewed to identify the location and citations of local non-statutory designated sites and presence of records for notable and protected species. This provided the overall ecological context for the site. In addition, a Preliminary Roost Survey was undertaken simultaneously to the PEA, of the one derelict structure still standing on the site.

7.1.2 No statutory designated sites were identified within 1 km of the site boundary. However, the site is located within the Impact Risk Zone of the Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), located approximately 5 km to the east. As per the criteria listed on MAGIC, the proposed site will not require further consultation with Natural England to proceed in relation to the SSSI due to the size of the site and the nature of the proposed works. Furthermore, no negative impacts to the SAC are anticipated as a result of the development and therefore a Habitat Regulations Assessment will not be required.

7.1.3 The site area is vacant, derelict land with one abandoned structure present. The site context surrounding the site is urban in nature and comprise roads, commercial unites and high-rise residential dwellings. No Biodiversity Action Potential Priority Habitats are present within or around the site, with the closest of these habitats being open mosaic land located approximately 250m east of the site. No invasive non-native plant species were identified on or in proximity to the site. Native species identified on site include field horsetail however this was identified as a low density. No suitable habitat corridors exist between the site and closest priority habitats. Existing habitats on site include sparsely vegetated urban land and structures. The River Irk is the closest body of water to the site, located approximately 560m southwest. There is no ecological or marine connectivity between the site and the river.

7.1.4 The site contains no record of amphibians present and contains no suitable waterbodies for amphibians. The vegetation and rubble piles may provide shelter for amphibians within the site however these amphibians could be moved by hand during construction if encountered.

7.1.5 The onsite structure was assessed as part of the Preliminary Roost Survey as having low roosting potential for bats and breeding birds. The small size of the site, lack of linear habitats and its surrounding urban context limit its potential to provide value for foraging or commuting bats. Further consultation with GMEU identified records of bats within 1km of the site, with the closest record of a bat being approximately 90m southwest of the site from 2014. It is recommended that bat and bird boxes be implemented into the design of the proposed development.

7.1.6 The site provides suitable refuge and foraging habitat for mammals including hedgehogs and badgers, however neither of these species were recorded as present on site. A small mammal hole was located on site however no mammals were found to be present within. It is not anticipated that the proposed development will have a significant negative impact upon mammals within the area. Where vegetation requires removal, it should be checked for the presence of mammals prior to removal.

7.1.7 Consultation with the GMEU did not locate any records of reptiles within 1km of the site. The habitats onsite could support reptile species within the vegetation, however due to a lack of suitable habitats and habitat connectivity within the local area and the urban habitats which were present on the site within the recent past, reptiles are not anticipated to be onsite and do not need to be considered further within the construction or operation of the proposed development.

7.1.8 As such, impacts to ecological receptors including protected habitats and species are unlikely to be considered significant and should be scoped out of the ES.

7.2 Water Resources and Flood Risk

7.2.9 The closest watercourse to the site is the River Irk, located approximately 560m southwest of the site. No water features are present on the site.

7.2.10 Environment Agency (EA) Flood Maps for planning show that the entirety of the site is located within Flood Zone 1, therefor the site is at 'low' risk (<0.1% Annual Exceedance Probability) of flooding from rivers and sea.

7.2.11 The EA's indicative online surface water flood risk maps show the entirety of the site to be at very low risk of surface water flooding in both the 1 in 30 and 1 in 100 year Annual Likelihood of Flooding calculations. A small portion northern and northwestern area of the site is shown to have a 1 in 1000 Annual Likelihood of flooding, however this still puts the site at a very low potential for surface water flooding.

7.2.12 In terms of drainage, there are a number of sewers within the vicinity of the site. Although the site is shown to be at a very low risk of surface water flooding, a majority of Manchester is designated as a Critical Drainage Area. This is detailed in the Level 1 Strategic Flood Risk Assessment (SFRA) Critical Drainage areas map produced jointly by MCC, Salford City Council and Trafford Metropolitan Council[7].

7.2.13 The site is located within Flood Zone 1, which is land considered at Low Probability of flooding from rivers and sea as well as an area predicted to be at a low susceptibility to groundwater flooding. Furthermore, all future surface water generated by the Proposed Development will be managed through a site specific drainage strategy and design. The drainage strategy and design for the Proposed Development will account for any increased surface water runoff (including from the building façades) and maintain or reduce surface water runoff and associated flooding (including surface water attenuation and betterment provided as part of the sustainable drainage system (SuDS) strategy for the site). This will include an allowance for climate change in line with Environment Agency guidance. It will also be designed in line with CIRIA SuDS manual[8].

7.2.14 Drainage features will be developed to provide sufficient control of surface pollutants as necessary, providing suitable levels of treatment for surface water which will remove pollutants prior to discharge to the wider aquatic environment. Details of the treatment plan for all surface water runoff from the development will be included in the final drainage strategy submitted with the planning application.

7.2.15 Based on the information provided above, adverse changes to water resources and surface water flooding are unlikely to be considered significant and will not be considered further within the ES.

7.3 Ground Conditions

7.3.16 A Phase 1 Detailed Desk Top Study was undertaken for the site as part of the previous site consent under planning application 113914/FO/2016. Previous site uses include residential and commercial uses of the site since the 1840s, with the site becoming disused in the 1990s.

[7] Salford City Council and Trafford Metropolitan Borough Council (2011) MST SFRA current critical drainage area map
[8] The SuDS Manual, C753, CIRIA 2015

surrounding land use has historically been residential and industrial, with railway lines 150m east of the site and a disused gas works located 500m east of the site respectively.

7.3.17 Envirocheck records and British Geological Survey (BGS) mapping records indicate that the site is underlain by the Chester Formation of sandstone and sedimentary bedrock along with the Till, Devensian superficial deposit. Adjacent to the eastern site boundary artificial made ground has been reported. There are four BGS fault lines located within 1 km of the site, the closest of these being 10m to the northwest of the site and runs in a northwest to southeast direction. There are no boreholes contained within the site boundary, however there a number of BGS recorded boreholes located around the site boundary, the closest of these being 80m south of the site boundary.

7.3.18 Envirocheck records further confirm that there is very low to no risk from ground stability hazards on and around the site including running sands, collapsible ground, landslide ground, shrinking or swelling clay or ground dissolution.

7.3.19 The Radon atlas for England and Wales confirms the site is in a lower probability radon area, as less than 1% of homes are above the action level. No radon protective measures would be necessary in the construction of the proposed development.

7.3.20 One BGS recorded landfill site is recorded within 1 km of the site approximately 725m northeast of the site.

7.3.21 Zetica unexploded ordnance mapping reports the site to be in medium risk for unexploded ordnance. There are two former Luftwaffe target sites within 1 km of the site. A search of Bomb Damage Maps from the University of Manchester has shown that the site and immediate surrounding area did not receive any direct hits. As the site was occupied during WWII, it is unlikely that UXO would remain unrecorded on site.

7.3.22 During demolition and construction, there is the potential for adverse environmental effects to arise due to the disturbance of existing on-site contamination, including the migration of contamination to ground, soil, surface water and ground water. There is also the potential for the accidental release of new contamination due to onsite activities. However, all on-site enabling and construction activities will be undertaken in line with Construction Design Management Regulations (CDM), CL:AIRE Development Industry Code of Practice, as well as best practice measures.

7.3.23 Based on the information provided above, adverse changes to ground conditions are unlikely to be considered significant and will not be considered further within the ES.

7.4 Transport

7.4.24 The site is currently accessible through Lord Street and Cheetham Hill Road, however it is blocked by scaffolding and not open to the public. The site is located within the city centre which offers access to transport and local amenities within a short walk. Manchester Victoria Station is located approximately 355m to the south of the site. The site is not operational and therefore has no vehicle movements associated.

7.4.25 The Chartered Institution for Highways and Transportation (CIHT) classifies that an average pedestrian is capable of walking 400m every five minutes. This is the same metric for a 'desirable' walking distance. Within this distance from the site there is a range of local amenities including food shops, public houses and restaurants. CIHT further defines a 1km walk as an 'acceptable' walking distance. Within a 1 km site buffer there are further amenities and opportunities for employment access alongside retail and leisure centres.

7.4.26 Based on the above, the site is deemed to be highly accessible on foot and that there are numerous uses within walking distance from the site.

7.4.27 Cyclist availability is also considered to be highly accessible from the site area, with an 8km cycle radius providing access to Manchester City Centre and surrounding areas. Local routs are located within close proximity to the site along the A56 Bury New Road, Corporation Street and along the River Irwell. There are cycle lanes along Cheetham Hill Road to the north of the site as well as advanced cycle stop lines on all the signal junctions along this road. These routes link the site to the National Cycle Routes Network.

7.4.28 The site benefits from its highly accessible location for public transport with train, tram and bus services available within a short walking distance, with the nearest bus stop being located approximately 75m south of the site along Cheetham Hill Road. The closes rail accessibility is from Victoria Station approximately 700m south of the site, which also provides access to the Manchester Metrolink.

7.4.29 The proposed development would be accessed via Fernie Street, which runs along a northeast to southwest alignment linking with lord street to the north. It provides access to the residential apartments along its length as well as the Park Inn Hotel. The proposed development is car free in nature and will not create any operational trips. Proposed cycle parking includes one space per allotment, totalling 221 spaces. The provision includes 11 spaces 5% designed for adapted cycles

7.4.30 There have been a total of 11 traffic collisions in the latest five-year data available, with one of these classes as serious. No significant correlations have been identified to suggest that highway condition, layout or design were significant contributory factors within the surrounding site area. It is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.

7.4.31 Given the surrounding road network and industrial character of the existing area along Cheetham Hill Road, the road is not considered to be a sensitive area or receptor as defined under ISEP's 'Environmental Assessment of Traffic and Movement[9]'.

7.4.32 Demolition and construction phase of the Proposed Development will result in the addition of temporary traffic on the local road network as a result of movement of plant/machinery, workers (including subcontractors) and deliveries/collections/removal of waste. The additional traffic generated by demolition and construction activities will include a greater level of Heavy Goods Vehicles (HGVs) alongside general trips from construction staff and contractors.

7.4.33 The exact number of trips anticipated to be generated by the construction of the proposed development is currently not know and is subject to the specific construction phasing and timings, which will be determined by the principal contractor. It is considered that the construction traffic generated is likely to be similar to that of associated developments within the area, resulting in a total of 30 2-way Heavy Goods Vehicle (HGVs) trips during peak construction time. This would result in an uplift of 26% HGVs commuting within the site area when compared to the 2024 yearly average annual flow data observed by the Department for Transport, which reported an average of 223 HGVs travelling within the site area in 2024[10]. Under ISEP's 'Environmental Assessment of Traffic and Movement', non-sensitive road networks may allow for a temporary increase of under 30% uplift in HGV traffic flows during the construction period without requiring assessment in EIA.

7.4.34 In order to reduce adverse effects associated with the construction phase a traffic logistics plan (TLP) (or equivalent) will be implemented through demolition and construction phase and managed as part of the CEMP. The TLP will adopt good practice measures, which will be enforced by the appointed contractor, including provisions of traffic routing, management of deliveries and appropriate signage. Such embedded mitigation measures would be considered an integral part of the Proposed Development and controlled as part of the CEMP. As such, adverse effects resulting

[9] ISEP – 'Environmental Assessment of Traffic and Movement' 2023
[10] Road Traffic website - Manchester

from construction traffic are not considered to be significant and will not be considered further within the EIA or reported in the ES.

7.4.35 During the operational phase of the proposed development, potential environmental effects relating to traffic and transport are solely associated with the level of operational traffic. To inform the early stages of design development, appraisal of future development trips has been conducted. This is provided within Table 7.1 below and is based upon a figure of 221 residential dwellings.

Table 7.1: Operational Trip data

Time Period	Trip Rates			Trip Generation		
	Arrive	Depart	Total	Arrive	Depart	Total
People						
AM (08:00 – 09:00)	0.077	0.521	0.598	17	113	130
PM (17:00 – 18:00)	0.206	0.108	0.314	45	23	68
Daily (07:00-21:00)	2.212	2.423	4.635	480	526	1006
Vehicles						
AM (08:00 – 09:00)	0.021	0.031	0.052	5	7	11
PM (17:00 – 18:00)	0.046	0.021	0.067	10	5	15
Daily (07:00-21:00)	0.453	0.418	0.871	98	91	189

7.4.36 As observed by DfT in 2024, the number of all vehicles passing throughout the site area on the adjacent Cheetham Hill Road was 17,029. Table 7.1 demonstrates that there could be between 11 and 15 two-way vehicular movements generated by the proposed flats in the AM and PM peak respectively. The proposed development is also entirely residential in nature and as such would not require servicing trips for commercial uses.

7.4.37 As such, it is not foreseeable that the proposed development, especially given its car-free design, has the potential to create any adverse traffic impacts to existing highway network. Therefore, operational traffic has been scoped out of the assessment and will not be considered further within the ES.

7.5 Air Quality

7.5.38 The site lies within the Greater Manchester Combined Authority Air Quality Management Area (AQMA), designated for exceedances in nitrogen dioxide (NO_2).

An Air Quality Assessment (to be submitted alongside the planning application) was undertaken during October 2025. This included a construction phase assessment including risks to human health and an operational phase assessment .

Monitoring as set out in Table 7.2 of annual mean concentration of NO2 shows that annual mean concentrations are below the Air Quality Objective of 40 µg/m3 at 9 out of 12 local monitoring locations. The remaining three locations, with exceedances in bold in Table 7.1 are located at roadside positions adjacent to an A-road within an AQMA, elevated results would be expected. Concentrations were below the AQO at all other monitoring locations in recent years.

Table 7.2 - Monitoring Results Annual Mean NO2 Concentration

Monitoring Site	Monitored Annual Mean NO2 Concentration (µg/m3)			
CAP_SALF_060	A6042 (Trinity Way)	31.0	33.7	31.3
CAP_MANC_051	A665 (Miller Street)	**50.2**	-(a)	**49.0**
CAP_MANC_076	A665 (Miller Street)	29.5	27.3	26.5
CAP_MANC_077	A665 (Miller Street)	32.2	29.1	27.6
CAP_MANC_115	Gt Ducie St	34.6	33.2	-(b)
CAP_MANC_116	Gt Ducie St	39.1	-(c)	-(c)
CAP_MANC_136	A665	**44.1**	-(a)	**41.7**
CAP_MANC_137	A665	**46.9**	**43.6**	-(a)
CAP_MANC_192	A56 (Great Ducie Street)	-(d)	-(d)	29.3
MA26ANO	Cheetham's School	27.5	24.5	24.6
MA88NO	Angel St	35.7	32.7	30.3
MA104BNO	Cheetwood Primary School, Waterloo Road	37.9	34.5	31.1

Note: (a) Data not available.

(b) Monitor decommissioned in 2024.

(c) Monitor decommissioned in 2023.

(d) Monitor commissioned in 2024.

Predictions of background annual mean pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. As shown in Table 7.3, predicted background annual mean NO2, PM10 and PM2.5 concentrations are below the relevant AQOs and Interim Target at the proposed development site according to these data.

Table 7.3 Defra Background Pollutant Concentration Predictions

Pollutant	Predicted Background Pollutant Concentration			Air Quality Objective
	2024	2025	2026	
NO2	18.65	18.03	16.14	40

PM10	13.42	13.38	13.21	40
PM2.5	7.82	7.76	7.59	12

7.5.39 Consequently, it is expected that annual mean pollutant concentrations are expected to be well within the AQOs at the site.

7.5.40 With regards to construction traffic emissions, while the construction traffic would be higher than the screening criteria set out in the EPUK/ Institute of Air Quality Management' (IAQM) guidance[11] for HDVs (25 HDVs AADT), the addition of around 30 construction vehicle trips at peak is not anticipated to lead to an exceedance of the air quality objective noting the short period of peak construction.

7.5.41 The construction dust risk assessment identified that, in the absence of mitigation, the construction of the Proposed Development would have a high risk for adverse dust soiling effects and a medium risk for adverse human health effects. With the implementation of mitigation (such as those typically included within a Construction Management Plan), the risk of dust soiling and human health effects would be effectively reduced to negligible.

7.5.42 A qualitative operational phase assessment was undertaken by following the screening criteria provided in the EPUK and IAQM guidance[12]. Given that vehicle movements anticipated to be generated by the operational Proposed Development were below the relevant EPUK and IAQM guidance criteria, it is anticipated that no significant adverse effects on local air quality would occur.

7.5.43 Based on the evidence above, effects relating to air quality are not expected to be significant and are therefore not considered further within the ES.

7.6 Noise and Vibration

7.6.44 During the construction phase there will be a short-term, temporary increase in noise and vibration levels because of construction activities, such as excavation and piling, as well as the operation of other construction plant, equipment and delivery vehicle movements. These temporary, short-term effects will be typical of any urban construction project and may lead to some localised disturbance to residential properties in proximity to the site. However, such impacts and effects are routinely and successfully mitigated via standard means including the use of Best Practicable Means to minimise noise and vibration as far as is practicable and the implementation of standard environmental management control measures detailed within a Construction Management Plan, which is to be secured as a planning condition.

7.6.45 The construction Management Plan will include, but not be limited to, the following:

- The use of site hoarding to provide acoustic screening.
- Adherence to reasonable construction working hours which will avoid early mornings and night-time, with limited weekend working i.e. core hours only.
- The location of construction plant items away from noise sensitive areas when and where practicable,
- The use of construction techniques known to reduce the incidence of noise and vibration.
- The use of modern, low noise emission plant and machinery.
- Switching off plant and machinery when not in use.
- Noise and vibration monitoring to assess the effectiveness of the management controls and to indicate if and when additional measures may be required.

11 EPUK and IAQM 2017: Land-Use Planning & Development Control: Planning for Air Quality

7.6.46 The ISEP guidelines on Traffic and Movement[13] state that a 25% increase in traffic flows or a 20% decrease in traffic flows is required to produce only a 1dB change in ambient noise, with a 3dB change indicating likely significant effects. As noted in Section 7.4 of this report, the works are likely to result in a temporary 26% uplift in construction traffic during peak times. As such, no significant road traffic noise effects are expected to occur as a result of the construction of the proposed development.

7.6.47 Upon operation, the proposed development will be fully residential in use and will be a car-free development. In line with ISEP Guidelines[14], Section 7.4 of this report notes that operational traffic uplift is not expected to produce either a 25% increase in traffic flows or a 20% decrease in traffic flows. As such, no significant effects relating to operational traffic noise is expected to occur as a result of the operation of the proposed development.

7.6.48 With regard to potential noise emanating from the operation of building plant, the design of the proposed development will be informed by noise emission limits set in accordance with British Standard 4142[15] and the relevant planning policies of MCC. This will ensure that noise from the operation of building plant will not give rise to undue noise disturbance or intrusion. The operational proposed development will not generate any perceptible sources of vibration given its entirely residential makeup.

7.6.49 An acoustics assessment will be undertaken to identify suitable noise limits for fixed plant and a stand-alone report will be submitted alongside the planning application in line with MCC's validation requirements. The requirement to specify building plant to adhere to certain noise limits can be secured by planning condition.

7.6.50 It should be noted that that an assessment of external and internal noise levels within the site in terms of its suitability for residential development will be undertaken. As this does not form an assessment of impact against relevant baseline conditions, the assessment will be presented in a separate standalone report in support of the planning application.

7.7 Materials and Waste

7.7.51 The proposed development will require the demolition of the single derelict building on site as well as the excavation of the ground for the basement. Both activities will generate a series of waste arisings, likely to include but not limited to concrete, wood and vegetation removal. Other materials and any contaminated material will be disposed to appropriate landfill facilities. Such waste will be handled, processed and removed from the site by suitably qualified contractors all being undertaken with the Hazardous Waste (England and Wales) Regulations 2005[16]. In addition, it is anticipated that waste will be produced as a result of construction activities. Overall, it is anticipated that there will be a surplus of material for disposal off-site.

7.7.52 All waste arising during demolition and construction are to be controlled through the implementation of a Construction Management Plan and good practice construction waste management plan (CWMP). The management plans will be informed by waste provisions of the Environmental Protection Act 1990 and will set out the principles and legal requirements relating to waste (including hazardous waste). The CWMP will describe how the materials will be managed and stored efficiently and disposed of legally during the construction phase. It will also outline the aims, objectives and on-going management responsibilities, including management and storage

[13] ISEP – 'Environmental Assessment of Traffic and Movement' 2023

[14] ISEP – 'Environmental Assessment of Traffic and Movement' 2023

[15] British Standard 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound. 2019.

1. [16] The Hazardous Waste (England and Wales)Regulations 2005

practices, to be implemented during the demolition and construction phase, and will set targets for the reduction, diversion from landfill and reuse of waste.

7.7.53 Operational waste will be from residents. The proposed development will include provisions for waste storage facilities, which will include facilities for the separation of waste for recycling purposes. An operational waste strategy will be developed for the site which sets out the principles. Strategy and targets for the management of waste and maximise recycling, in accordance with MCC established policy.

7.7.54 With regards to materials, it is not anticipated to be any significant issues in terms of availability of materials required for the proposed development. The proposed development will comprise a number of sustainability features and construction methods when compared to the industry standard. Subsequently, there are not anticipated to be any significant effects on materials from the proposed development.

7.7.55 Based on the evidence above, effects related to materials and waste are not considered to be significant and will not be assessed within the ES.

7.8 Aviation

7.8.56 The site is located approximately 15km north of Manchester Airport. As the site is located a significant distance away from the closest airport, not within any key flight paths and outside of any airport exclusion zones, it can be concluded that there will be no likely adverse impacts on operations at the airport as a result of the proposed development.

7.9 Archaeology

7.9.57 An Archaeological Desk Based Assessment was prepared for the site in July 2016. The site does not fall within a conservation area and does not contain any designated heritage assets, such as Scheduled Monuments, Registered Parks and Gardens or listed buildings. In total, 46 archaeological assets have been identified within a 300m radius of the site area. Of these, six lie within the boundary of the proposed development, the majority pertaining to the development of the site in the nineteenth century.

7.9.58 The Prehistoric Period to Iron Age Period (c 10,000 BC – AD 43): the current understanding of any human activity in the Manchester region during the prehistoric period is poor, although it is reasonable to suggest that the Castlefield area may have been conducive for late prehistoric settlements on account of the natural topography and its location close to the River Irk. There is no known evidence of prehistoric activity within the site area and the potential for remains from this period is considered to be low.

7.9.59 Roman Period (AD 43-410 AD): The nearest evidence for Roman activity is a hoard of coins found in the old river bed of the Irk between Scotland and Ducie bridges, approximately 100m to the southeast of the site area, and the potential for any such buried remains within the site area remaining is considered low.

7.9.60 Medieval Period (AD 410 – 1450 AD): there is very little evidence in the Manchester Region for the period between the end of the Roman occupation and the Norman Conquest. A remnant of the period is a funerary urn of probable 6th century date which was found approximately 170m northeast of the site area. Notwithstanding the importance of this discovery, the potential for buried remains of early medieval date to survive in the site area is considered low. Following the Norman Conquest, it is likely that the site was used as agricultural land beyond the area of settlement associated with the town. However, there are there are known remains from the late medieval period within or in close proximity to the site area and the potential for any such buried remains to exist on the site is low.

7.9.61 Post-Medieval and Industrial Period (AD 1540 – AD 1914): the area around the site close to the River Irk was likely used for water mills and associated works surrounding the mills. The Castlefield area remained almost fully undeveloped until the 18th century, and the site is likely to have remained agricultural in this period. As the surrounding area was further industrialised, the use of factories in the area became the predominant land use. It is possible that non-designated buried archaeological remains, particularly those pertaining to the nineteenth century, however these are likely to be of low value.

7.9.62 The site area is likely to contain two non-statutory below-ground heritage assets of local/borough importance. Any surviving remains of the Fernie Street terrace site or shops/workshops along Cheetham Hill are likely to be of most interest. It is unlikely however that any significant archaeological evidence will have survived the development of the site into the early-mid twentieth century. Other archaeological assets surrounding the site have been deemed to be of low archaeological significance.

7.9.63 It is not considered that there are any assets which would preclude the proposed development of the site. Given the limited potential for the survival of archaeological remains, no further mitigation measures are considered to be necessary.

7.9.64 Based on the evidence above, effects related to archaeology are not considered to be significant and will not be assessed within the ES.

7.10 Major Accidents and Disasters

7.10.65 Under Schedule 3 of the EIA Regulations, the risks of major accidents and natural disasters relevant to the proposed development need to be considered.

7.10.66 As a residential development, the proposed development would not be a source of hazard that could result in a major accident or disaster during operation. Measures to eliminate the risk of major accidents or disasters as a result of the demolition and construction of the proposed development will be outlined within a construction management plan.

7.10.67 As described in section 7.2: Water Resources and Flood Risk, risk from adverse changes to water resources and surface water flooding are unlikely to be significant and, as described in section 7.3 Ground Conditions, risks from ground conditions and contamination are unlikely to be significant. No structural , geomorphological or geochemical features are recorded on or near the site by BGS mapping. The site is not in an area potentially affect by past coal mining activities and there are no Health and Safety Executive (HSE) Control of Major Accident Hazards (COMAH) sites in close proximity to the site.

7.10.68 The site has a medium risk for UXO however as the site was occupied during WWII it is unlikely that UXO will be found during demolition and construction activities. During demolition and construction, a working method statement will be prepared by the construction contractor and will identify safe working practices and response mechanisms should UXO be encountered on the site. This will be managed as part of the Construction Management Plan.

7.10.69 Any increased risk of major accidents or disasters as a result of climate change will be addressed in the Climate Change chapter of the ES.

7.10.70 It is considered that existing design measures and standard practice will adequately control any potential major accidents and/or disasters; therefore, Major Accidents and Disasters will be considered further within the ES.

8. SUMMARY OF THE PROPOSED SCOPE OF EIA

8.1 Summary of the Proposed Scope of EIA

8.1.1 Table 8.1 sets out the proposed scope of the Environmental Statement.

Table 8-1: Proposed Scope of Environmental Statement

Topic	Scoped In	Scoped Out
Transport		X
Air Quality		X
Noise and Vibration		X
Ecology		X
Archaeology and Cultural Heritage		X
Townscape and Visual Impact Assessment	X	
Climate Change	X	
Water Environment		X
Daylight, Sunlight and Overshadowing and Wind	X	
Waste and Materials		X
Major Accidents and Disasters		X
Ground Conditions/ Agricultural Land		X
Human Health and Socioeconomics	X	
Wind Microclimate	X	

8.2 Proposed Content and Format of Environmental Statement

8.2.2 The proposed standardised structure for the individual assessment chapters is as follows:

- Introduction
- Assessment methodology
  - Legislation and Regulations;
  - Planning Policy;
  - Technical Standards and Guidance;
  - Consultation;
  - Scope of Assessment;
  - Technical Scope;
  - Spatial Scope;

    - Temporal Scope
    - Assessment Method (across each stage)
    - Assessment Criteria;
    - Receptor Sensitivity/Value Criteria;
    - Impact Magnitude Criteria;
    - Scale and Nature of Effect;
- Assumptions and Limitations;
- Baseline Conditions;
- Assessment of Effects;
    - Demolition and Construction Effects;
    - Completed Development Effects
- Assessment of Residual Effects
    - Additional Mitigation (demolition and construction stages);
    - Enhancement Measures;
    - Demolition and Construction Residual Effects;
    - Completed Development Residual Effects
- Residual Effects;
    - Significant residual effects;
- Cumulative Effects
    - Inter-Project Effects
        - Demolition and Construction Cumulative Effects;
        - Completed Development Cumulative Effects.
- Summary of Assessment (Non-Technical Summary)

8.3 Structure of the ES

8.3.3 The ES will comprise the following set of documents:

- ES Volume 1: Non-Technical Summary NTS: this document will provide a concise summary of the Proposed Development, alternative designs that were considered, environmental impacts and mitigation measures;
- ES: Volume 2: Main Text: this will contain the main body of the EIA with the proposed chapter headings as set out below;
- ES Volume 3: Townscape, Visual Impact Assessment (TVIA): the methodology and findings of the TVIA accompanied by a full set of views and verified images; and
- ES Volume 4: Technical Appendices: these will provide supplementary details of the environmental studies conducted during the EIA including relevant data tables, figures and photographs.

8.3.4 It is currently envisaged that the ES Volume 2: Main Text will be structured with the following Chapter Headings

- Chapter 1: Introduction
- Chapter 2: EIA Process and Methodology;
- Chapter 3: Alternatives and Design Evolution;
- Chapter 4: Proposed Development
- Chapter 5: Demolition and Construction
- Chapter 6: Daylight, Sunlight and Overshadowing;
- Chapter 7: Wind Microclimate
- Chapter 8: Socioeconomics and Human Health
- Chapter 9: Climate Change
- Chapter 10: Intra Cumulative Effects; and
- Chapter 11: Summary of Mitigation and Residual Effects

9. CONCLUSION AND SUMMARY

9.1.1 This report sets out the scope of the proposed EIA for a residential development for land off Lord Street, Cheetham Hill, Manchester. This report sets out information in line with the EIA Regulations, including the site location and a description of the proposed development.

9.1.2 This report is prepared to accompany a requests for a formal Scoping Opinion from MCC in line with Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

9.1.3 Manchester City Council and statutory consultees are invited to consider the contents of this report and comment accordingly within the five-week period prescribed by the EIA Regulations.

APPENDIX 1
ASSESSMENT CRITERIA

A consistent approach to assessment criteria and terminology will be used in the ES where appropriate, unless specific alternative terminology exists within topic specific guidance. Where topics deviate from this criteria, this has been set out in the relevant section and will be defined within the ES.

The sensitivity of receptors will be classified as:

- Low;
- Medium; or
- High.

The magnitude of impact will be classified as:

- Low;
- Medium; or
- High.

The scale of effect will be determined by the consideration of the sensitivity/value of the receptor and the magnitude of impact as presented in Table A1.

Table A1: Scale of Effects Matrix (Significant Effects in Bold)

		Magnitude of Change (Impact)		
		Low	**Medium**	**High**
Sensitivity of Receptor	Low	Negligible	Minor	Minor
	Medium	Minor	Moderate	Moderate
	High	Minor	Major	Major

Residual effects will be predicted as either '**significant**' or '**not significant**'. Residual effects of moderate and major scale are typically considered significant, but would be dependent on the relevant technical assessment, as well as the existence of published assessment guidance. Where published assessment guidance is not definitive in respect of categorising/determining significant environmental effects, professional judgement will be applied.

Table A2 sets out additional terminology that will be used to describe the type/nature of effects.

Table A2: Type/Nature of Effects

Effect	**Example**
Adverse	Detrimental or negative effect to an environmental resource or receptor.
Neutral	An effect that on balance, is neither beneficial nor adverse to an environmental resource or receptor OR an effect that is equally beneficial and adverse to an environmental resource or receptor[17].
Beneficial	Advantageous or positive effect to an environmental resource or receptor.

[17] In respect of the TVBHIA it is possible for Neutral residual effects to be classed as 'significant' for situations in which the 'net equation' of beneficial and adverse impacts considered together results in an overall effect which is neither beneficial or adverse on balance (e.g. due to their guidance, a townscape and visual impact assessment can result in a 'moderate neutral' effect, which would be classed as 'significant').

Effect	Example
Direct	Direct effects are those which arise as a direct consequence of a project action, e.g. the loss of habitat or the run-off of surface water to a watercourse.
Indirect (secondary)	Indirect effects include, for example, the decline in the abundance of a species as a result of the loss of habitat or the damage to aquatic vegetation as a result of water pollution. Other common examples include the effect on air quality and ambient noise as a result of increased traffic flows.
Cumulative	The combined effects of impacts.
Intra	Effect of the project in combination of other reasonably foreseeable projects (refer to Cumulative Effects section later in this chapter).
Inter	Effect of the project in combination with each other on the same receptor (refer to Cumulative Effects section later in this chapter).
Long term	10 years +
Medium term	5-10 years
Short Term	up to 5 years.
Reversible	Capable of being reversed so that the previous state or situation is restored.
Irreversible	Permeant.
Adverse	Detrimental or negative effect to an environmental resource or receptor.
Neutral	An effect that on balance, is neither beneficial nor adverse to an environmental resource or receptor OR an effect that is equally beneficial and adverse to an environmental resource or receptor[18].

[18] In respect of the TVBHIA it is possible for Neutral residual effects to be classed as 'significant' for situations in which the 'net equation' of beneficial and adverse impacts considered together results in an overall effect which is neither beneficial or adverse on balance (e.g. due to their guidance, a townscape and visual impact assessment can result in a 'moderate neutral' effect, which would be classed as 'significant').

APPENDIX 2
PROPOSED CUMULATIVE SCHEMES

TABLE A2.1: PROPOSED CUMULATIVE SCHEMES

Number	Planning Ref	Proposals	Status
1	137941/FO/2023 Brewery Gardens	Residential led mixed use development for 505 apartments with commercial uses. Development comprises two buildings (one part 29, 25 and 20 storeys, one 12 storeys).	Under construction
2	132416/FO/2021 Land bounded by the Travelodge And Surface Level Carparking to the north, Further Surface Level Carparking to the east, Manchester College to the south and Bury New Road to the west. 935 metres from the site.	Residential led mixed use development for 461 apartments with ground floor commercial uses, comprising two buildings part 27, 20, 17 storeys and part 11 and 10 storeys.	Approved
3	122280/FO/2019 Land bounded by Great Ducie Street and Mirabel Street Manchester M3 1PJ 550 metres from the site.	Residential led mixed use development for 84 residential apartments comprising one ten-storey building for 45 apartments, and one 14 storey building for 84 apartments. Commercial uses on the ground floor.	Approved
4	19/74205/FULEIA Land Corner New Bridge Street And, Greengate, Salford 700 metres from the site.	A single building with two blocks (14 and 55 storeys) to include: 542 residential apartments, commercial at ground.	Approved
5	22/80890/REM (submitted pursuant to 21/78473/HYBEIA (Section 73 permission)) Original consent 19/74465/HYBEIA	Phases 2 and 3 only	Approved

	(Salford City Council) 860 metres from the site.	Phase 2? 40-storey (plus ground) building containing 518 apartments, ground floor commercial space	
6	118831/FO/2018 Former Boddingtons Brewery Site, Dutton Street, Manchester, M3 1LE 935 metres from the site.	Residential led mixed use development for 536 residential units, comprising two buildings (one maximum 17 storeys and one maximum 26 storeys). Commercial floor space included.	Under construction
7	136492/FO/2023 Manchester College 415 metres from the site.	Phase 2 of the new city centre campus for the Manchester College and UCEN Manchester 5,870 square metres educational floorspace within a 5 storey building.	Completed
8	136812/OO/2023 136814/FO/2023 Red Bank Victoria 210 metres from the site.	Residential scheme including 4,800 units across in multiple buildings ranging from 6 to 34 storeys.	Outline / Approved
9	138696/FO/2023 Land At 33 - 41 Cheetham Hill Road Manchester M4 4FT 50 metres from the site.	Residential led development comprising a part 17 / part 23-storey residential development comprising 237 apartments.	Approved
10	138302/FO/2023 1 Park Place Manchester M4 4EZ 110 m from the site.	Part 25 and part 15 storey residential building comprising 154 apartments.	Approved
11	126944/FO/2020	Residential led scheme, comprising three towers (37, 26 and 18 storeys) and podium levels (6 storey) to form	Under construction

	Land Bound by Dantzic Street, Gould Street, Williamson Street and Bromley Street (known as Victoria Riverside) 425 metres from the site.	Residential led mixed use scheme for up to 634 residential apartments and townhouse accommodation together with commercial accommodation (1,222 sqm).	
12	116366/FO/2017 124120/JO/2019 Land Bounded by Dantzic Street and Aspin Lane, Land Bounded by Gould Street and Angel Meadows and Land bounded by Old Mount Street, School Street, Naples Street and Ludgate Street 480 metres from the site.	Four residential buildings (22 storey building, 17 storey building, 40 storey building and part 12, part 9 storey building) to form 756 residential apartments together with ground floor commercial uses (616 sqm).	Three plots completed One further plot Approved
13	134092/FO/2022 Land At Corporation Street "New Victoria Phase 2” 475 metres from the site.	10 storey office building with ground floor commercial unit	Approved
14	EIASCO/25/011 50-54 Red Bank 180 metres from the site.	Residential led scheme for 589 units, comprising one 43 storey and one 18 storey building.	EIA scoping opinion request (pre-planning)

APPENDIX 3
CONTENT OF ES

Appendix 3, Table 1: Proposed Structure of ES	
Section	**Content Summary**
Non-Technical Summary (NTS)	A summary of the information provided in the ES.
Chapter 1 Introduction	The purpose and layout of the ES, the planning context, and the relevant experience and or qualifications of the experts who have prepared the ES. A description of the site location and its surroundings.
Chapter 2 Process and Methodology	The legislative framework, provides details of scoping outcomes, outlines the assessment methodology, and details of the cumulative schemes that will be considered;
Chapter 3 Alternatives	Provides a description of the reasonable alternatives studied by the applicant as relevant to the Proposed Development (e.g., implementing the consented development), and the reasons for the selection of the chosen option, including a comparison of the environmental effects along with the reasons for the selection of the preferred option. Where applicable it will detail the evolution of the Proposed Development.
Chapter 4 Project Description	A description of the Proposed Development containing information on the physical characteristics and land use requirements of the Proposed Development during the demolition and construction works and the completed development and the main characteristics of the operational stage of the Proposed Development including energy demand, nature and quantity of the materials and natural resources used (water, land, soil and biodiversity).
Chapter 5 Demolition and Construction	Includes information on demolition and construction phase, along with construction management controls that will be in place.
Topic Chapters	Separate Chapters will be provided for each of the scoped in topics. To include: relevant aspects of the baseline and an outline of the likely evolution thereof without the implementation of the Proposed Development; factors of the environment likely to be significantly affected by the Proposed Development; the likely significant effects of the Proposed Development; mitigation; and residual effects.
Cumulative Effects	The following types of cumulative effects will be considered: Intra-Project effects of different types of impact from the Proposed Development on particular receptors at or surrounding the site. Potential impact interactions include the combined effects of noise, dust and visual impacts during construction of the Proposed Development on a particular sensitive receptor; and

	Inter-Project effects which are combined effects generated from the Proposed Development with other existing and/or approved developments. These other developments may generate their own individually insignificant effects but when considered together could amount to a significant cumulative effect, for example, combined townscape and visual impacts from two or more (existing and/or approved) developments.
Residual Effects	A summary of any significant residual effects, subsequent to implementation of mitigation.

APPENDIX 4
AIR QUALITY ASSESSMENT

Air Quality Assessment

Lord Street, Manchester

Client: Linear Living Ltd

Reference: 9835r1

Date: 16th October 2025



Report Issue

Report Title: Air Quality Assessment - Lord Street, Manchester

Report Reference: 9835

Field	Report Version			
	1	2	3	4
Prepared by	Hannah Whitaker			
Position	Graduate Air Quality Consultant			
Reviewed by	Megan Pond			
Position	Air Quality Consultant			
Authorised by	Claire Meddings			
Position	Director			
Date of Issue	16th October 2025			
Comments	-			

Serendipity Labs, Building 7, Exchange Quay, Salford, M5 3EP

info@red-env.co.uk | 0161 706 0075 | www.red-env.co.uk

This report has been prepared by Redmore Environmental Ltd in accordance with the agreed terms and conditions of appointment. Redmore Environmental Ltd cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

Executive Summary

Redmore Environmental Ltd was commissioned by Linear Living Ltd to undertake an Air Quality Assessment in support of a residential development at Lord Street, Manchester.

An Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the proposed development;
- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development;
- Assess risk of exposure of future residents to any existing air quality issues; and,
- Identify the requirement for relevant mitigation measures.

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of demolition, earthworks, construction and trackout activities. It is considered that the use of the identified site-specific control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed using standard screening criteria. Based on the nature of the proposals, road traffic exhaust emission impacts were not predicted to be significant.

The proposal has the potential to expose future residents to elevated pollution levels. Dispersion modelling was therefore undertaken in order to predict concentrations across the site as a result of emissions from the highway network. Results were subsequently verified using local monitoring data.

The results of the dispersion modelling assessment indicated that predicted pollutant concentrations were below the relevant criteria across the development. As such, the site is considered suitable for the proposed end use from an air quality perspective and mitigation is not required.

A number of mitigation measures were identified in line with the requirements of Manchester City Council's 'Air Quality and Planning Technical Guidance' in order to reduce vehicle exhaust

emissions associated with the proposals. It is considered these are appropriate for a development of this scale and nature and will further control impacts during the operational phase.

Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

Table of Contents

1.0	**INTRODUCTION**	**1**
1.1	Instruction	1
1.2	Site Location and Context	1
1.3	Assessment Scope	1
2.0	**LEGISLATION AND POLICY**	**2**
2.1	Legislation	2
2.2	Local Air Quality Management	4
2.3	Dust	4
2.4	National Planning Policy	5
2.5	National Planning Practice Guidance	6
2.6	Regional Planning Policy	7
2.7	Local Planning Policy	9
2.8	Greater Manchester Clean Air Plan	10
3.0	**METHODOLOGY**	**11**
3.1	Introduction	11
3.2	Construction Phase Fugitive Dust Emissions	11
	Step 1 - Screen the Need for an Assessment	12
	Step 2 - Assess the Risk of Dust Impacts	12
	Step 3 - Site-specific Mitigation	18
	Step 4 - Determine Significance	18
3.3	Operational Phase Assessment	18
	Potential Development Impacts	18
	Potential Future Exposure	19
4.0	**BASELINE**	**20**
4.1	Introduction	20
4.2	Local Air Quality Management	20
4.3	Air Quality Monitoring	20
4.4	Background Pollutant Concentrations	22
4.5	Sensitive Receptors	22
5.0	**CONSTRUCTION PHASE ASSESSMENT**	**24**
5.1	Introduction	24
5.2	Step 1 - Screen the Need for an Assessment	24
5.3	Step 2a - Define the Potential Dust Emission Magnitude	24
	Demolition	24

	Earthworks	24
	Construction	25
	Trackout	25
5.4	Step 2b - Define the Sensitivity of the Area	25
	Dust Soiling	25
	Human Health	25
5.5	Step 2c - Define the Risk of Dust Impacts	26
5.6	Step 3 - Site-specific Mitigation	27
5.7	Step 4 - Determine Significance	29
6.0	**OPERATIONAL PHASE ASSESSMENT**	**30**
6.1	Introduction	30
6.2	Potential Development Impacts	30
6.3	Potential Future Exposure	30
6.4	Interim Planning Guidance for $PM_{2.5}$	31
7.0	**CONCLUSION**	**35**
8.0	**ABBREVIATIONS**	**37**

Appendices

Appendix 1 - Assessment Input Data
Appendix 2 - Curricula Vitae

1.0 INTRODUCTION

1.1 Instruction

1.1.1 Redmore Environmental Ltd was commissioned by Linear Living Ltd to undertake an Air Quality Assessment in support of a residential development at Lord Steet, Manchester.

1.2 Site Location and Context

1.2.1 The site is located at Lord Street, Manchester, at approximate National Grid Reference (NGR): 384138, 399430. The relevant Local Authority (LA) is Manchester City Council (MCC). Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 The proposals comprise the clearance of the existing structure on site and the construction of a 20-storey residential building to provide four townhouses at the ground floor level and 217 single-storey apartments.

1.3 Assessment Scope

1.3.1 The development proposals have the potential to cause air quality impacts. As such, an Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the proposed development;
- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development;
- Assess risk of exposure of future residents to any existing air quality issues; and,
- Identify the requirement for relevant mitigation measures.

1.3.2 This is detailed in the following report.

2.0 LEGISLATION AND POLICY

2.1 Legislation

2.1.1 The Air Quality Standards Regulations (2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:

- Nitrogen dioxide (NO_2);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM_{10});
- Particulate matter with an aerodynamic diameter of less than 2.5µm ($PM_{2.5}$);
- Benzene; and,
- Carbon monoxide.

2.1.2 Air Quality Target Values have also been provided for several additional pollutants. It should be noted that the AQLV for $PM_{2.5}$ stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

2.1.3 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28th April 2023[1]. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.4 The Environmental Improvement Plan 2023[2] was published in January 2023, providing long term and Interim Targets in order to reduce population exposure to $PM_{2.5}$. The Concentration Target for 2040 was subsequently adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

[1] AQS: Framework for Local Authority Delivery, DEFRA, 2023.

[2] Environmental Improvement Plan 2023, DEFRA, 2023.

2.1.5 Table 1 presents the AQOs and Interim Target and Concentration Target for pollutants considered within this assessment.

Table 1 Air Quality Objectives/Interim Target/Concentration Target

Pollutant	Air Quality Objective/Interim Target	
	Concentration (µg/m³)	Averaging Period
NO_2	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM_{10}	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
$PM_{2.5}$	12(a)	Annual mean
	10(b)	Annual Mean

Note: (a) Interim Target to be achieved by end of January 2028.
(b) Concentration Target to be achieved by 2040.

2.1.6 Table 2 summarises the advice provided in DEFRA guidance[3] on where the AQOs for pollutants considered within this report apply.

Table 2 Examples of Where the Air Quality Objectives Apply

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term

[3] Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
24-hour mean	All locations where the annual mean objective would apply, together with hotels Gardens of residential properties	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets) Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer	Kerbside sites where the public would not be expected to have regular access

2.2 Local Air Quality Management

2.2.1 LAs are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in Table 2, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan, the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

2.3 Dust

2.3.1 The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

> "any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework[4] (NPPF) was published in December 2024 and amended in February 2025. It sets out the Government's planning policies for England and how these are expected to be applied.

2.4.2 The purpose of the planning system is to contribute to the achievements of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

> "c) an environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

2.4.3 Chapter 15 of the NPPF details objectives in relation to conserving and enhancing the natural environment. It states that:

> "Planning policies and decisions should contribute to and enhance the natural and local environment by:
>
> […]
>
> e) preventing new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of

[4] NPPF, Ministry of Housing, Communities and Local Government, 2024.

soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality […]"

2.4.4 The NPPF specifically recognises air quality as part of delivering sustainable development and states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

2.4.5 The implications of the NPPF have been considered throughout this assessment.

2.5 National Planning Practice Guidance

2.5.1 The National Planning Practice Guidance[5] (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

1. What air quality considerations does planning need to address?
2. What is the role of plan-making with regard to air quality?
3. Are air quality concerns relevant to neighbourhood planning?
4. What information is available about air quality?
5. When could air quality be relevant to the planning development management process?
6. What specific issues may need to be considered when assessing air quality impacts?

[5] https://www.gov.uk/guidance/air-quality--3.

7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

2.5.2 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

2.6 Regional Planning Policy

2.6.1 The Places for Everyone Plan (PfEP)[6] was produced by the Greater Manchester Combined Authority (GMCA) and became part of the statutory development plan for MCC on 21st March 2024.

2.6.2 A review of the PfEP indicated the following policies of relevance to air quality that have been considered throughout this assessment:

> "Policy JP:S5: Clean Air
>
> A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:
>
> 1. Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
> 2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;
>
> 3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air

[6] PfEP, GMCA, 2024.

quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;

4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;

5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;

6. Implementing the Clean Air Plan and associated measures;

7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;

8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;

9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;

10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and,

11. Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users."

"Policy JP-P1 Sustainable Places

We aim to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

[…]

15. Comfortable and inviting, with indoor and outdoor environments:

A. Offering a high level of amenity that minimises exposure to pollution; and,

[…]."

2.6.3 The above policies were considered as necessary throughout the undertaking of the assessment.

2.7 Local Planning Policy

2.7.1 The Manchester Local Development Framework consists of a series of planning documents of which the Core Strategy Development Plan Document (DPD)[7] is central. This was adopted by MCC on 11th July 2012.

2.7.2 Review of the Core Strategy DPD indicated the following policies of relevance to the assessment:

"Policy EN 16

Air Quality

The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local effect of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.
When assessing the appropriateness of locations for new development the Council will consider the effects on air quality, alongside other plan objectives. This includes cumulative effects, particularly in Air Quality Management Areas."

[7] Core Strategy DPD, MCC, 2012.

"Policy DM 1

Development Management

All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

[…]

Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise."

2.7.3 MCC has also produced the 'Air Quality & Planning Technical Guidance' Document'[8] which provides guidance on assessing the impact of proposed development on air quality.

2.7.4 The above policies and guidance were taken into consideration throughout the undertaking of the assessment.

2.8 Greater Manchester Clean Air Plan

2.8.1 The UK Government has instructed a number of LAs to take rapid action to reduce harmful roadside levels of NO_2 within their areas of jurisdiction in the quickest possible timeframe. The GMCA and Transport for Greater Manchester (TfGM) have collaborated to develop a Clean Air Plan (CAP) to ensure Greater Manchester achieves compliance with the relevant AQOs for NO_2 by 2026 at the latest. The initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA has subsequently updated the CAP proposals[9] to comprise an investment-led, non-charging approach. This was approved by the UK Government on 23rd January 2025. The implications of the CAP were taken into account during the undertaking of this assessment.

8 Air Quality & Planning Technical Guidance, MCC, 2022.

9 Case for a New GM Clean Air Plan, GMCA and TfGM, 2022.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposed development has the potential to cause air quality impacts during the construction and operational phases, as well as expose future residents to elevated pollution levels. These factors have been assessed in accordance with the following methodology.

3.2 Construction Phase Fugitive Dust Emissions

3.2.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'[10].

3.2.2 Activities on the proposed construction site have been divided into four to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and,
- Trackout.

3.2.3 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM_{10}.

3.2.4 The assessment steps are detailed below.

[10] Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Step 1 - Screen the Need for an Assessment

3.2.5 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment proceeds to Step 2. Additionally, should ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.

3.2.6 Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

Step 2 - Assess the Risk of Dust Impacts

3.2.7 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

3.2.8 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

3.2.9 Step 2A defines the potential magnitude of dust emission through the construction phase. The relevant criteria are summarised in Table 3.

Table 3 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	• Total building volume greater than 75,000m^3 • Potentially dusty construction material (e.g. concrete) • On-site crushing and screening • Demolition activities more than 12m above ground level

Magnitude	Activity	Criteria
	Earthworks	• Total site area greater than 110,000m^2 • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) • More than 10 heavy earth moving vehicles active at any one time • Formation of bunds greater than 6m in height
	Construction	• Total building volume greater than 75,000m^3 • On site concrete batching • Sandblasting
	Trackout	• More than 50 Heavy Duty Vehicle (HDV) trips per day • Potentially dusty surface material (e.g. high clay content) • Unpaved road length greater than 100m
Medium	Demolition	• Total building volume between 12,000m^3 and 75,000m^3 • Potentially dusty construction material • Demolition activities between 6m and 12m above ground level
	Earthworks	• Total site area 18,000m^2 to 110,000m^2 • Moderately dusty soil type (e.g. silt) • 5 to 10 heavy earth moving vehicles active at any one time • Formation of bunds 3m to 6m in height
	Construction	• Total building volume 12,000m^3 to 75,000m^3 • Potentially dusty construction material (e.g. concrete) • On site concrete batching
	Trackout	• 20 to 50 HDV trips per day • Moderately dusty surface material (e.g. high clay content) • Unpaved road length 50m to 100m
Small	Demolition	• Total building volume less than 12,000m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber) • Demolition activities less than 6m above ground • Demolition during wetter months

Magnitude	Activity	Criteria
	Earthworks	• Total site area less than 18,000m^2 • Soil type with large grain size (e.g. sand) • Less than 5 heavy earth moving vehicles active at any one time • Formation of bunds less than 3m in height
	Construction	• Total building volume less than 12,000m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	• Less than 20 HDV trips per day • Surface material with low potential for dust release • Unpaved road length less than 50m

3.2.10 Step 2B defines the sensitivity of the area around the development to potential dust impacts. The sensitivities of specific receptors are summarised in Table 4.

Table 4 Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	• Users expect high levels of amenity • High aesthetic or value property • People expected to be present continuously for extended periods of time • Locations where members of the public are exposed over a time period relevant to the AQO for PM_{10}. e.g. residential properties, hospitals, schools and residential care homes	• Internationally or nationally designated site e.g. Special Area of Conservation
Medium	• Users would expect to enjoy a reasonable level of amenity • Aesthetics or value of their property could be diminished by soiling • People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	• Nationally designated site e.g. Sites of Special Scientific Interest

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
Low	• Enjoyment of amenity would not reasonably be expected • Property would not be expected to be diminished in appearance • Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads	• Locally designated site e.g. Local Nature Reserve

3.2.11 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 5.

Table 5 Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

3.2.12 Table 6 outlines the criteria for determining the sensitivity of the area to human health impacts.

Table 6 Construction Dust - Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Background Annual Mean PM_{10} Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m^3	More than 100	High	High	High	Medium

Receptor Sensitivity	Background Annual Mean PM_{10} Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m^3	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m^3	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m^3	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	Greater than 32µg/m^3	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m^3	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28µg/m^3	More than 10	Low	Low	Low	Low
		1 -10	Low	Low	Low	Low
	Less than 24µg/m^3	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	1 or more	Low	Low	Low	Low

3.2.13 Table 7 outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 7 Construction Dust - Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

3.2.14 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

3.2.15 Table 8 outlines the risk category from demolition activities.

Table 8 Construction Dust - Dust Risk Category from Demolition Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Medium
Medium	High	Medium	Low
Low	Medium	Low	Negligible

3.2.16 Table 9 outlines the risk category from earthworks, construction and trackout activities.

Table 9 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

Step 3 - Site-specific Mitigation

3.2.17 Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance[11] to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

Step 4 - Determine Significance

3.2.18 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.

3.2.19 The determination of significance relies on professional judgement and reasoning should be provided as far as practicable. The IAQM guidance suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 2.

3.3 Operational Phase Assessment

Potential Development Impacts

3.3.1 The development has the potential to increase concentrations of NO_2, PM_{10} and $PM_{2.5}$ as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. A screening assessment was therefore undertaken using the criteria contained within the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'[12] guidance to determine the potential for trips generated by the development to affect local air quality.

3.3.2 The following criteria are provided to help establish when an assessment of potential impacts on the local area is likely to be considered necessary:

[11] Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

[12] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

A. If any of the following apply:

- 10 or more residential units or a site area of more than 0.5ha; or,
- More than 1,000 m^2 of floor space for all other uses or a site area greater than 1ha.

B. Coupled with any of the following:

- The development has more than 10 parking spaces; or,
- The development will have a centralised energy facility or other centralised combustion process.

3.3.3 Should these criteria not be met, then the IAQM guidance[13] considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

Potential Future Exposure

3.3.4 The proposals have the potential to expose future residents to elevated pollution levels as a result of road vehicle exhaust emissions in the vicinity of the site. In order to assess NO_2, PM_{10} and $PM_{2.5}$ concentrations across the development, detailed dispersion modelling was undertaken. Reference should be made to Appendix 1 for a full description of the assessment input data.

3.3.5 The dispersion modelling results were compared against the relevant AQOs and Interim Target in order to determine the potential for exposure of future residents to elevated pollutant concentrations and identify appropriate mitigation, if necessary.

[13] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

4.0 BASELINE

4.1 Introduction

4.1.1 Existing air quality conditions in the vicinity of the proposed development site were identified to provide a baseline for assessment. These are detailed in the following Sections.

4.2 Local Air Quality Management

4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), MCC has undertaken Review and Assessment of air quality within its area of jurisdiction. This process has indicated that annual mean concentrations of NO_2 are above the AQO within the city. As such, a number of roads within Manchester have been included within the GMCA AQMA. This is described as follows:

> "This is the part of the Greater Manchester Combined Authority AQMA located within the Manchester City Council area."

4.2.2 The development is located within the AQMA. As such, there is the potential for vehicles travelling to and from the site to increase pollution levels in this sensitive area, as well as the exposure of future residents to poor air quality. This has been considered throughout the assessment.

4.2.3 MCC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMAs have been designated.

4.3 Air Quality Monitoring

4.3.1 Monitoring of pollutant levels is undertaken by MCC throughout its area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO_2 concentrations recorded in the vicinity of the development, as provided in GMCA's '2024

Air Quality Annual Status Report (ASR)'[14] and 'CAP NO_2 Diffusion Tube Results 2011-2024'[15], are shown in Table 10. Exceedances are shown in **bold.**

Table 10 Monitoring Results

Monitoring Site		Monitored Annual Mean NO_2 Concentration ($\mu g/m^3$)		
		2022	2023	2024
CAP_SALF_060	A6042 (Trinity Way)	31.0	33.7	31.3
CAP_MANC_051	A665 (Miller Street)	**50.2**	-(a)	**49.0**
CAP_MANC_076	A665 (Miller Street)	29.5	27.3	26.4
CAP_MANC_077	A665 (Miller Street)	32.2	29.1	27.6
CAP_MANC_115	Gt Ducie St	34.6	33.2	-(b)
CAP_MANC_116	Gt Ducie St	39.1	-(c)	-(c)
CAP_MANC_136	A665	**44.1**	-(a)	**41.7**
CAP_MANC_137	A665	**46.9**	**43.6**	-(a)
CAP_MANC_192	A56 (Great Ducie Street)	-(d)	-(d)	29.3
MA26ANO	Chethams School	27.5	24.5	24.6
MA88NO	Angel St	35.7	32.7	30.3
MA104BNO	Cheetwood Primary School, Waterloo Road	37.9	34.5	31.1

Note: (a) Data not available.
(b) Monitor decommissioned in 2024.
(c) Monitor decommissioned in 2023.
(d) Monitor commissioned in 2024.

4.3.2 As shown in Table 10, annual mean NO_2 concentrations were above the AQO of 40µg/m^3 at the CAP_MANC_051, CAP_MANC_136 and CAP_MANC_137 monitors in recent years. As the survey sites were located at roadside positions adjacent to an A-road within an AQMA, elevated results would be expected. Concentrations were below the AQO at all other monitoring locations in recent years.

[14] 2024 Air Quality ASR, GMCA, 2025.

[15] Greater Manchester LAQM and CAP NO_2 Diffusion Tube Results 2011-2024, GMCA, 2025.

4.3.3 Monitoring of PM_{10} and $PM_{2.5}$ is not undertaken within the vicinity of the site.

4.4 Background Pollutant Concentrations

4.4.1 Predictions of background annual mean pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 384500, 399500. Data for this location was downloaded from the DEFRA website[16] for the purpose of the assessment and is summarised in Table 11.

Table 11 Background Pollutant Concentration Predictions

Pollutant	Predicted Background Pollutant Concentration (µg/m³)		
	2024	2025	2028
NO_2	18.65	18.03	16.14
PM_{10}	13.42	13.38	13.21
$PM_{2.5}$	7.82	7.76	7.59

4.4.2 As shown in Table 11, predicted background annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations are below the relevant AQOs and Interim Target at the proposed development site.

4.5 Sensitive Receptors

4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. Receptors sensitive to potential dust impacts during demolition, earthworks and construction were identified from a desk-top study of the area up to 250m from the boundary. These are summarised in Table 12.

16 http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021.

Table 12 Demolition, Earthworks and Construction Dust Sensitive Receptors

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0
Up to 100	More than 100	-
Up to 250	More than 100	-

4.5.2 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Table 13.

Table 13 Trackout Dust Sensitive Receptors

Distance from Site Access Route (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0

4.5.3 There are no ecological receptors within 50m of the development boundary or the access route within 250m of the site entrance. As such, ecological impacts have not been assessed further within this report.

4.5.4 Based on the criteria shown in Table 4, the sensitivity of the receiving environment to potential dust impacts was determined as **high**. This was because the identified receptors included residential properties.

5.0 CONSTRUCTION PHASE ASSESSMENT

5.1 Introduction

5.1.1 There is the potential for air quality impacts as a result of the construction of the proposed development. These are assessed in the following sections.

5.2 Step 1 - Screen the Need for an Assessment

5.2.1 The undertaking of activities such as demolition, excavation, ground works, cutting, construction and storage of materials have the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements on the local road network also have the potential to result in the re-suspension of dust from highway surfaces.

5.2.2 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.

5.2.3 The desk-study undertaken to inform the baseline, as detailed in Section 4.5, identified a number of sensitive receptors within 250m of the site boundary and 50m of routes to be used by construction vehicles to access the site. As such, a detailed assessment of potential dust impacts was required.

5.3 Step 2a - Define the Potential Dust Emission Magnitude

Demolition

5.3.1 Demolition will be undertaken at the start of the construction phase and will involve clearance of the existing structure on the south-west corner of the site. The total building volume to be demolished is less than 12,000m^3. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from demolition is therefore **small.**

Earthworks

5.3.2 Earthworks will primarily involve excavating material haulage, tipping and stockpiling, as well as site levelling and landscaping. The area of the proposed development site is less

than 18,000m^2. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **small**.

Construction

5.3.3 The total proposed building volume is greater than 75,000m^3. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **large**.

Trackout

5.3.4 Based on the total site area and access routes comprising tarmacked surfaces, it is anticipated that the unpaved road length will be less than 50m. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **small**.

5.4 Step 2b - Define the Sensitivity of the Area

Dust Soiling

5.4.1 Table 12 shows that there are more than 100 **high** sensitivity receptors within 20m of the site boundary. The sensitivity of the area with respect to dust soiling from demolition, earthworks and construction, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.

5.4.2 Table 13 shows that there are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to dust soiling from trackout, as defined using the criteria summarised in Table 5, is therefore considered **high**.

Human Health

5.4.3 Table 11 shows the annual mean PM_{10} background concentration at the site is 13.38µg/m^3. As shown in Table 6, where the background annual mean PM_{10} concentration is below 24µg/m^3 and there are more than 100 **high** sensitivity receptors

within 20m of the site boundary, the sensitivity of the area with respect to human health from demolition, earthworks and construction is considered to be **medium**.

5.4.4 There are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to human health from trackout, as defined using the criteria summarised in Table 6, is therefore considered to be **medium**.

5.5 Step 2c - Define the Risk of Dust Impacts

5.5.1 The derived dust emission magnitude for each activity was combined with the sensitivity of the area to determine the risk of unmitigated impacts in line with the methodology set out in Table 8 and Table 9. A summary of the risk from each dust generating activity is provided in Table 14.

Table 14 Summary of Potential Unmitigated Dust Risks

Potential Impact	Activity	Step 2A - Dust Emission Magnitude	Step 2B - Sensitivity of the Area	Step 2C - Risk
Dust Soiling	Demolition	Small	High	Medium
	Earthworks	Small	High	Low
	Construction	Large	High	High
	Trackout	Small	High	Low
Human Health	Demolition	Small	Medium	Low
	Earthworks	Small	Medium	Low
	Construction	Large	Medium	Medium
	Trackout	Small	Medium	Low

5.5.2 As indicated in Table 14, the potential risk of dust soiling is **high** from construction, **medium** from demolition and **low** from earthworks and trackout. The potential risk of human health effects is **medium** from construction and **low** from demolition, earthworks and trackout.

5.5.3 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on

a worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

5.6 Step 3 - Site-specific Mitigation

5.6.1 The IAQM guidance[17] provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 15. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan or similar if required by the LA.

Table 15 Fugitive Dust Emission Mitigation Measures

Issue	Control Measure
Communications	• Develop and implement a stakeholder communications plan that includes community engagement before work commences on site • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager • Display the head or regional office contact information • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority.
Site management	• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken • Make the complaints log available to the LA upon request • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book • Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are coordinated and dust and particulate matter emissions are minimised

[17] Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Issue	Control Measure
Monitoring	• Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the LA when asked • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the LA upon request • Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
Site preparation	• Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site • Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period • Avoid site runoff of water or mud • Keep site fencing, barriers and scaffolding clean using wet methods • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below • Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle/machinery and sustainable travel	• Ensure all vehicles switch off engines when stationary - no idling vehicles • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials
Operations	• Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques • Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate • Use enclosed chutes and conveyors and covered skips • Minimise drop heights and use fine water sprays wherever appropriate • Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods
Waste management	• Avoid bonfires or burning of waste materials

Issue	Control Measure
Demolition	• Ensure effective water suppression is used during demolition operations • Avoid explosive blasting, using appropriate manual or mechanical alternatives • Bag and remove any biological debris or damp down such material before demolition
Construction	• Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out • Avoid scabbling (roughening of concrete surfaces) if possible • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery
Trackout	• Avoid dry sweeping of large areas • Ensure vehicles entering and leaving site are covered to prevent escape of materials

5.7 Step 4 - Determine Significance

5.7.1 Assuming the relevant mitigation measures outlined in Table 15 are implemented, the residual impact from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance[18].

[18] Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

6.0 OPERATIONAL PHASE ASSESSMENT

6.1 Introduction

6.1.1 There is the potential for air quality impacts as a result of the operation of the proposed development. These are assessed in the following Sections.

6.2 Potential Development Impacts

6.2.1 The development has the potential to increase concentrations of NO_2, PM_{10} and $PM_{2.5}$ as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. These have therefore been assessed against the IAQM[19] screening criteria detailed in Section 3.3. The development proposals do not include onsite car parking. As such, the Stage 1 criteria are not met and potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be **not significant**.

6.3 Potential Future Exposure

6.3.1 The proposals have the potential to expose future residents to elevated pollution levels as a result of road vehicle exhaust emissions in the vicinity of the site. Dispersion modelling was therefore undertaken with the inputs described in Appendix 1 to quantify air quality conditions across the development. Reference should be made to Figures 3, 4 and 5 for graphical representations of predicted annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations.

6.3.2 As shown in Figure 3, annual mean NO_2 concentrations were predicted to be below the AQO of 40µg/m^3 across the site.

6.3.3 As shown in Figure 4, annual mean PM_{10} concentrations were predicted to be below the AQO of 40µg/m^3 across the site.

6.3.4 As shown in Figure 5, annual mean $PM_{2.5}$ concentrations were predicted to be below the Interim Target of 12µg/m^3 across the site.

[19] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

6.3.5 Based on the assessment results, future residents are not predicted to be exposed to pollutant concentrations above the relevant AQOs and Interim Target. As such, the site is considered suitable for the proposed use from an air quality perspective.

6.4 Interim Planning Guidance for $PM_{2.5}$

6.4.1 Interim Planning Guidance[20] on the consideration of the $PM_{2.5}$ targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise $PM_{2.5}$ and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 16, along with the development response.

Table 16 Interim Planning Guidance Questions

Question	Response
How has exposure to $PM_{2.5}$ been considered when selecting the development site? • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use	The site is located in Manchester city centre and as such is in close proximity to a large population comprising mixed land uses. However, as outlined in Sections 5.0 and 6.2, impacts associated with the scheme are predicted to be **not significant** The site is adjacent to the A665 Cheetham Hill Road and associated vehicle emissions. However, the results of the assessment, as shown in Section 6.3, indicated that predicted $PM_{2.5}$ levels are below the Interim Target of 12µg/m^3 across the development As outlined in Table 15, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations

20 https://uk-air.defra.gov.uk/pm25targets/planning.

Question	Response
What actions and/or mitigations have been considered to reduce $PM_{2.5}$ exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of $PM_{2.5}$ and its precursors? • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development	In order to reduce emissions of $PM_{2.5}$ across the site, as well as at nearby receptors, the following measures have been included in the proposals: • No car parking spaces will be included in the proposals, which will minimise $PM_{2.5}$ emissions associated with private vehicles • 228 cycle stores will be provided to encourage the use of sustainable transport modes to and from the site • The site is located within Manchester city centre with good access to public transport links, including bus stops, the metro link and Manchester Victoria train station. This will further encourage sustainable modes of travel Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities. These are outlined in Table 15

6.4.2 Based on the responses provided in Table 16 and the assessment results, as outlined in Sections 6.3, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of $PM_{2.5}$.

7.0 MITIGATION

7.1.1 A number of mitigation measures have been included within the development to encourage the use of sustainable transport modes, manage vehicle flow and reduce pollution around the site. These are in accordance with MCC's 'Air Quality and Planning Technical Guidance'[21], which is based upon the Good Practice Design Principles outlined in the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'[22]. Table 17 describes the good practice principles along with how each has been addressed with regards to the proposals.

Table 17 Good Practice Design Principles for Operational Phase Air Quality Impacts

Phase	Principle	Action
Design Phase	New developments should not contravene the Council's AQAP[23], or render any of the measures unworkable	It is confirmed that the proposals will not contravene MCC's AQAP, or render any of the measures unworkable
	Wherever possible, new developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion	The development will create a new street canyon on one side of the road, however, this has been considered within the assessment. As summarised in Section 6.3, the development is not predicted to lead to pollutant concentrations above the relevant criteria
	Delivering sustainable development should be the key theme of any application	The proposals have been designed to encourage sustainable behaviours, such as active and public transport due to its proximity to local bus routes and amenities, as well as the provision of cycle storage
Operational Phase	The provision of at least 1 EV "rapid charge" point per 10 residential dwellings and/or 1,000m^2 of commercial floor space. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made	The development does not include provision of car parking spaces. Therefore no EV charging points will be required

21 Air Quality & Planning Technical Guidance, MCC, 2022.

22 Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

23 Greater Manchester AQAP 2016-2021, GMCA, 2016.

Phase	Principle	Action
	Where development generates significant additional traffic, provision of a detailed Travel Plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety	The development does not include provision of car parking. As such, a Travel Plan is not required
	All gas-fired boilers to meet a minimum standard of <40mgNO_x/kWh. All gas-fired CHP plant to meet a minimum emissions standard of: • Spark ignition engine: 250mgNO_x/Nm^3; • Compression ignition engine: 400mgNO_x/Nm^3; • Gas turbine: 50mgNO_x/Nm^3. A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of: • Solid biomass boiler: 275mgNO_x/Nm^3 and 25mgPM/Nm^3	The heating and hot water strategy is yet to be finalised. However, any boilers or CHP plant to be included in the development will be provisioned in accordance with the relevant requirements

7.1.2 It is considered the above methods would further reduce potential impacts associated with the scheme. Specific mitigation suited to the proposals may be stipulated as a planning condition if deemed necessary by the LA.

8.0 CONCLUSION

8.1.1 Redmore Environmental Ltd was commissioned by Linear Living Ltd to undertake an Air Quality Assessment in support of a planning application for a residential development at Lord Street, Manchester.

8.1.2 The development has the potential to cause air quality impacts at sensitive locations during the construction and operational phases, as well as expose future residents to any existing air quality issues at the site. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions, assess potential impacts as a result of the scheme and consider location suitability for the proposed end use.

8.1.3 During the construction phase of the development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. Site-specific dust control measures were subsequently determined based on the identified risk ratings. Subject to implementation, potential air quality impacts from dust generated by demolition, earthworks, construction and trackout activities are predicted to be **not significant**.

8.1.4 Potential impacts during the operational phase of the proposed development may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the screening criteria provided within the IAQM[24] guidance document. Due to the nature of the development, road traffic exhaust impacts were predicted to be **not significant.**

8.1.5 The proposal has the potential to expose future residents to elevated pollution levels as a result of road vehicle exhaust emissions in the vicinity of the site. Dispersion modelling was therefore undertaken using ADMS-Roads in order to predict concentrations as a result of emissions from the highway network. Results were subsequently verified using local monitoring data.

8.1.6 The results of the dispersion modelling assessment indicated that predicted annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations were below the relevant AQOs and Interim Target

[24] Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

across the development. As such, the site is considered suitable for the proposed end use from an air quality perspective.

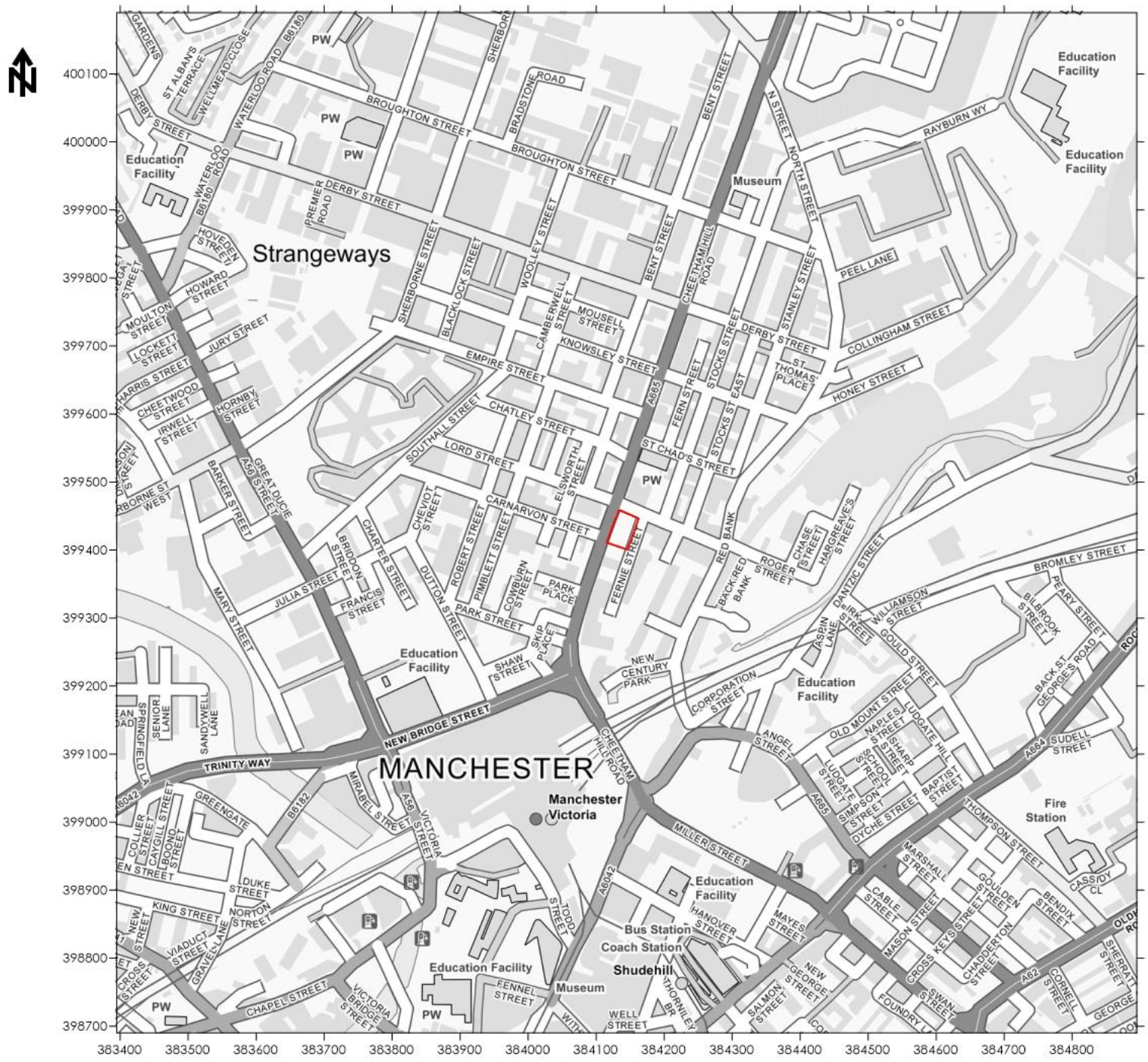
8.1.7 A number of mitigation measures were identified in line with the requirements of MCC's 'Air Quality and Planning Technical Guidance' in order to reduce vehicle exhaust emissions associated with the proposals. It is considered these are appropriate for a development of this scale and nature and will further control impacts during the operational phase.

8.1.8 Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

9.0 ABBREVIATIONS

AADT	Annual Average Daily Traffic
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
ASR	Annual Status Report
CAP	Clean Air Plan
CERC	Cambridge Environmental Research Consultants
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DPD	Development Plan Document
GMCA	Greater Manchester Combined Authority
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
MCC	Manchester City Council
NGR	National Grid Reference
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10µm
$PM_{2.5}$	Particulate matter with an aerodynamic diameter of less than 2.5µm
PfEP	Places for Everyone Plan
TfGM	Transport for Greater Manchester
z_0	Roughness length

Figures



Legend

Site Boundary

Title
Figure 1 - Site Location Plan

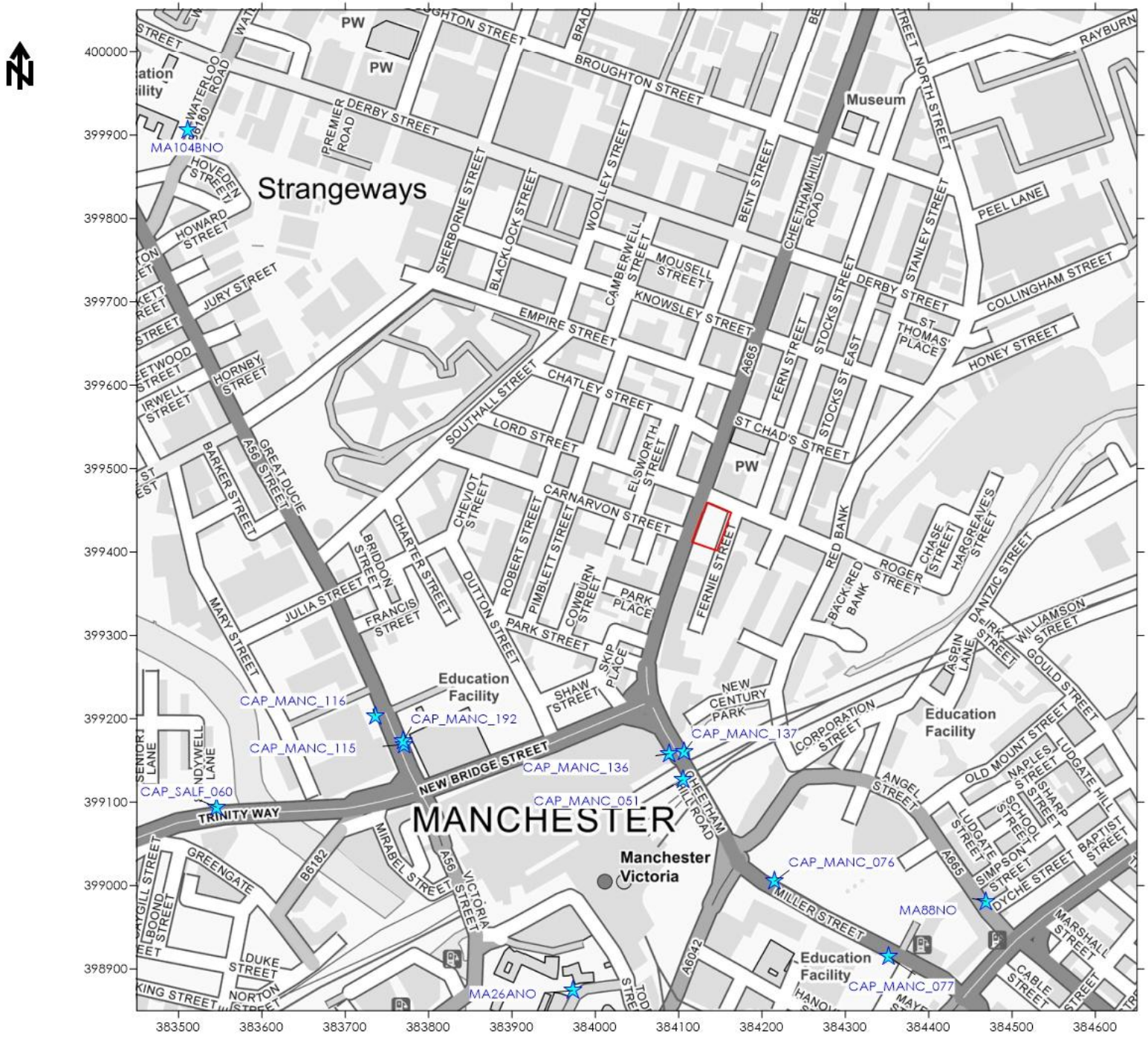
Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental
www.red-env.co.uk | 0161 7060075



Legend

Site Boundary

Monitor

Title
Figure 2 - Monitoring Locations

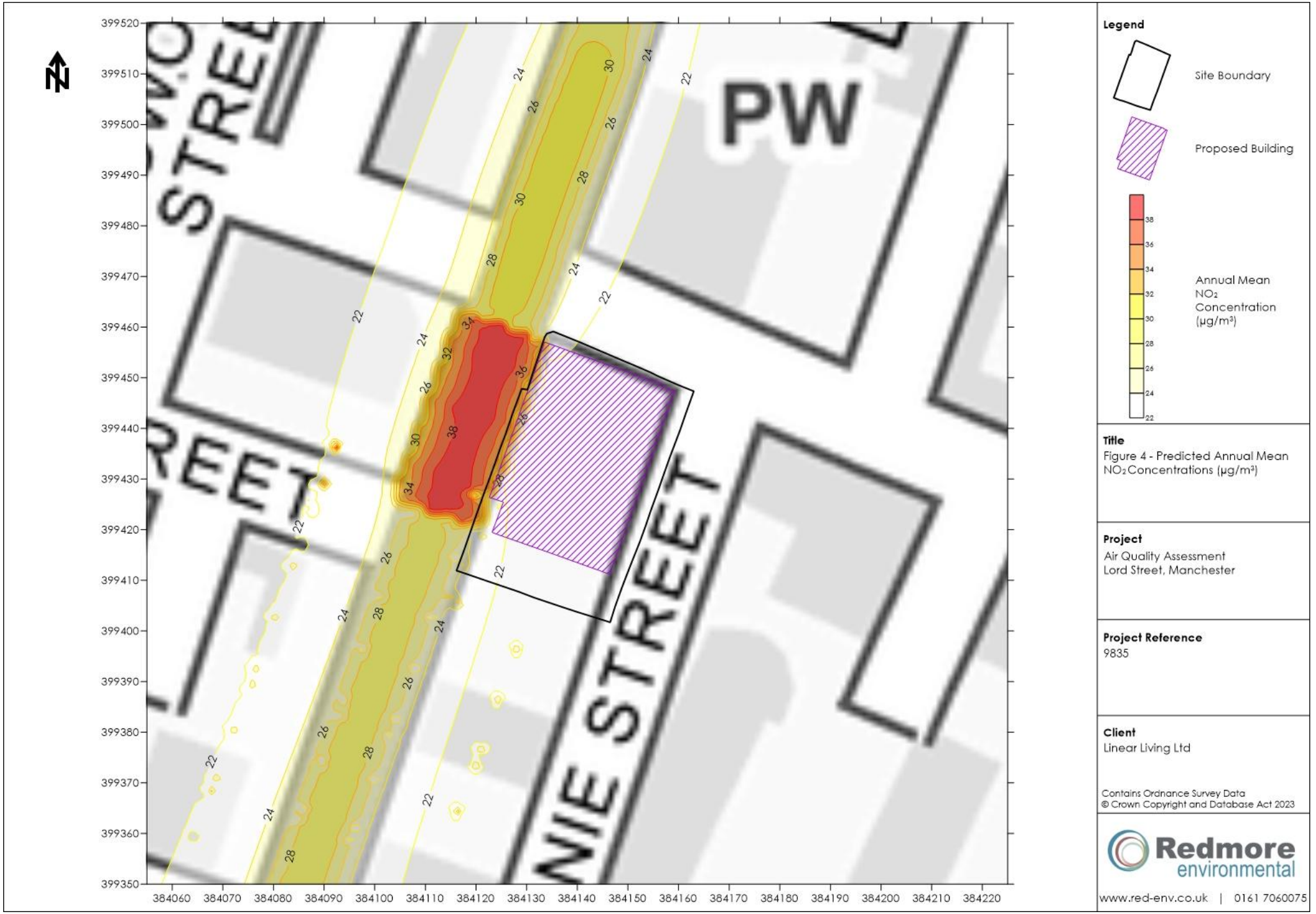
Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental
www.red-env.co.uk | 0161 7060075



Title
Figure 4 - Predicted Annual Mean NO_2 Concentrations (µg/m³)

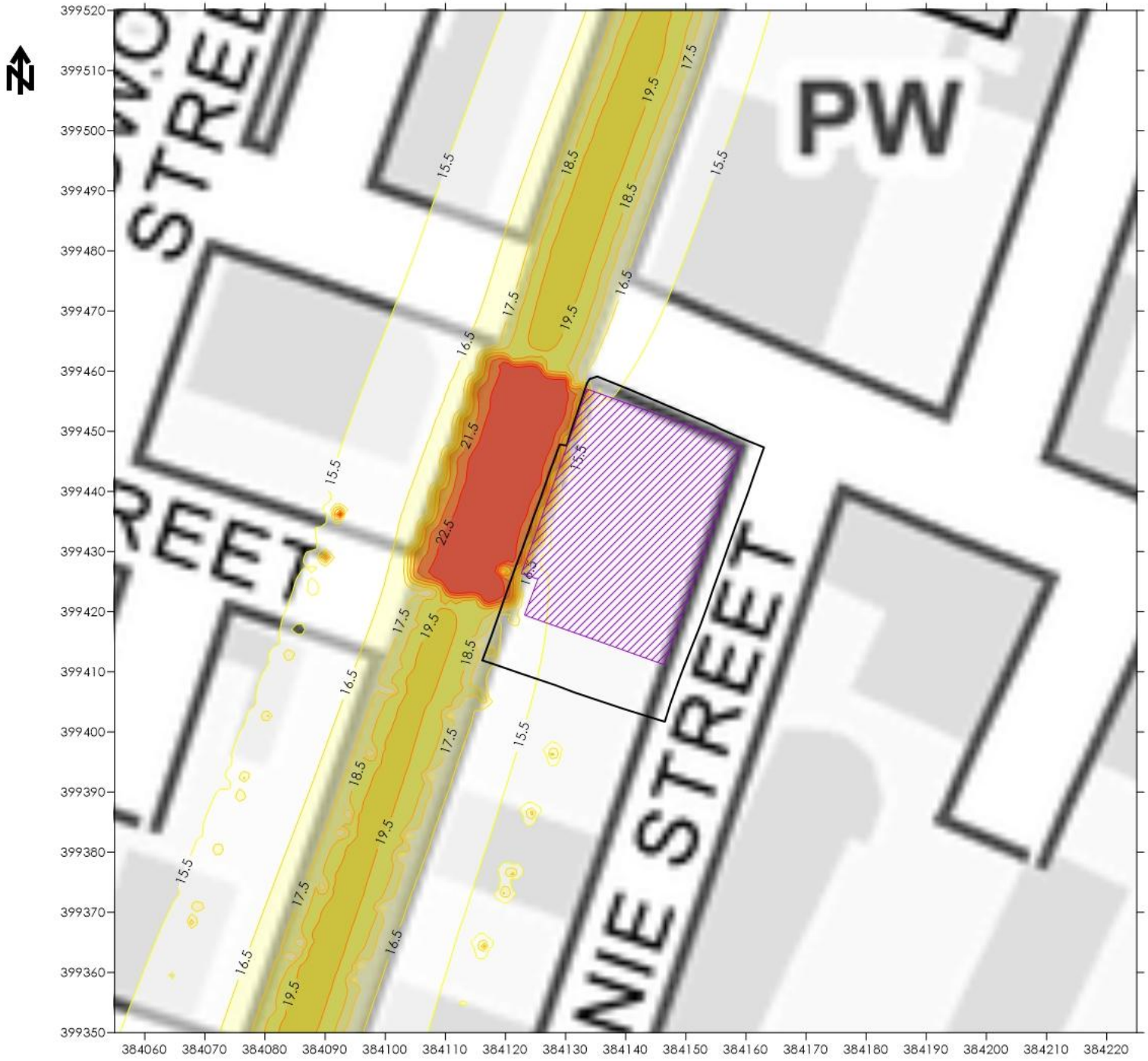
Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental
www.red-env.co.uk | 0161 7060075



Legend

Site Boundary

Proposed Building

Annual Mean PM_{10} Concentration ($\mu g/m^3$)

22.5
21.5
20.5
19.5
18.5
17.5
16.5
15.5

Title

Figure 4 - Predicted Annual Mean PM_{10} Concentrations ($\mu g/m^3$)

Project

Air Quality Assessment
Lord Street, Manchester

Project Reference

9835

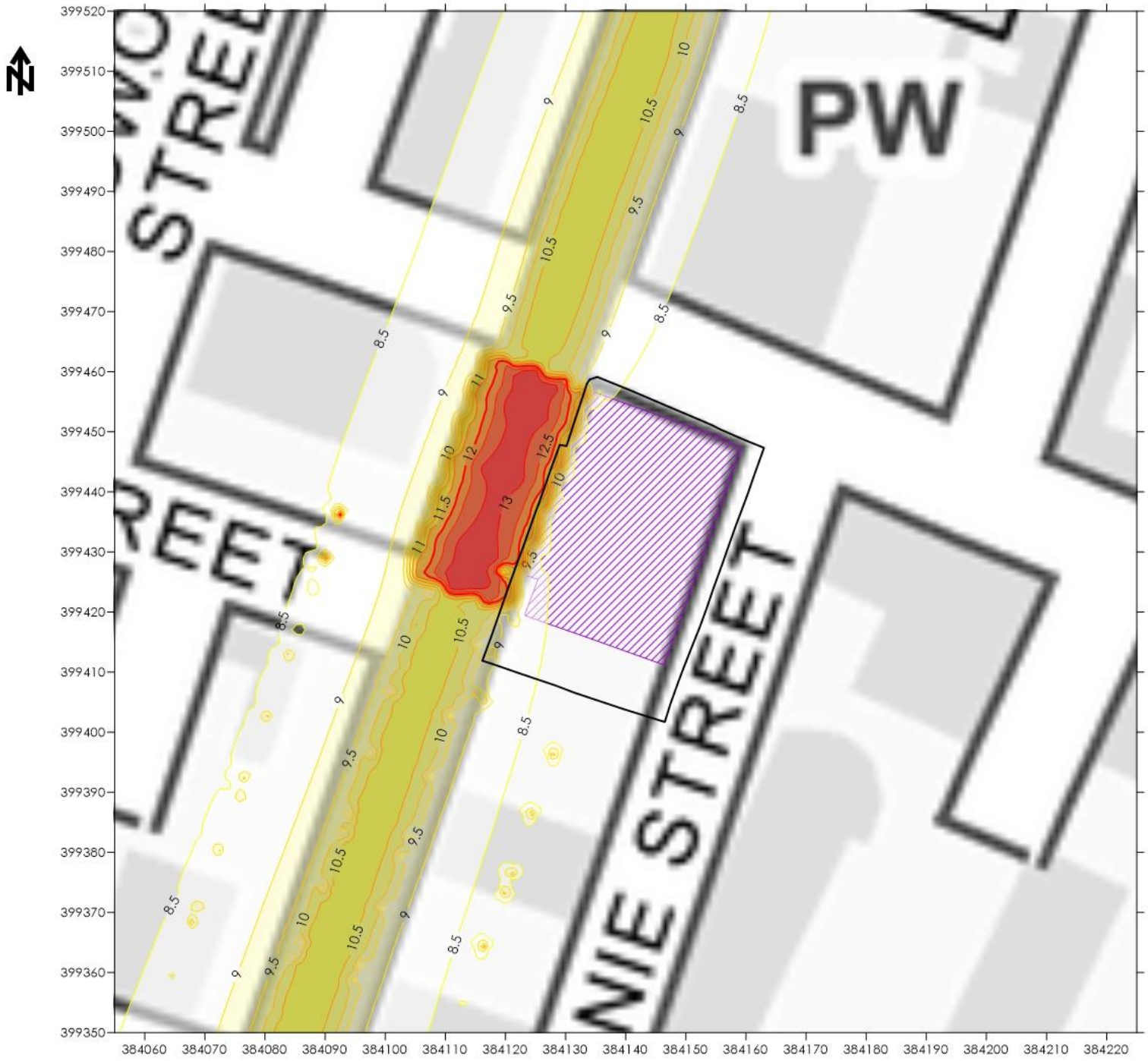
Client

Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental

www.red-env.co.uk | 0161 7060075



Legend

Site Boundary

Proposed Building

Annual Mean $PM_{2.5}$ Concentration ($\mu g/m^3$)

13
12.5
12
11.5
11
10.5
10
9.5
9
8.5

Title
Figure 5 - Predicted Annual Mean $PM_{2.5}$ Concentrations ($\mu g/m^3$)

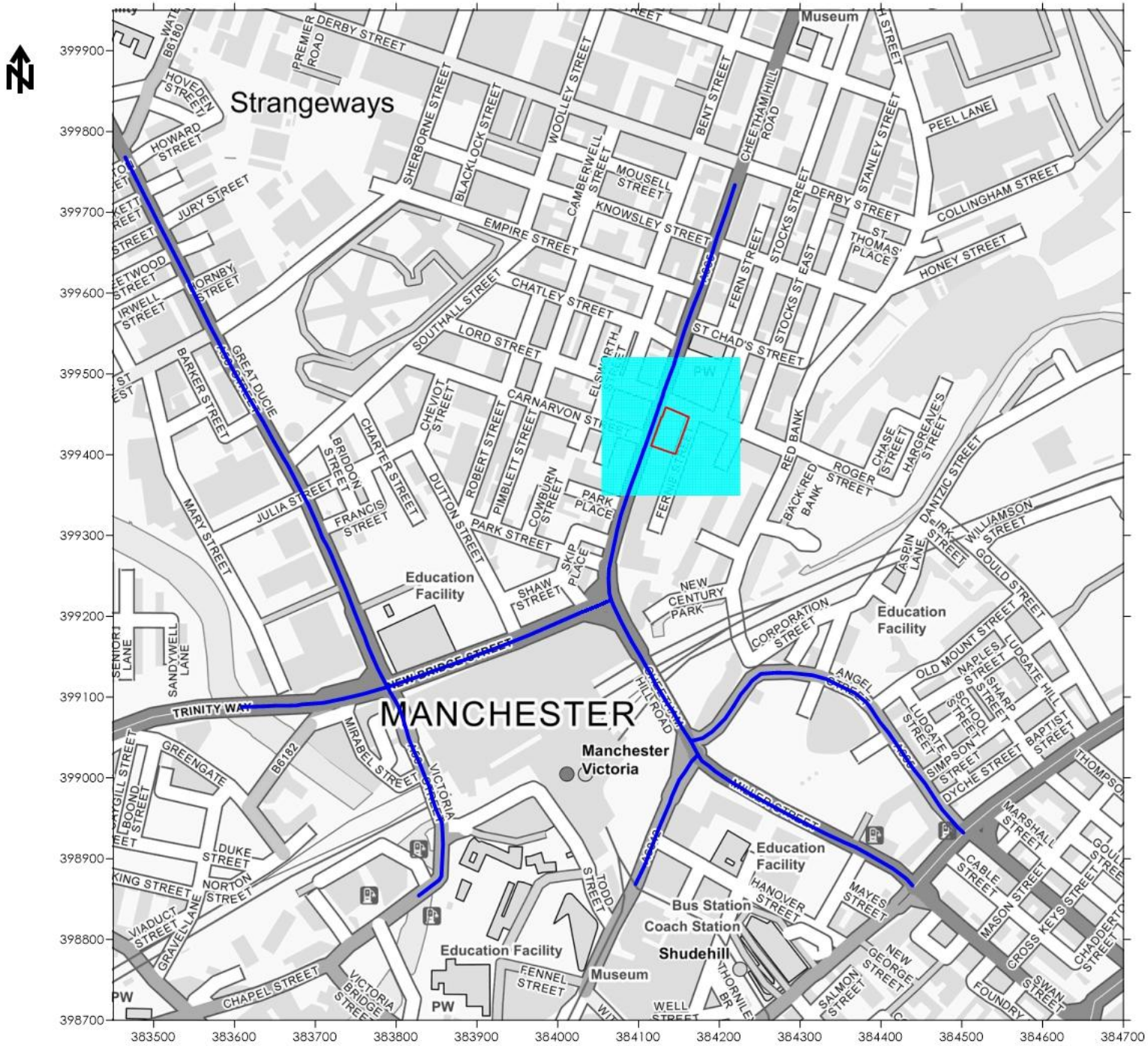
Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental
www.red-env.co.uk | 0161 7060075



Legend

Site Boundary

Road Link

Output Grid

Title
Figure 6 - ADMS-Roads Inputs

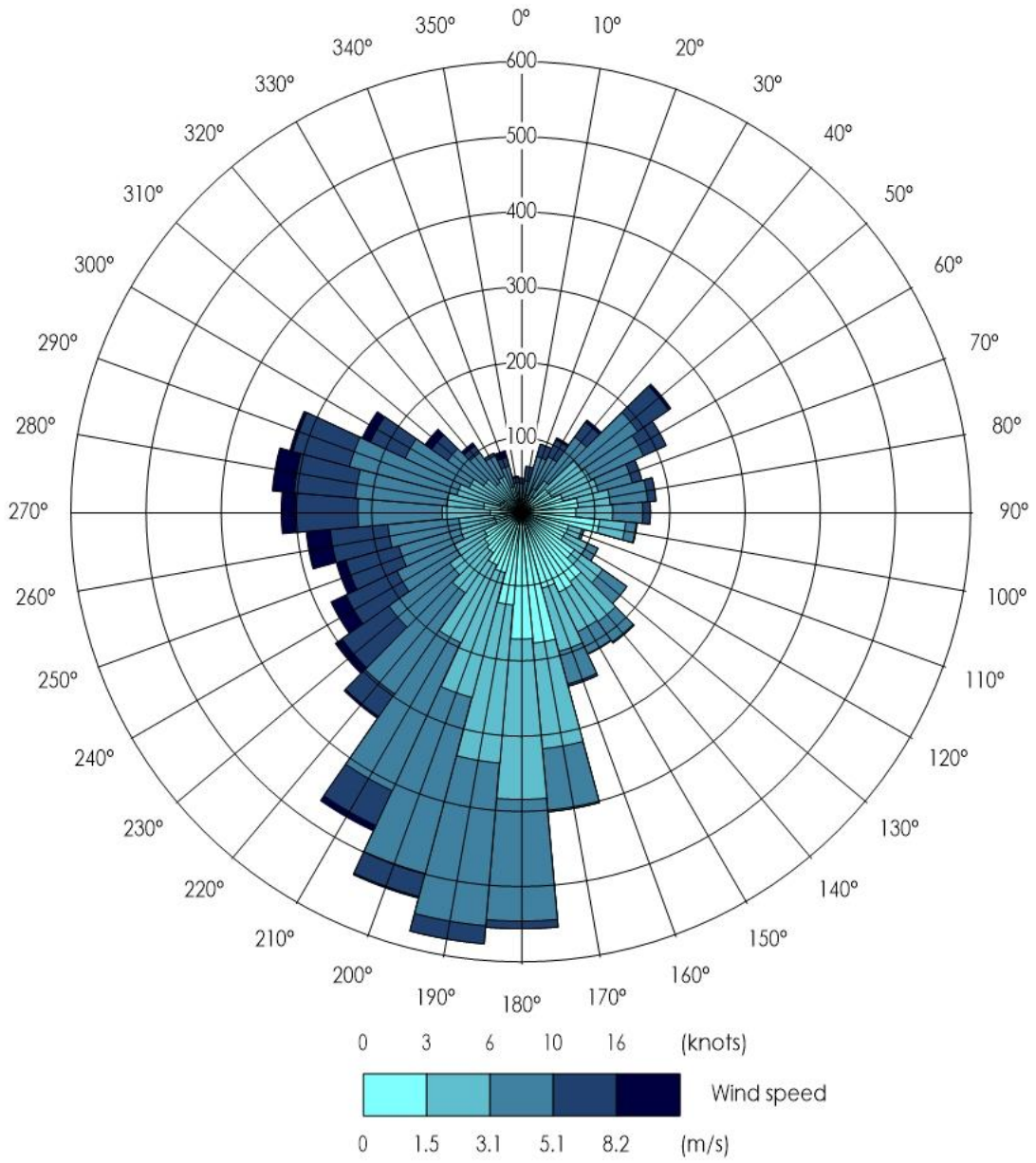
Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Contains Ordnance Survey Data
© Crown Copyright and Database Act 2023

Redmore environmental
www.red-env.co.uk | 0161 7060075



Legend

Title
Figure 7 - Wind Rose of 2024 Manchester Airport Meteorological Data

Project
Air Quality Assessment
Lord Street, Manchester

Project Reference
9835

Client
Linear Living Ltd

Redmore environmental
www.red-env.co.uk | 0161 7060075

Appendix 1 - Assessment Input Data

Introduction

The proposal has the potential to expose future residents to any existing air quality issues as a result of road vehicle exhaust emissions in the vicinity of the site. In order to assess NO_2, PM_{10} and $PM_{2.5}$ concentrations across the development, detailed dispersion modelling was undertaken in accordance with the following methodology.

Dispersion Model

Dispersion modelling was undertaken using the ADMS-Roads dispersion model (version 5.0.1.3). ADMS-Roads is developed by Cambridge Environmental Research Consultants (CERC) and is routinely used throughout the world for the prediction of pollutant dispersion from road sources. Modelling predictions from this software package are accepted within the UK by the Environment Agency and DEFRA.

The model requires input data that details the following parameters:

- Assessment area;
- Traffic flow data;
- Vehicle emission factors;
- Spatial co-ordinates of emissions;
- Street width;
- Meteorological data;
- Roughness length (z_0); and,
- Monin-Obukhov length.

Additional options can also be selected within the ADMS-Roads interface to take account of site specific characteristics that may affect model output, such as canyons.

The relevant inputs are detailed in the following Sections.

Assessment Area

Ambient concentrations were predicted over the area NGR: 384055, 399350 to 384225, 399520. One Cartesian grid was used within the model to produce data suitable for contour plotting using the Surfer software package. It should be noted that although the grid only covered the

proposed site, road links were extended in order to ensure the impact of all relevant vehicle emissions in the vicinity of the development were considered.

Reference should be made to Figure 6 for a graphical representation of the assessment grid extents.

Traffic Flow Data

Baseline traffic data for use in the assessment, including 24-hour AADT flows and fleet composition as HDV proportion, was obtained from the Department for Transport (DfT)[25]. The DfT web tool enables the user to view and download traffic flows on every link of the 'A' road and motorway network, as well as selected minor roads, in Great Britain for the years 1999 to 2024. It should be noted that the DfT web tool is referenced in DEFRA guidance[26] as being a suitable source of data for air quality assessments and it is therefore considered to provide a reasonable estimate of traffic flows in the vicinity of the site.

The baseline traffic data was converted to the site opening year utilising a factor obtained from TEMPro (version 8.0). This software package has been developed by the DfT to calculate future traffic growth throughout the UK.

Road parameters for input into the model were based on the following:

- Road widths were estimated from aerial photography and UK highway design standards;
- Vehicle speeds were estimated as an average for the relevant road link over the course of a 24-hour period;
- Vehicle speeds were determined following review of speed limits within the study extents, as well as congestion data available from GoogleMaps;
- Vehicle speeds specific to slow phases were determined using the methodology outlined in the DEFRA guidance[27];
- Necessary adjustments to slow phase vehicle speeds were based upon congestion data available from GoogleMaps; and,

25 https://roadtraffic.dft.gov.uk/#6/55.254/-11.107/basemap-regions-countpoints.7

26 Local Air Quality Management (TG22) Technical Guidance, DEFRA, 2022.

27 Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

- The length for slow phases were derived using the approaching distance of 25m outlined in the DEFRA guidance[28], and adjusted accordingly based on aerial photography and congestion data available from GoogleMaps.

A summary of the traffic flow data is provided in Table A1.1.

Table A1.1 Traffic Data

Link		24-hour AADT Flow		HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2024	2028			
L1	A665 Cheetham Hill Road	17,029	17,720	2.44	11.6	45
L2	Church North of Site Slow Phase (SP)	17,029	17,720	2.44	11.8	20
L3	Canyon at the Site Boundary SP	17,029	17,720	2.44	11.7	20
L4	A665 South of Site	17,029	17,720	2.44	11.8	45
L5	A665 SP into Junction	17,029	17,720	2.44	12.0	20
L6	New Bridge Street SP	30,149	31,373	2.68	22.1	20
L7	New Bridge Street	30,149	31,373	2.68	18.2	45
L8	New Bridge Street SP to Junction West	30,149	31,373	2.68	17.4	20
L9	Trinity Way SP	29,541	30,740	2.46	21.0	20
L10	Trinity Way	29,541	30,740	2.46	25.0	45
L11	A56 Victoria Street SP	4,846	5,043	6.87	15.0	20
L12	A56 Victoria Street	4,846	5,043	6.87	10.8	30
L13	Great Ducie Street after Junction SP	14,318	14,899	2.05	15.9	20
L14	Great Ducie Street	14,318	14,899	2.05	11.1	45
L15	Great Ducie Street near Francis Street	14,318	14,899	2.05	9.3	45
L16	Great Ducie Street after Julia Street	14,318	14,899	2.05	9.2	45
L17	Canyon at New Bridge Street Junction SP	27,709	28,834	3.14	12.6	20
L18	Cheetham Hill Road across Bridge	27,709	28,834	3.14	12.6	45

28 Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Link		24-hour AADT Flow		HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2024	2028			
L19	Canyon at Miller Street SP	13,506	14,054	2.39	10.0	20
L20	Miller Street	13,506	14,054	2.39	7.2	30
L21	Miller Street South	13,506	14,054	2.39	7.4	30
L22	A6042 SP	3,363	3,500	7.88	11.6	20
L23	Angel Street SP	3,363	3,500	7.88	7.0	20
L24	Angel Street	3,363	3,500	7.88	9.0	45

Reference should be made to Figure 6 for a graphical representation of the road link locations.

Canyons

Where buildings or walls surround roads, pollutant dispersion patterns are altered which can lead to high pollutant concentrations. These street canyons can significantly influence air quality along a road and therefore it is important to take consideration of their effects when undertaking dispersion modelling.

The release of ADMS-Roads version 4.0.1.0 in December 2015 incorporated a number of new features including an advanced street canyon module, which have been retained in version 5.1.0.2. Advanced street canyon modelling allows a number of parameters to be included in the dispersion model in order to predict pollutant dispersion patterns which better reflect air flow within complex urban geometries.

Canyons have five principal effects on dispersion which can influence pollutant concentrations. These are:

- Pollutants are channelled along street canyons;
- Pollutants are dispersed across street canyons by circulating flow at road height;
- Pollutants are trapped in recirculation regions;
- Pollutants leave the canyon through gaps between buildings - as if there was no canyon; and,
- Pollutants leave the canyon from the canyon top.

The combined modelling of these effects will result in concentration patterns unique to each canyon. The parameters used in the model are outlined in Table A1.2. It should be noted that where buildings are only present on one side of the road, parameters were purposely included at 0m.

Table A1.2 Canyon Parameters - Baseline Year

Link	Parameter (m)					
	Canyon Width Left	Average Height of Buildings to Left	Building Length Left	Canyon Width Right	Average Height of Buildings to Right	Building Length Right
L17	14.4	51.0	45.3	0	0	0
L19	12.5	30.4	43.3	0	0	0

The proposals will alter the street geometry along Cheetham Hill Road. As such, the canyon parameters were altered in the future year model to take account of potential changes in street geometry on L3. The parameters are shown in Table A1.3.

Table A1.3 Canyon Parameters - Future Year

Link	Parameter (m)					
	Canyon Width Left	Average Height of Buildings to Left	Building Length Left	Canyon Width Right	Average Height of Buildings to Right	Building Length Right
L3	8.7	60.0	39.0	0	0	0
L17	14.4	51.0	45.3	0	0	0
L19	12.5	30.4	43.3	0	0	0

A choice of two modes is provided for use in the advance canyon module. Standard mode assumes that each road is part of a continuous network of roads with similar canyon properties. Network mode analyses the road network to determine transport of pollutants between adjoining street canyons, allows for varying concentrations along the canyon and accounts for transport of pollutants out of the end of a canyon. Network mode is considered most accurate for detailed local analysis and as such was selected for use in the model.

Emission Factors

Emission factors were calculated using the relevant traffic flows and the Emission Factor Toolkit (version 13.1). This has been produced by DEFRA and incorporates COPERT 5.8 vehicle emission factors and fleet information.

Meteorological Data

Meteorological data used in the assessment was taken from Manchester Airport meteorological station over the period 1st January 2024 to 31st December 2024 (inclusive). Manchester Airport is located at NGR: 382073, 385035 which is approximately 15.4km south of the development. It is anticipated that conditions would be reasonably similar over a distance of this magnitude. The data was therefore considered suitable for an assessment of this nature.

All meteorological records used in the assessment were provided by Atmospheric Dispersion Modelling (ADM) Ltd, which is an established distributor of data within the UK. Reference should be made to Figure 7 for a wind rose of the utilised meteorological data.

Roughness Length

The z_0 is a modelling parameter applied to allow consideration of surface height roughness elements. A z_0 of 1m was used to describe the modelling extents. This is considered appropriate for the morphology of the area and is suggested within ADMS-Roads as being suitable for 'cities, woodlands'.

A z_0 of 0.2m was used to describe the meteorological site. This value is considered appropriate for the morphology of the area due to the large expanse of surrounding flat land use, such as runways and surrounding grassland, and is suggested within ADMS-Roads as being suitable for 'agricultural areas (min)'.

Monin-Obukhov Length

The Monin-Obukhov length provides a measure of the stability of the atmosphere. A minimum Monin-Obukhov length of 30m was used to describe the modelling extents and meteorological data. This value is considered appropriate for the nature of both areas and is suggested within ADMS-Roads as being suitable for 'cities and large towns'.

Background Concentrations

Background NO_2, PM_{10} and $PM_{2.5}$ concentrations used in the assessment were obtained from the DEFRA mapping study for the grid square, NGR: 384500, 398500, containing the CAP_MANC_077 monitor. These are shown in Table A1.4.

Table A1.4 Background Pollutant Concentrations - Modelling Extents

Pollutant	Predicted Background Pollutant Concentrations (µg/m³)	
	2024	2028
NO_2	22.22	19.28
PM_{10}	14.34	14.13
$PM_{2.5}$	8.01	7.78

The annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations were chosen to represent concentrations throughout the dispersion modelling extents without the contribution from road vehicles as they were higher than the DEFRA background for the grid square containing the site, as shown in Table 11.

NO_x to NO_2 Conversion

Predicted annual mean NO_x concentrations were converted to NO_2 concentrations using the spreadsheet (version 9.1) provided by DEFRA, which is the method detailed within DEFRA guidance[29].

Verification

The predicted results from a dispersion model may differ from measured concentrations for a large number of reasons, including:

- Estimates of background concentrations;
- Uncertainties in source activity data such as traffic flows and emission factors;

[29] Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

- Variations in meteorological conditions;
- Overall model limitations; and,
- Uncertainties associated with monitoring data, including locations.

Model verification is the process by which these and other uncertainties are investigated and where possible minimised. In reality, the differences between modelled and monitored results are likely to be a combination of all of these aspects.

For the purpose of the assessment, model verification was undertaken for 2024 using traffic data, meteorological data and monitoring results from this year.

Monitoring of NO_2 concentrations was undertaken at five locations within the vicinity of roads included in the dispersion model during 2024. Review of the sites indicated that the CAP_MANC_051 - A665 (Miller Street) monitor was positioned in an area of restricted airflow, adjacent to a wall and large street sign. This results in complex dispersion characteristics surrounding the monitor. As such, it was removed from the verification process.

Results for the remaining monitors were obtained and the road contributions to total NO_x concentrations calculated following the methodology contained within DEFRA guidance[30]. The monitored annual mean NO_2 concentrations and calculated road NO_x concentrations are summarised in Table A1.5.

Table A1.5 NO_x Verification - Monitoring Results

Monitoring Location		Monitored NO_2 Concentration (µg/m^3)	Calculated Road NO_x Concentration (µg/m^3)
CAP_MANC_076	A665 (Miller Street)	26.40	9.73
CAP_MANC_077	A665 (Miller Street)	27.60	12.66
CAP_MANC_136	A665	41.70	52.81
CAP_MANC_192	A56 (Great Ducie Street)	29.30	16.92

The annual mean road NO_x concentrations predicted from the dispersion model and the 2024 road NO_x concentrations calculated from the monitoring results are summarised in Table A1.6.

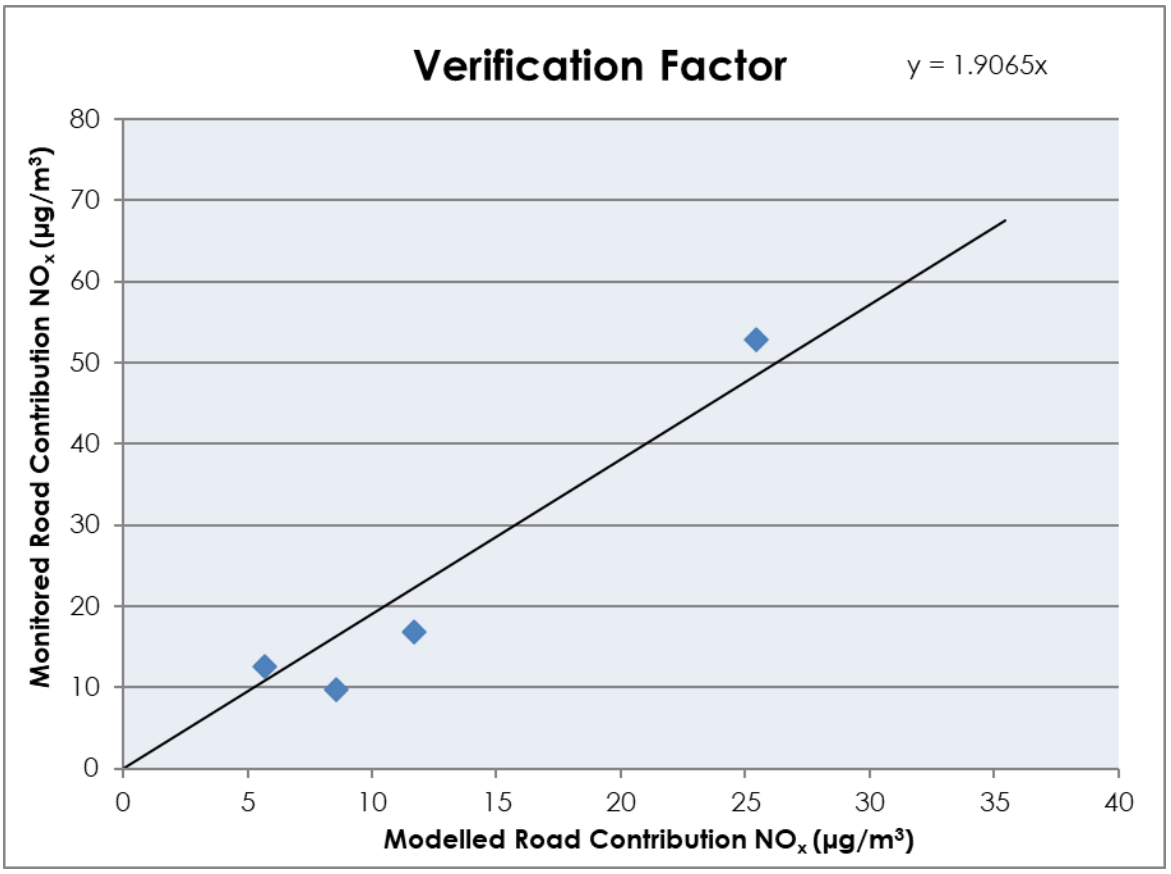
30 Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Table A1.6 NO_x Verification - Modelling Results

Monitoring Location		Calculated Road NO_x Concentration (µg/m^3)	Modelled Road NO_x Concentration (µg/m^3)
CAP_MANC_076	A665 (Miller Street)	9.73	8.58
CAP_MANC_077	A665 (Miller Street)	12.66	5.68
CAP_MANC_136	A665	52.81	25.45
CAP_MANC_192	A56 (Great Ducie Street)	16.92	11.69

The monitored and modelled road NO_x concentrations were graphed and the equation of the trendline based on linear progression through zero calculated. This indicated that a verification factor of 1.9065 was required to be applied to all modelling results, as shown in Graph 1.

Graph 1 NO_x Verification Factor



Monitoring of PM_{10} and $PM_{2.5}$ concentrations is not undertaken within the assessment extents. The NO_x verification factor was therefore used to adjust model predictions of these species in lieu of more accurate data in accordance with DEFRA guidance[31].

[31] Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Appendix 2 - Curricula Vitae

CLAIRE MEDDINGS

Director

MSc, BSc (Hons), CSci, MIAQM, MIEnvSc

Tel: 0161 706 0075 | Email: Claire.Meddings@red-env.co.uk

KEY EXPERIENCE:

Claire is a Director with specialist experience in the air quality sector

Her key capabilities include:

- Production and management of Air Quality, Dust and Odour Assessments for a wide range of clients from the residential, retail, commercial, leisure and industrial and infrastructure sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-6 and AERMOD. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Project management and co-ordination of Environmental Impact Assessments and scoping reports for developments throughout the UK.
- Assessment of fugitive dust impacts from a range of waste and industrial developments.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.
- Undertaken and overseeing pollutant monitoring campaigns.
- Provision of expert advice and attendance at DCO examination process.

SELECT PROJECTS SUMMARY:

Residential and Educational

Air Quality Assessments for a large number of proposed residential and educational developments across the UK. The assessments included consideration of construction phase dust emissions and mitigation was recommended to minimise fugitive dust emissions accordingly. The suitability of the sites for the proposed residential and educational uses was also assessed. The assessment utilised a range of assessment tools including relevant screening criteria, air dispersion modelling using ADMS-Roads, local air quality monitoring and Defra published assessment tools. Where required for sites in London, Air Quality Neutral assessments were also undertaken utilised the Greater London Authority guidance.

Air Quality Monitoring

Air Quality Assessments and overseeing air quality monitoring campaigns for a number of sites within Birmingham. Air dispersion modelling was undertaken and air quality monitoring utilising NO_2 diffusion tubes was carried out for use in verification of the dispersion model. Mitigation was recommended where appropriate to reduced the exposure of future uses of the sites to elevated pollutant concentrations.

Odour Assessments

Undertaken to support developments in the UK, including consideration of the impact of existing odour sources on proposed developments or to assess proposed odour releases. A combination of field odour surveys, risk assessments and detailed dispersion modelling were undertaken, with mitigation measures recommended where required.

Commercial and Retail

Foodstores across the UK - Air quality assessments for a number of proposed foodstores across the UK. Consideration was given to construction phase dust emissions and vehicle emissions generated by the foodstore operations. Relevant screening criteria and detailed air dispersion modelling were utilised in the assessment. Mitigation was recommended as required to minimise construction phase dust emissions.

Commercial development, Worksop - Air quality assessment and input into the EIA for a proposed large scale commercial development near Worksop. Assessments of construction phase dust and operational phase road traffic emissions were undertaken and consideration was given to both human and ecological receptors.

Industrial and Infrastructure

Greater Manchester Waste PFI Contract - Air Quality and Odour Assessments were undertaken as part of the Planning Applications and Environmental Permit applications for a number of proposed waste facilities in Greater Manchester.

Energy from Waste Development, Scotland - Air Quality Assessment and coordination of the EIA and Environmental Permit Application for a proposed Energy from Waste development in Scotland. Considered industrial emissions from flue stacks as well as additional road traffic movements generated by the development

Strategic Rail Freight Interchange, Hinckley - oversaw the Air Quality Assessment for the proposed Rail Freight Interchange and acted as expert witness as part of the Development Consent Order (DCO) examination process.

MEGAN POND

Air Quality Consultant

BSc (Hons), AMIAQM, AMIEnvSc

Tel: 0117 2441912 | Email: megan.pond@red-env.co.uk

KEY EXPERIENCE:

Megan is an Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle exhaust emissions using ADMS-Roads. Studies have included impact assessments on sensitive receptors and exposure of new residents to poor air quality.
- Advanced Canyon Modelling to evaluate the impact of altered urban topography on air quality in built up areas.
- Assessment of construction dust impacts from a range of development sites.
- Production of Air Quality Neutral Assessments in accordance with The London Plan.
- Installation and management of diffusion tube monitoring campaigns in order to determine the potential for exposure of sensitive receptors to poor air quality.

SELECT PROJECTS SUMMARY:

Whitebirk, Blackburn

Air Quality Assessment in support of a residential development comprising demolition of existing buildings and construction of 152 dwellings on land at the Whitebirk Estate, Blackburn. The development had the potential to expose future occupants to any existing air quality issues and cause impacts at sensitive locations. Dispersion modelling was undertaken using ADMS-Roads. A construction dust assessment was also performed to provide mitigation for proposed dust generating activities. Results of the study indicated that air quality impacts and fugitive dust emissions were not significant.

Willow Lane, Mitcham

Air Quality Assessment in support of an industrial development off Willow Lane, Mitcham. Due to the size of the development, it was possible that traffic generated from the scheme may cause negative impacts on sensitive receptors nearby. NO_2 and PM_{10} concentrations were quantified at specific receptor points to ensure there would be no significant increases in pollution levels. Results revealed negligible impacts at all locations. An Air Quality Neutral Assessment was also undertaken in accordance with the London Plan. Following implementation of relevant mitigation measures, the development was considered Air Quality Neutral.

Harrow Road, London

Air Quality Assessment in support of a nursery. Detailed dispersion modelling, including advanced canyon inputs, was undertaken to evaluate the potential for exposure of future occupants to any existing issues at the site. The results indicated air quality conditions did not present an issue to planning consent.

The Green, Cheadle

Air Quality Assessment in support of a new Aldi store off the Green, Cheadle. Following concerns from the Local Authority regarding the potential for traffic generated by the proposals to cause air quality impacts, dispersion modelling was undertaken in order to quantify changes in pollutant concentrations at sensitive locations in the vicinity of the site. Results revealed negligible impacts at all locations.

Holloway Road, London

Kitchen Odour Assessment undertaken in line with the EMAQ+ and DEFRA guidance in support of a new restaurant on Holloway Road, London. Site-specific odour abatement options were identified in order to conform with best practice guidance. Based on the inclusion of the specified mitigation, odour effects associated with the development were not considered a constraint to planning consent.

Wyebridge Motors, Hereford

Ambient Air Quality Monitoring in support of a residential development. The Local Authority raised concerns regarding the exposure of future residents to poor air quality as a result of pollution from the adjacent A49. Due to the irregular topography of the area, a scheme of diffusion tube monitoring was undertaken to determine baseline NO_2 concentrations at the site. Results indicated that concentrations were below the Air Quality Objective at the building façade and as such, the risk for exposure of future residents to poor air quality was not considered significant.

APPENDIX 5 PRELIMINARY ECOLOGICAL APPRAISAL

Preliminary Ecological Appraisal Report

Lord Street, Manchester
Reference: 82-675-R1-1
Date: October 25



e3p

E3P

Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

+ 44 (0) 161 707 9612
https://e3p.co.uk

Registered in England
CRN: 08725262

QUALITY ASSURANCE

Report reference	82-675-R1

REV REF:	DESCRIPTION	AUTHOR	CHECKED	AUTHORISED	DATE
R1-1	First issue	NS2	HM	CK	08/10/25

This report has been prepared for the sole benefit, use, and information of the client. The liability of Environmental Engineering Partnership Limited T/A E3P with respect to the information contained in the report will not extend to any third party. This report has been prepared by the qualified persons as listed below.

WRITTEN BY	QUALIFICATIONS	POSITION
Noah Salt	BSc (Hons)	Graduate Ecologist

REVIEWED BY	QUALIFICATIONS	POSITION
Huw Morgan	BSc (Hons) MIEnvSc CEnv MCIEEM	Principal Ecologist

AUTHORISED BY	QUALIFICATIONS	POSITION
Celia Kenyon	BSc (Hons), MSc, MIEnvSc, CEnv, MCIEEM	Associate Director

EXECUTIVE SUMMARY

Site Address	Land south of Lord Street, Strangeways, Manchester M4 4EX
Coordinates	E 384140 N 399435
Site Area	Approximately 0.16 ha
Current Site Use	The site comprises a vacant plot of derelict land colonised by overgrown vegetation. The site is bordered to the east, north and west by Cheetham Hill Road, Lord Street and Fernie Street. A Texaco filling station lies directly adjacent to the south.
Designated Sites	No statutory designated sites were identified within 1 km of the site boundary. However, the site is located within the Impact Risk Zone of the Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), located approximately 5 km to the east. As per the criteria listed on MAGIC, the proposed site will not require further consultation with Natural England to proceed in relation to the SSSI due to the size of the site and the nature of the proposed works. Furthermore, no negative impacts to the SAC are anticipated as a result of the development and therefore a Habitat Regulations Assessment will not be required. No non-statutory designated sites are located within 1 km of the site.
Survey Results	The site was found to contain vacant or derelict land with one structure present. The site was found to have the following potential ecological constraints: • Terrestrial opportunities for common amphibians within rubble piles and scrub. • Structure 1 (S1) was assessed as having a Low bat roosting potential. • Potential presence of badgers, although limited. • Potential presence of hedgehogs within the dense scrub. • One small shallow mammal hole within the southwest of the site. • Opportunities for nesting birds within the structure and scrub.
Conclusions	The following further survey is recommended to inform a planning application: One Nocturnal Bat Survey is required on S1 between May and August (inclusive). If bats are identified roosting within the structure, a further two surveys would be required to characterise the roost, and a European Protected Species Licence will be required and with up-to-date surveys from the survey season prior to the application submission. The following mitigation is recommended: • Common amphibians are to be removed by hand from the working area during the clearance phase. • Precautionary Working Methods for badger.

- Where vegetation requires removal, it should be checked for the presence of hedgehogs prior to removal. If any vegetation is too dense to be fully inspected, it should be strimmed to 50 cm and checked for hedgehog before being cleared to ground level.

- The small mammal hole should be inspected before site clearance. Should a small mammal be identified sheltering within the hole, works should cease in this area until the mammal has vacated the hole.

- The structure and vegetation should be cleared or demolished outside of the breeding bird season (March to September inclusive). If this is not possible, a nesting bird check should be undertaken by a suitably qualified ecologist up to 48 hours before works commence. If a nest, or nest in construction, is located, then a stand-off distance should be maintained until the young have fledged.

A 10% gain in biodiversity will be required on-site. If this cannot be achieved on-site, a conservation offset payment or off-site compensation will be required.

Table of Contents

EXECUTIVE SUMMARY 1

1. INTRODUCTION 4
   1.1. Background 4
   1.2. Proposed Development 4
   1.3. Site Location 4
   1.4. Objectives 5

2. METHODOLOGY 6
   2.1. Desktop Study 6
   2.2. Vegetation and Habitats 6
   2.3. Fauna 7
   2.4. Preliminary Roost Assessment 7
   2.5. Survey Limitations 8

3. SURVEY RESULTS 9
   3.1. Site Context 9
   3.2. Designated Sites 9
   3.3. Habitats 10
      3.3.1. Sparsely Vegetated Urban Land – Vacant or Derelict Land u1f - 82 10
      3.3.2. Structures 10
   3.4. Protected and Notable Species 11
      3.4.1. Amphibians 11
      3.4.2. Bats 12
      3.4.3. Badger 12
      3.4.4. Otter and Water Vole 13
      3.4.5. Other Terrestrial Mammals 13
      3.4.6. Breeding Birds 13
      3.4.7. Reptiles 14
      3.4.8. Notable Invertebrates 14
   3.5. Invasive Plant Species 14

4. ECOLOGICAL CONSTRAINTS AND MITIGATION 15
   4.1. Development Proposals 15
   4.2. Protected and Notable Species 15
      4.2.1. Amphibians 15
      4.2.2. Bats 15
      4.2.3. Badgers 15
      4.2.4. Hedgehogs 15
      4.2.5. Breeding Birds 16

5. FURTHER SURVEYS 17
   5.1. Bats 17
   5.2. Table of Further Surveys 17

6. BIODIVERSITY NET GAIN 18

7. REFERENCES 19

APPENDIX I UKHAB HABITAT PLAN 20

APPENDIX II STRUCTURE 1 DESCRIPTION 21

1. INTRODUCTION

1.1. BACKGROUND

E3P were commissioned by Linear Living Ltd to undertake a Preliminary Ecological Appraisal at Lord Street, Manchester, hereafter referred to as "the site".

This report has been prepared by Noah Salt BSc (Hons), Graduate Ecologist at E3P. Noah holds a qualifying CIEEM membership, has a Level 4 Field Identification Skills Certificate (FISC) and has experience undertaking Preliminary Ecological Appraisals, protected species surveys and ecological mitigation for a wide variety of projects across the UK.

1.2. PROPOSED DEVELOPMENT

Proposals include the erection of a 20-storey residential building.

1.3. SITE LOCATION

The site is located to the north of Manchester City Centre, in the Strangeways area. The site is bordered by Cheetham Hill Road to the west, Lord Street to the north, and Fernie Street to the east. Please refer to Figure 1 for the approximate site location.

Figure 1 Approximate Site Location



1.4. OBJECTIVES

The objectives of the Preliminary Ecological Appraisal are as follows:

- Identify the major habitats present.
- Ascertain the presence or potential presence of any legally protected species and habitats.
- Recommend any further surveys or mitigation that may be required.

The Preliminary Ecological Appraisal comprises a desk study and site walkover. This survey has been completed as a baseline assessment of the site, and as such please see the end of the report for further surveys and mitigation proposed.

2. METHODOLOGY

2.1. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites, accessed September 2025.
- Aerial mapping and ordnance survey maps.
- Local data records provided by the Greater Manchester Ecology Unit (GMEU) on the 18th of September 2025.

A 1 km search area was utilised for the data search, with this being deemed an appropriate distance for the zone of influence of the site. The 1 km data search was selected due to the small size of the site as well as the urban nature of the surrounding area.

The data search included the request for details of protected and notable species of flora and fauna within 1 km of the central grid reference of the site. In addition, a request was made for any non-statutory designated sites within 1 km of the site boundary.

Please note that a lack of up-to-date records does not confirm the absence of a species from the area. The lack of records may simply be a result of a lack of protected species surveys being undertaken within the local area.

2.2. VEGETATION AND HABITATS

A Preliminary Ecological Appraisal of the proposed development site was undertaken by Noah Salt on the 18th of September 2025. The weather was warm and dry.

The walkover survey was undertaken to the standard methodology as detailed by the UK Habitat Classification Version 2.0 (UKHab, 2023). The assessment follows the methodology as per “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2017).

A vegetation and habitat plan has been produced for the proposed development site (please refer to Appendix I). The mapping is based on the UK Habitat Classification Version 2.0 (UKHab, 2023).

Searches were made for uncommon, rare, and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act 1981 (as amended) and species which are indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).

Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).

2.3. FAUNA

A thorough search of the site for signs of protected species of fauna was undertaken during the site walkover. These searches considered the following:

- Suitability of any ponds to support notable amphibians, and the suitability of the site's terrestrial habitats to support amphibians.
- Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- Signs of badgers (*Meles meles*), by way of setts, mammal paths, foraging signs, or latrines to indicate usage of the site by the species.
- Search of any watercourses for signs or suitability for water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts, and foraging signs.
- Suitability of the site to support roosting, foraging and commuting bats.
- Suitability of the site to support notable bird species.
- Suitability of the site to support notable invertebrates.
- Search of the site for any invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT

The Preliminary Roost Assessment was undertaken by Noah Salt on the 18th of September 2025. The survey involved undertaking a systematic search of the structures onsite, searching for signs of bats or spaces where bats would be able to access. The methodology followed that described in *Bat Surveys for Professional Ecologists, 4th Edition (Collins, 2023)*.

The structures were categorised for their bat roosting potential as described in **Table 1** in accordance with Collins (2023).

Table 1 Bat Roosting Potential Classification of Structures

CATEGORY	DESCRIPTION
NONE	No habitat features are likely to be used by any roosting bats at any time of the year.
NEGLIGIBLE	No obvious habitat features on-site are likely to be used by roosting bats; however, a small element of uncertainty remains, as bats can use small and apparently unsuitable features on occasion.
LOW	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
MODERATE	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but is unlikely to support a roost of high conservation status.
HIGH	A structure with one or more potential roost sites that are obviously suitable for use by a larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity, or classic cool/stable hibernation sites.

2.5. SURVEY LIMITATIONS

A Preliminary Ecological Appraisal does not constitute a full botanical survey. Instead, key species are identified to give a representative description of each habitat type. Additionally, due to different flowering times, some plant species present may have been missed. These limitations have been considered.

3. SURVEY RESULTS

3.1. SITE CONTEXT

The site comprised a small plot of vacant, derelict land to the north of Manchester City Centre. The surrounding habitats were predominantly urban in nature, with the immediate surroundings comprising roads, commercial units and high-rise residential dwellings. This urban arrangement of habitats is anticipated to provide limited value for local wildlife, however, the buildings may be used by nesting birds and small numbers of opportunistic roosting bats.

No Biodiversity Action Potential (BAP) Priority Habitats are present within the site or directly adjacent to the site boundary however, numerous isolated parcels were present within 1 km. The closest of which were Deciduous Woodland and Open Mosaic Habitat on Previously Developed Land located approximately 250 m and 470 m east of the site, respectively. These habitats are likely to provide value for a number of flora species, including plants seen in early successional communities and specialist fungi. These habitats will also offer high value for local animal species, including birds, terrestrial mammals and amphibians. Despite this, no suitable habitat corridors exist between these habitats and the site, with numerous high-rise buildings and high disturbance roads in between.

An active and inactive railway line and embankment is located approximately 150 m to the east of the site. This habitat could provide valuable commuting habitat for birds, bats and other terrestrial mammals. Despite this, numerous roads and buildings form a barrier between these habitats and the site itself.

The River Irk, a tributary of the river Irwell with the confluence located approximately 560 m southwest of the site, flows approximately 175 m south from the site at its closest point. The aquatic habitat present could provide valuable habitat for species such as otter, water vole and Daubenton's bat (*Myotis daubentonii*) however, there is no connectivity between the watercourse and the site.

An unvegetated ornamental fountain was located approximately 60 m south of the site. No other waterbodies were located within 250 m of the site.

3.2. DESIGNATED SITES

No statutory designated sites were identified within 1 km of the site boundary. However, the site is located within the Impact Risk Zone of the Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), located approximately 5 km to the east. Rochdale Canal is designated as a SSSI for supporting a diverse assemblage of aquatic vegetation, including the nationally scarce floating water-plantain (*Luronium natans*), for which it receives its SAC status. As per the criteria listed on MAGIC, no further consultation with Natural England is required with regards to Rochdale Canal SSSI. Furthermore, due to the distance between the site and the SAC, and the anticipation that the proposed residential building will not have a significant impact on air quality, a Habitat Regulations Assessment (HRA) will not be required.

No non-statutory Sites of Biological Importance were identified by GMEU.

3.3. HABITATS

The main habitats encountered during the survey are described in the following subsections. Please refer to Appendix I for the UKHab Habitat Plan.

3.3.1. SPARSELY VEGETATED URBAN LAND – VACANT OR DERELICT LAND U1F - 82

The majority of the site comprised derelict land which had been left vacant following the demolition of the previous building in early 2020. The peripheries of the site were dominated by butterfly bush (*Buddleja davidii*) with scattered silver birch (*Betula pendula*), goat willow (*Salix caprea*) and crack willow (*Salix fragilis*) saplings. Towards the centre of the site, there was a mosaic of hardstanding and hardcore which was colonised by a range of urban, disturbed ground, ruderal species including mugwort (*Artemisia vulgaris*), michaelmas-daisy (*Aster sp.*), Canadian fleabane (*Solidago canadensis*), bramble (*Rubus fruticose agg.*), field horsetail (*Equisetum arvense*), mouse-ear-hawkweed (*Pilosella officinarum*), cat's ear (*Hypochaeris radicata*), coltsfoot (*Tussilago farfara*), dandelion (*Taraxacum officinale agg.*), black medic (*Medicago lupulina*), herb Robert (*Geranium robertianum*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), petty spurge (*Euphorbia peplus*), ribbed melilot (*Melilotus officinalis*), yellow-wort (*Blackstonia perfoliata*), common centaury (*Centaurium erythraea*), Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*) and smaller cat's-tail (*Phleum bertolonii*). The habitat does not meet the criteria for open mosaic habitats on previously developed land, as the area of this habitat is less than 0.25 ha. Furthermore, only a small number of ruderal and annual indicator species were present.

Figure 2 Sparsely Vegetated Urban Land - Vacant or Derelict Land (u1f – 82)



3.3.2. STRUCTURES

One small structure was located within the southwest corner of the site. This structure was a remaining section of the building, which was demolished in 2020. The structure comprised red brick and breeze block walls, with part demolished walls providing access into the interior. Dense butterfly bush scrub surrounded the walls of the structure, and the species had also colonised the roof.

Figure 3 **Showing Structure**



3.4. PROTECTED AND NOTABLE SPECIES

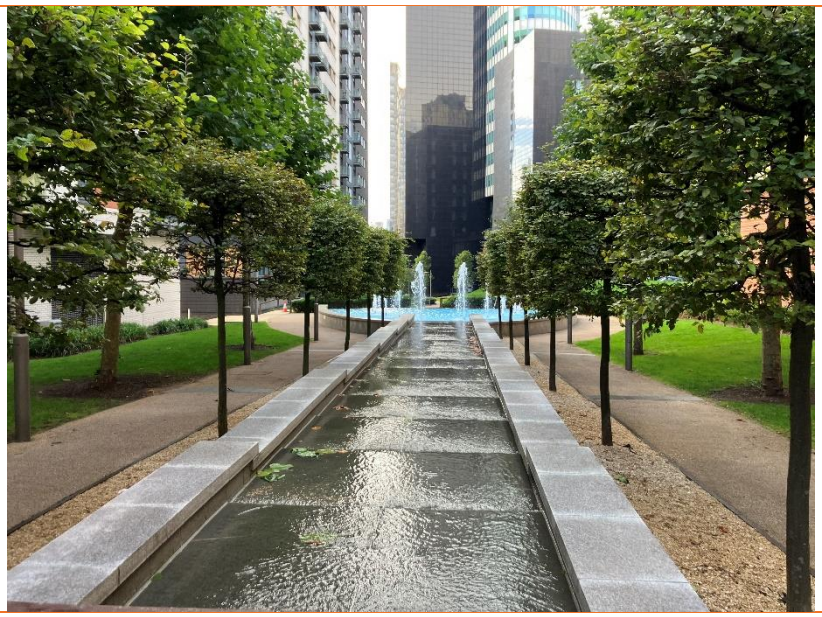
3.4.1. AMPHIBIANS

No records of great crested newts (*Triturus cristasus*) were identified by GMEU during the record search.

Consultation with MAGIC did not identify any great crested newt European Protected Species Licenses (EPSLs) within 1 km of the site. The closest EPSL was located approximately 5.4 km northwest of the site, active between 2014 and 2015 for the destruction of a great crested newt resting place.

An ornamental fountain was located approximately 60 m south of the site. No vegetation was present in the fountain, and it did not offer suitable breeding habitat for great crested newts. Please see Figure 4 for an image of the fountain.

Figure 4 **Fountain**



No further waterbodies were identified within 250 m of the site.

Great crested newts' upper dispersal limit is generally considered to be up to 250 m from a waterbody (though the occurrence of greater distances does exist where habitat connectivity is of high quality) (English Nature, 2001). As there are no suitable waterbodies located on-site or within 250 m of the site boundary, the presence of great crested newts on-site is reasonably discounted.

Further consultation with GMEU did not identify any records of common amphibians within 1 km of the site. The site does not offer a suitable breeding habitat for common amphibians due to a lack of waterbodies on-site. However, the vegetation and rubble piles may provide suitable shelter and protection for the species group within their terrestrial phase. As such, common amphibians may be present on-site.

3.4.2. BATS

Consultation with GMEU identified multiple records of bats within 1 km of the site, with recent records including common pipistrelle (*Pipistrellus pipistrellus*) and older records including soprano pipistrelle (*Pipistrellus pygmaeus*) and Daubenton's bat (*Myotis daubentonii*). The closest record was located approximately 90 m southwest of the site from 2014, comprising a record of an injured common pipistrelle.

Consultation with MAGIC identified four Natural England Bat Mitigation Licences within 1 km of the site, the details of which can be found in Table 2.

Table 2 Summary of Natural England Bat Licences

LICENCE REFERENCE	APPROXIMATE DISTANCE FROM SITE (M)	DESCRIPTION
2014-6380-EPS-MIT	600 m south	Active between 2015 and 2023 for the destruction of a common pipistrelle non-breeding roost.
2014-4219-EPS-MIT	750 m southwest	Active between 2014 and 2020 for the destruction of a common pipistrelle non-breeding roost.
2017-31569-EPS-MIT	800 m southwest	Active between 2017 and 2019 for the destruction of a common pipistrelle non-breeding roost.
EPSM2013-5644	950 m southeast	Active between 2013 and 2015 for the destruction of a common pipistrelle non-breeding roost.

The building on site (S1) was assessed as having Low bat roosting potential. A detailed assessment and photographs of the building are outlined in Appendix II.

Although the site comprised habitats which could support invertebrates, which could provide foraging opportunities for bat species, the site is small, lacks linear habitats and is situated within an area with high anthropogenic disturbance from traffic and street lighting. As such, the site is not anticipated to provide value for commuting and foraging bats.

3.4.3. BADGER

Consultation with GMEU identified one record of badger within 1 km of the site from 2011.

No badger setts or field signs were located on-site or within 30 m of the site boundary. However, badgers may occasionally utilise the site for foraging within the vegetation. Furthermore, although unlikely, the looser ground could be used by badgers for sett building.

3.4.4. OTTER AND WATER VOLE

Consultation with GMEU identified multiple records of otter within 1 km of the site. The closest of which comprised a record of an otter pair from 2018, approximately 600 m to the southwest of the site associated with the River Irwell.

No records of water vole were identified within the data search.

No watercourses are located on-site or directly adjacent to the site boundary. The closest watercourse is the River Irk, located approximately 175 m south at its closest point. Due to a lack of suitable aquatic and terrestrial habitat for otter and water vole within or adjacent to the site boundary, both species have been ruled out of further assessment.

3.4.5. OTHER TERRESTRIAL MAMMALS

A single record of a common hedgehog from 2020 was identified approximately 400 m south of the site.

The site was assessed as providing suitable refuge and foraging habitat for hedgehogs within the vegetation understorey however the habitat was isolated from other suitable habitat in the surrounding area. As such, hedgehogs may occasionally be present on-site.

A small mammal hole, approximately 1 m deep was present within the hardstanding embankment to the southwest of the site. A full inspection of the hole was possible during the survey.

Figure 5 Mammal Hole



3.4.6. BREEDING BIRDS

Consultation with GMEU identified numerous records of notable and protected bird species within 1 km of the site. Species included black redstart (*Phoenicurus ochruros*), hobby (*Falco subbuteo*), kingfisher (*Alcedo atthis*), peregrine (*Falco peregrinus*), bullfinch (*Pyrrhula pyrrhula*), cuckoo (*Cuculus canorus*),

dunnock (*Prunella modularis*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), song thrush (*Turdus philomelos*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*) and yellow wagtail (*Motacilla flava*).

Common bird species are anticipated to be present within the habitats onsite and may use the vegetation and structure for nesting. Due to the small size of the site and the high disturbance of the habitats directly adjacent to the site, it is not anticipated that the site supports an important assemblage of bird species or any ground-nesting birds.

3.4.7. REPTILES

Consultation with GMEU did not identify any records of reptiles within 1 km of the site.

The habitats onsite could support reptile species within the vegetation; however, due to a lack of suitable habitats and habitat connectivity within the local area and the urban habitats which were present on the site within the recent past, reptiles are not anticipated to be onsite and have been ruled out of further assessment.

3.4.8. NOTABLE INVERTEBRATES

Consultation with GMEU identified multiple records of notable invertebrates within 1 km of the site, including cinnabar (*Tyria jacobaeae*) and common carpet (*Epirrhoe alternata*).

Due to the small size of the site and the lack of connectivity to any high-quality habitats, an important assemblage of notable invertebrate species is not anticipated to be present on-site.

3.5. INVASIVE PLANT SPECIES

No invasive non-native plant species listed on the Wildlife and Countryside Act 1981 were identified on, or within close proximity to, the site. The native species, field horsetail, was identified at a low density on-site. This species can cause damage to hardstanding and structures.

4. ECOLOGICAL CONSTRAINTS AND MITIGATION

4.1. DEVELOPMENT PROPOSALS

Proposals include the erection of a 20-storey residential building.

4.2. PROTECTED AND NOTABLE SPECIES

4.2.1. AMPHIBIANS

The site may support small numbers of common amphibians within the vegetation and rubble piles. It is recommended that during the clearance phase of works, any common amphibians encountered should be moved by hand away from construction activities.

4.2.2. BATS

The onsite structure was assessed as having a Low roosting potential. Please see Section 5.1 for the information regarding further surveys in relation to bats.

It is recommended that any planting within the site be of native fruiting/flowering species in order to enhance the site for foraging bats post-completion.

Furthermore, bat boxes could be included in the design to enhance the sites value for the species group.

4.2.3. BADGERS

The habitats onsite may occasionally be visited by foraging badgers. As such, the following precautionary working methods will be adhered to during the construction phase to ensure that no badgers within the local area are impacted by the proposed development:

- All site operatives will be inducted to the presence of the species and their working limits and legal responsibilities. If they suspect that they locate a new sett during works, works should cease immediately, and the site manager and project ecologist should be notified.
- All excavations will be battered at a 45-degree angle, or ramps will be installed, to allow the escape should animals become trapped. Alternatively, excavations will be covered overnight.
- All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November (inclusive) each year when extra care is needed to avoid potential impacts on pregnant females.

It is not anticipated that the development will have a significant negative impact on badgers within the local area.

4.2.4. HEDGEHOGS

The site was assessed as providing suitable refuge and foraging habitat for hedgehogs within the denser vegetation. Where vegetation requires removal, it should be checked for the presence of hedgehog prior to removal. If any vegetation is too dense to be fully inspected, it should be strimmed to 50 cm and checked for hedgehog before being cleared to ground level.

4.2.5. OTHER MAMMALS

The small mammal hole should be inspected to ensure that no animal is occupying the shallow hole before clearance. Should any small mammal be identified, works within proximity to the hole should cease until the mammal has vacated the hole.

4.2.6. BREEDING BIRDS

The site was assessed as having value for common bird species within the peripheral vegetation and the onsite structure. Demolition and clearance of these features should be carried out outside of nesting bird season. Breeding bird season occurs between March-September (inclusive). If this is not possible, a suitably qualified ecologist should inspect the area no more than 48 hours prior to the removal. Should any nests, or nests in construction, be located, a suitable stand-off distance should be maintained until the young have fledged. The ecologist will advise on suitable standoff and provide a toolbox talk to all site contractors regarding their working limits and legal implications.

Post-development, bird boxes could be installed on the development to enhance the site's value for the species group.

5. FURTHER SURVEYS

5.1. BATS

The structure onsite (S1) was found to have Low bat roosting potential. As such, one Nocturnal Bat Survey is required on the structure between May and August (inclusive). If bats are identified roosting within the structure, a further two surveys would be required to characterise the roost, and a European Protected Species Licence will be required and with up-to-date surveys from the survey season prior to the application submission.

5.2. TABLE OF FURTHER SURVEYS

Please refer to Table 3 for a summary of further surveys required to inform a planning application.

Table 3 Further Surveys Recommended

SURVEY TYPE	TIMESCALES
Bat Survey on S1	One survey should be undertaken between May to August (inclusive)

6. BIODIVERSITY NET GAIN

The scheme will be required to achieve a 10% in Biodiversity Net Gain. In line with The Environment Act 2021, this is a mandatory requirement. Full details of this and a calculation of net gain could be finalised after detailed landscape plans have been prepared. It is recommended that an ecologist is consulted during the design stage to ensure, where possible, that biodiversity net gain can be achieved. If this is not feasible on-site, a conservation offset payment or off-site compensation may be required.

Habitat measures should be provided within areas of open space or designated wildlife zones. Planting should consist of native species and be of local provenance where possible. A 30-year management plan should be produced to ensure any significant biodiversity enhancements are secured on-site.

7. REFERENCES

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal.
- Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edition. The Bat Conservation Trust, London.
- Stace, C. A. (2019). New Flora of the British Isles. Fourth Edition. Cambridge University Press.
- UKHab (2023) UK Habitat Classification Version 2.0.
- Wildlife and Countryside Act (2010) Schedule 9 of the Wildlife and Countryside Act 1981.

END OF REPORT

APPENDIX I
UKHAB HABITAT PLAN





Key:

- Red line boundary
- Approximate field horsetail location
- Structure
- Vacant or derelict land

Notes

Issue:	Revision:	Date:	Drawn:	Authorised:
1	1	18/09/2025	NS2	CK

Client: Linear Living Ltd	Job No. 82-675	Date: 18/09/2025
	Drawing No. 82-675-001	Scale: 1:400 @ A4
Job title: Lord Street, Manchester	Drawing title: UKHab Habitat Plan	

Environmental Engineering Partnership Ltd
Manchester Office
Taylor Road, Urmston M41 7JQ
Tel: 0161 707 9612
Email: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.

APPENDIX II
STRUCTURE 1
DESCRIPTION



STRUCTURE REFERENCE	DESCRIPTION	PHOTOS
S1	S1 comprised a small section of the building which previously occupied the site, which was not demolished in 2020. As such, the features described below would only have been available to bats for the past five years. The structure was surrounded by dense vegetation along the sides and on the roof. The structure comprised two rooms, which were both missing walls on the northern aspect, providing access into the structure. Within both the internal rooms, small crevices in which a small number of bats could opportunistically roost in were present. Within the eastern room, a breeze block was missing from the internal wall, which provided access into the cavity wall. Within the western room, the roof and wall had flexed, creating a long crevice along the back wall. No evidence of bats was identified during the survey.	 

STRUCTURE REFERENCE	DESCRIPTION	PHOTOS
		

MANCHESTER CITY COUNCIL

Julie Roscoe
Director of Planning, Building Control and Licensing

PO Box 532
Town Hall
Manchester M60 2LA

Campbell Risdon
Ramboll
240 Blackfriars Road
London
SE1 8NW

Contact: Emily Booth
Tel: 0161 234 4193
Fax: 0161 274 0014
Email: emily.booth@manchester.gov.uk

5th January 2026

Our reference: EB/DMN/EIASCO/25/012

Dear Mr Risdon,

TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 ("THE EIA REGULATIONS")

SCOPING REQUEST UNDER PART 4 REGULATION 15(1)

'SITE OFF LORD STREET, MANCHESTER' – DEVELOPMENT OF A 23 STOREY TOWER PROVIDING 221 RESIDENTIAL UNITS ("THE PROPOSED DEVELOPMENT")

SCOPING OPINION OF MANCHESTER CITY COUNCIL PURSUANT TO REGULATION 15

Thank you for your request dated 20 November 2025 for a Scoping Opinion at the above site.

In coming to a formal opinion on the scope of the Environmental Statement ("ES"), Manchester City Council, as Local Planning Authority, has considered the supporting information contained within your *'Request for Scoping Opinion'* prepared by yourselves, on behalf of the Applicant Manchester City Council, and the comments from statutory consultees.

I have now had a chance to consider your scoping request, and I outline my response below.

The Proposed Development is considered an EIA development as it falls within the description and thresholds in Schedule 2, Section 10 (Urban Development Projects) of the EIA Regulations as an 'Urban Development Project' which has the potential to have significant effects on the environment. In accordance with Schedule 2, of the EIA Regulations and owing to the location, scale and nature and of the Proposed Development, I note that you recognise the need for an

EIA and have therefore submitted the Scoping Report for consideration to the City Council, as Local Planning Authority.

Before adopting a Scoping Opinion, the City Council, as Local Planning Authority, must take into account the information specified in Regulation 15(6) of the EIA Regulations.

(a) any information provided by the applicant about the proposed development.

(b) the specific characteristics of the particular development.

(c) the specific characteristics of development of the type concerned.

(d) the environmental features likely to be significantly affected by the development.

This Scoping Opinion sets out the information that the City Council, as Local Planning Authority, considers should be included in the ES that will be submitted with the subsequent planning application made in respect of the Proposed Development.

In formulating this Scoping Opinion, the City Council, as Local Planning Authority, has taken account of, the requirements of the EIA Regulations, the nature and scale of the Proposed Development, the nature of the receiving environment, current best practice in the preparation of environmental statements, and the views expressed by the organisations and bodies that responded to the consultation.

This Scoping Opinion should not be construed as implying that the City Council, as Local Planning Authority, agrees with the conclusions set out in the Scoping Request regrading impacts of the proposal. This Scoping Opinion is without prejudice to any decisions subsequently taken in respect of any planning application submitted in respect of the Proposed Development.

Your report of November 2025 sets out the proposed chapters that the ES will cover, and the disciplines which you believe should be scoped in and out of the EIA.

These are as follows:

Scoped In -

- Daylight/Sunlight:
    - Assessment of the impact on residential accommodation, including impact on Daylight and Sunlight Amenity of habitable rooms and Sunlight Amenity of identified external amenity spaces
- Wind
- Socio- Economic and Human Health:
    - Housing
    - Open Space, Leisure and Play
    - Employment and Income - increase
    - Built Environment
- Climate Change and Greenhouse Gases
- Townscape and Visual Impact:

    - Height/Scale, massing, grain and skyline contribution
    - Visual amenity of the public realm
    - Heritage-related views
    - Cumulative Visual/Townscape Effects

Scoped out -

- Daylight and Sunlight*:*
    - Impact on residential buildings not identified in the report and on commercial buildings.
- Socio- Economic and Human Health:
    - Risk Taking behaviour
    - Diet and Nutrition
    - Employment and Income – increase or reduce opportunities
    - Transport modes
    - Relocation
    - Community identity, culture, resilience and influence
    - Social participation, interaction and support
    - Education and training
    - Air Quality
    - Water Quality
    - Land Quality
    - Radiation
    - Crime and Community Safety
    - Climate Change
    - Health and Social Care Services
- Townscape and Visual Impact:
    - Views beyond 1km
    - Private interior views
    - Glare/Reflectivity Studies Transport and Access
- Ecology:
- Water Resources and Flood Risk
- Ground Conditions
- Transport
- Noise and Vibration
- Materials and Waste
- Aviation
- Archaeology
- Major Incidents and Disasters

Below is a consideration of the Scoping Report for the Proposed Development and comments on the approach which you have outlined.

CONSULTATIONS

Regulation 15 (4) of the EIA Regulations require the City Council, as Local Planning Authority, to consult consultation bodies prior to adopting a Scoping Opinion.

CONSULTATIONS

Regulation 15 (4) of the EIA Regulations require the City Council, as Local Planning Authority, to consult consultation bodies prior to adopting a Scoping Opinion.

Having regard to Regulation 2 of the EIA Regulations, the following consultees were consulted who have specific environmental responsibilities and which the City Council, as Local Planning Authority, considers are likely to have an interest in the development proposal.

- Natural England
- Environment Agency
- Greater Manchester Ecology Unit (GMEU)
- Greater Manchester Archaeology Advisory Service (GMAAS)
- Historic England
- United Utilities
- Cadent Gas
- City Council Highway Services
- City Council Environmental Health
- City Council Flood Risk Management
- City Council Arborist
- City Council City Centre Regeneration
- City Council Housing Strategy
- Aerodrome Safeguarding
- Design for Security at Greater Manchester Police.

All responses of the consultees contacted by the City Council, as Local Planning Authority, during the EIA scoping process are appended to this letter.

You are strongly recommended to consult further with consultees as appropriate throughout the EIA process as the development proposal evolves. It is thereby recommended all consultee responses are reviewed by you and the applicant in full.

Any subsequent ES submitted with a planning application should reflect the points raised by the consultation bodies where this reflects the requirements of the Regulations. It is recommended that the ES summarises the scoping responses from the consultation bodies and how they are, or are not, addressed in this regard. Any consultation responses received after the date of this letter, that have not been taken into account within this Scoping Opinion, will be forwarded to you and should be given due consideration in the planning application and EIA process.

CONTEXT

The site is bound by Cheetham Hill Road to the west, Lord Street to the north and Fernie Road to the east and by a Texaco Petrol Station to the south.

The development site is approximately 0.18 hectares. It is a rectangular site containing vacant derelict land with one disused building and has been most recently occupied by seven commercial units.

The area is dominated by commercial premises, residential use, and offices associated with the Strangeways Warehouse district.

HMP Manchester lies approximately 330m to the west of the site. To the south of the site is Park Place, and the building at 25-31 Cheetham Hill Road is a bank.

The Green Quarter, a residential development, is located close to the site and is a primarily residential area with buildings that are 8-16 storeys tall.

The nearest listed buildings to the Site are the Roman Catholic Church of St Chad and Presbytery (and churchyard walls) on Cheetham Hill Road (Grade II), the former synagogue at 19 Cheetham Hill Road (Grade II) and various structures associated with HMP Manchester (Strangeways) (Grade II)

The site is within walking distance of the City Centre where there are many public transport connections. Both Victoria Station and Shudehill Interchange are approximately 10 minutes' walking distance from the site, providing train, tram and bus links.

SENSITIVE RECEPTORS

The development site is located within the Greater Manchester Combined Air Quality Management Area (AQMA) along Cheetham Hill Road.

The site is not within, nor does it contain, any ecological designations including sites of specific interest (SSSI), sites of biological importance (SB1) or special protection areas (SPA).

The site is located in Flood Zones 1. The site is also situated within the Manchester, Salford and Trafford Critical Drainage Area (CDA).

The development site is not located within a Conservation Area and the site does not contain any listed buildings. There are listed buildings close to the development site.

PROPOSED DEVELOPMENT

I note from your Scoping Report that the Proposed Development is based on a number of parameters which are evolving as part of the design process. Should these parameters change, then a further scoping assessment should be undertaken if the scope of the ES needs to reflect this.

The Proposed Development would consist of the following works:

- Demolition of existing structures and site enabling works
- Erection of a 23-storey building, including a 935sqm basement to form 221 residential apartments, including 4 town houses (Use Class C3a).
- The development would be car fee and include cycle parking.

ASSESSMENT OF THE SCOPING REPORT

I can confirm that the approach outlined within the Scoping Report is considered to be generally acceptable, appropriate and proportionate. This is also reflected in the nature of the consultation responses.

You should note the specific points I have made below within the specific discipline areas which reflect the comments of the consultees and those of the City Council, as Local Planning Authority. These matters should also be included and addressed within the relevant chapters of ES.

Discussion of alternatives

Paragraph (3)(d) of Regulation 18, and paragraph 2 of Schedule 4 of the EIA Regulations, require that environmental statements include discussion description of the reasonable alternatives to the Proposed Development and an indication of the main reasons for the option chosen, that have been considered by the applicant.

I note within section 3 of your Scoping Request that you intend to provide a discussion on alternatives within the ES. This will focus on alternatives considered and project design evolution.

Presentation and content of the Environmental Statement

The purpose of an ES is to enable significant environmental impacts of a proposed development to be fully considered before an application for planning consent is determined.

The ES provides environmental information to aid the decision-making process. The ES should be laid out clearly, with minimum use of technical terms (where appropriate) and should provide an objective and realistic description of the likely significant impacts of the proposed development.

The information should be presented so as to be comprehensible to the specialist and non-specialist alike. The ES should be concise with supporting technical information placed in appendices

Mitigation

Paragraph 7 of Schedule 4 of the EIA Regulations states that mitigation measures may fall into a range of categories namely:

- avoidance of impacts.
- reduction in the magnitude of impacts; or

- compensation for losses incurred through unavoidable impacts.

These should be identified as such in the technical chapters of the ES.

Mitigation measures should not be developed in isolation, as they may relate to more than one aspect of the environment (e.g. mitigation to address issues of landscaping, surface water management, air quality and biodiversity).

The ES should set out the mitigation measures required to prevent, reduce and where possible offset any significant adverse effects. The ES should also identify any residual effects that could be expected to persist even with mitigation in place.

The anticipated effectiveness of any mitigation measures proposed should be addressed within the ES. Only mitigation measures that can be shown to be deliverable (i.e. technically and financially viable), and for which the applicant can deliver and implement as part of any planning permission granted, should be taken into account as part of the assessment.

It is further recommended that a section is included in the ES in which the mitigation measures proposed across all the technical chapters are collated and presented as an integrated package.

It is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan.

Cumulative effects

The committed developments summarised in table 4.5 of your Scoping Report appears to be acceptable.

Cross references and summarising of the findings

All specialist chapters should be cross-referenced to other relevant disciplines (for example traffic impacts on air quality). Consideration of the potential for interactions between the different aspects of the environment is essential to the production of a robust assessment.

The ES should not be a collection of separate specialist chapters, but a comprehensive assessment of the environmental impacts of the proposed components of the wider scheme and should account for how the identified impacts could be mitigated or avoided, or how suitable compensation could be provided to offset those effects.

In accordance with the requirements of paragraph 6 of Schedule 4 of the EIA Regulations, each technical chapter should include a description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of any difficulties (e.g. technical deficiencies, lack of know-how, etc.) encountered by the applicant during the preparation of the ES and the main uncertainties involved.

ENVIRONMENTAL MATTERS TO BE SCOPED OUT OF THE ES

The City Council comments as follows, based on the information provided, on the matters proposed to be scoped out and partly scoped out of the ES.

- Ecology:
- Water Resources and Flood Risk
- Ground Conditions
- Transport
- Noise and Vibration
- Materials and Waste
- Aviation
- Archaeology
- Major Incidents and Disasters
- Daylight and Sunlight*:*
    - Impact on residential buildings not identified in the report and on commercial buildings.

- Socio- Economic and Human Health:
    - Risk Taking behaviour
    - Diet and Nutrition
    - Employment and Income – increase or reduce opportunities
    - Transport modes
    - Relocation
    - Community identity, culture, resilience and influence
    - Social participation, interaction and support
    - Education and training
    - Air Quality
    - Water Quality
    - Land Quality
    - Radiation
    - Crime and Community Safety
    - Climate Change
    - Health and Social Care Services

- Noise and vibration:
    - ground-borne noise
    - tranquil areas
    - vibration during operation only
    - traffic noise during operation only.

- Townscape and Visual Impact:

- Views beyond 1km
- Private interior views
- Glare/Reflectivity Studies Transport and Access

Air Quality

Air quality can be scoped out of the EIA as the Scoping Report submitted includes an Air Quality Assessment prepared by Redmore dated 16th October 2025 and referenced 9835r1. The content of this report can be agreed, and this report should be submitted as part of the planning application. The construction management plan for the development should include the mitigation measures within table 15 for control of fugitive dust emissions during the demolition and construction process. This CMP should also be submitted as part of the application.

Archaeology

Archaeology can be scoped out of the EIA as a 2016 archaeological assessment was produced as has informed the scoping report. The planning application should be supported by a suitable desk-based assessment. The need for intrusive archaeological investigation can be determined in due course once the design has been finalised and these works can be secured by a planning condition.

Ecology/Biodiversity

Ecology/Biodiversity can be scoped out of the EIA. The planning application should be supported by a suitable ecological assessment and a BNG Statement. Potential ecological issues including bats, nesting birds, and biodiversity net gain/ecological enhancements. A robust assessment of environmental impacts and opportunities based on relevant and up to date environmental information should be undertaken prior to a decision on whether to grant planning permission.

Ground Conditions

Ground Conditions can be scoped out of the EIA. The planning application should be supported by a suitable assessment.

Noise

Noise and Vibrations can be scoped out of the EIA subject to clarification. The planning application should be supported by a acoustic assessment and recommendations with regard to building insulation to address noise break in to the residential units from external noise and noise transfer from the ground floor and mezzanine commercial units. An AVO overheating assessment will also be required for the residential apartments. Assessment of noise breakout from the commercial and mezzanine units will be required and assessment of noise from any plant associated with the commercial units and also noise from the building ventilation system with regard to our noise criteria and recommendations providing for any insulation/ mitigation measures required. Please see the Environmental Health comments in full which are appended to this letter.

Transport

It is not agreed that Highways can be scoped out of the EIA. The statement shall include the information required by Highway Services within their comments that are attached to this letter.

Water Resources, Drainage and Flood Risk

Flood Risk and Drainage can be scoped out of the EIA. A Flood Risk Assessment and Drainage Strategy must be submitted to support the Planning Application. This should demonstrate design compliance with national and local policy.

Proposals for surface water attenuation are to align with the Manchester, Trafford and Salford Strategic Flood Risk Assessment. For brownfield sites a minimum of 50% betterment is required for reduction in runoff rate compared to the existing rates with the aim of reducing to the Greenfield runoff rates.

Heritage

Heritage cannot be scoped out of the EIA. Given the magnitude of the development the impact on the significance of the nearby heritage assets is required to be assessed.

Townscape and Visual Impact

Townscape and Visual Impact must be scoped into the EIA. It is however agreed that views beyond 1k, private interior views and glare/reflectivity Studies Transport and Access can be scoped out with all other relevant assessments scoped in to understand the full impact on the rich character surrounding the site.

Socio- Economic and Human Health

It is also proposed to scope the following assessments out of this section of the EIA:

- Risk Taking behaviour
- Diet and Nutrition
- Employment and Income – increase or reduce opportunities
- Transport modes
- Relocation
- Community identity, culture, resilience and influence
- Social participation, interaction and support
- Education and training
- Water Quality
- Land Quality
- Radiation
- Crime and Community Safety
- Climate Change
- Health and Social Care Services

Climate change cannot be scoped out of the EIA. Given the magnitude of the development all climate change issues are required to be assessed.

All of the other above Socio- Economic and Human Health assessments can be scoped out, but the following information would be required as part of the application.

- A completed Local Labour template for the construction period
- An Energy Statement
- A Crime Impact Statement

Daylight and Sunlight

The following can be scoped out of this section of the EIA:

- Impact on residential buildings not identified in the report and on commercial buildings.

Materials and Waste

Materials and waste can be scoped out of the EIA on the basis of the IEMA Guidance (Ref 8.1) (page 14).

The planning application should be supported by a description of the materials. These materials should be sought from as local suppliers as possible.

Waste management will be expected to comply with City Council requirements and waste will be required to be disposed of as sustainably as possible.

Aviation

Aviation can be scoped out of the EIA due to the distance between the site and Manchester Airport and flight paths.

Major Incidents and Disasters

I note that the proposed development does not pose a risk of major accident and/or disaster. As such, I can confirm that accidents and disasters can be scoped out the ES.

Summary

I agree that the matters you have identified to be scoped out of the ES are appropriate with the exception of heritage and highways.

The planning application must be supported by appropriate documentation, including any mitigation, to minimise any effects as a result of the Proposed Development from the matters capable of being scoped out. The City Council reserves the right to re-consider this position following a more detailed consideration of the reports which will accompany the planning application.

ENVIRONMENTAL STATEMENT CHAPTERS - SPECIFIC COMMENTS ON THE TECHNICAL CONTENTS

The ES should be proportionate in its consideration of the aspects of the environment listed under Paragraph 2 of Regulation 4 of the EIA Regulations. Those aspects of the environment that are subject to the most significant impacts from the Proposed Development should be the primary focus of the ES.

Your Scoping Report advises that the ES will cover the following topic areas.

- Daylight/Sunlight:
    - Assessment of the impact on residential accommodation, including impact on Daylight and Sunlight Amenity of habitable rooms and Sunlight Amenity of identified external amenity spaces
- Wind
- Socio- Economic and Human Health:
    - Housing
    - Open Space, Leisure and Play
    - Employment and Income - increase
    - Built Environment
- Climate Change and Greenhouse Gases
- Townscape and Visual Impact:
    - Height/Scale, massing, grain and skyline contribution
    - Visual amenity of the public realm
    - Heritage-related views
    - Cumulative Visual/Townscape Effects

As highlighted above, you should also include Heritage and Highways within relevant chapters within the ES.

General Comments

For planning purposes, the development site is located in a Strategic Housing Location (policy H2) of the Manchester Core Strategy (2012) together with forming a component of the Great Ducie Street Strategic Regeneration Framework Area.

The significance of the site should be reflected throughout the ES. The Environmental Chapters must therefore consider the impacts of the Proposed Development on this context in order to determine any wider significant environmental impacts.

Climate Change

The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.

Human Health

The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.

Sunlight, Daylight and Overshadowing

The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.

Townscape and Visual Impact

The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.

Socio economics

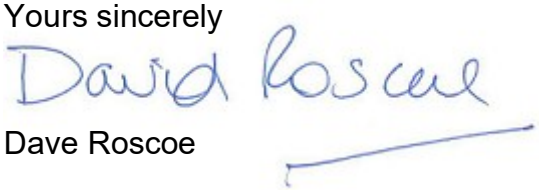
Socio economic impacts should be scoped into the EIA.

FURTHER INFORMATION

The City Council, as Local Planning Authority, has undertaken a thorough consideration of the information contained within your Scoping Report together with providing comments from relevant statutory consultees. The issuing of this Scoping Opinion does not preclude the City Council, as Local Planning Authority, from requesting further information at a later stage as the development proposals evolve or whilst a future planning application is being formally considered.

I trust this information is of some assistance to you. Should you require anything further please do not hesitate to contact myself or Emily Booth.

Yours sincerely



Dave Roscoe

Deputy Director of Planning

Lord Street, Manchester

Transport Statement

Curtins Ref: 88153-CUR-XX-XX-T-TP-00001
Revision: P02
Issue Date: 02 February 2026

Client Name: Linear Living Ltd

Control Sheet

Rev	Description	Checked	Issued	Date
P01	First issue	AT	AT	08 September 2025
P02	Second issue	AT	AT	02 February 2026

This report has been prepared for the sole benefit, use, and information for the client. The liability of Curtins with respect to the information contained in the report will not extend to any third party.

Author	Signature	Date
Miguel Quental BSc (Hons) MSc MCIHT Senior Transport Planner		02 February 2026

Reviewed	Signature	Date
Aaron Tilley FCIHT CMILT Transport Planning Director		02 February 2026

Authorised	Signature	Date
Aaron Tilley FCIHT CMILT Transport Planning Director		02 February 2026

Table of Contents

1.0 Introduction 1
1.1 Background 1
1.2 Policy Context 1
1.3 National Planning Practice Guidance (NPPG) 2
1.4 Manchester Core Strategy (2012 – 2027) 3
1.5 Greater Manchester Transport Strategy 2040 4
1.6 Manchester Residential Quality Guidance 5
1.7 Places for Everyone Joint Development Plan (2024) 5
1.8 Purpose of the Report 6
1.9 Scope of the Report 6
1.10 Structure of the Report 7
2.0 Existing Situation 8
2.1 Site Location 8
2.2 Existing Use and Access 8
2.3 Surrounding Highway Network 8
2.4 Highway Safety 9
3.0 Accessibility by Sustainable Modes of Travel 12
3.1 Introduction 12
3.2 Pedestrian Accessibility 12
3.3 Cycle Accessibility 13
3.4 Public Transport Accessibility 14
3.5 Summary 15
4.0 Development Proposals 16
4.1 Overview of Proposals 16
4.2 Proposed Access 16
4.3 Proposed Servicing Arrangements 18
5.0 Traffic Forecasting and Highway Impact 19

5.1 Introduction 19
5.2 Existing Trip Generation 19
5.3 Forecasted Trip Generation 19
5.4 Highway Impact Summary 20
6.0 Summary and Conclusions 21
6.1 Summary 21
6.2 Conclusions 21

Figures

Figure 2.1 – Site Location 8
Figure 2.2 – Area Assessed for Collision Data (5 years) 10
Figure 4.1 – Basement Level Layout 16

Tables

Table 2.1 – Collision Data Summary 10
Table 3.1 – CIHT Recommended Walking Distances 12
Table 3.2 – CIHT Maximum Suggested Walking Distances to Bus Stops 14
Table 3.3 – Summary of Bus Service Frequencies in the vicinity of the Site 14
Table 6.4 – Proposed Flats Trip Rates and Generation 20

Drawings

Drawing 88153-CUR-XX-00-D-TP-05001 – (Swept Path Analysis) 11.2m Large Refuse Vehicle

Appendices

Appendix A – Proposed Site Layout
Appendix B – TRICS Output

1.0 Introduction

1.1 Background

1.1.1 Curtins has been appointed by Linear Living Ltd (the Client) to provide transport and highways advice in relation to a planning application for residential development on Lord Street, Manchester.

1.1.2 The proposals seek to construct a 24-storey tower comprising 251 residential units, including the demolition of existing structures and the erection of a residential apartment development comprising 251no. dwellings (Use Class C3) with landscaping and associated works. The development will be car-free and will include dedicated cycle parking facilities at the basement level.

1.1.3 The principle of residential development on the Lord Street site has already been established through previous planning approvals. Planning permission was first granted on 21 November 2016 under application reference 113914/FO/2016 for the following development:

"Erection of a 16-storey building to form 192 residential apartments (Use Class C3a) together with ground floor commercial unit (172 sqm) (Use Class A1, A2, A3 or B1) with associated vehicular access from Fernie Street, car parking and hard and soft landscaping following demolition of existing buildings."

1.1.4 This scheme was later amended through a Non-Material Amendment application (ref: **138553/NMC/2023**) submitted in 2023, which retained the same number of residential units (192) but reduced on-site car parking to 20 spaces (11%) and increased cycle parking to 192 spaces (100%).

1.1.5 In contrast to the previous approvals, the current proposal increases the total number of residential units to 251 and eliminates all on-site car parking, delivering a fully car-free development.

1.1.6 The proposed site layout is provided in **Appendix A**.

1.2 Policy Context

1.2.1 The National Planning Policy Framework (NPPF) sets out the current national transport planning policy and outlines the important role that transport policies have to play in facilitating sustainable development.

1.2.2 Paragraph 115 of the NPPF states that in assessing sites that may be allocated for development in plans, or specific applications in development, it should be ensured that:

a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;
b) safe and suitable access to the site can be achieved for all users;

c) *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*

d) *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach."*

1.2.3 The development proposals demonstrate that safe and suitable access to the site can be achieved. The site benefits from a highly accessible location with excellent public transport and active travel links. As the scheme is car-free, it is not expected to generate significant vehicular traffic or result in any material impact on the highway network.

1.2.4 Paragraph 117 of the NPPF states that applications for development should:

- *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

1.2.5 The proposed development is situated in an accessible location. There is good active travel infrastructure adjacent to the site, and the public transport network is accessible within short walking distance. Being a car-free scheme, the proposed development has been designed to promote active travel and sustainable transport, with appropriate servicing facilities.

1.2.6 The proposed development accords with the general principles of the NPPF.

1.3 National Planning Practice Guidance (NPPG)

1.3.1 In addition to the NPPF, National Planning Practice Guidance (NPPG) has been developed by the Department for Communities and Local Government (DCLG; now the MHCLG) in 2014. It brings together planning practice guidance for England and sits alongside the NPPF. Within this document there is a specific section that clarifies the over-arching principles on Travel Plans, Transport Assessments and Transport Statements. The guidance states that:

"Travel Plans, Transport Assessments and Statements can positively contribute to:

- *Encouraging sustainable travel;*
- *Lessening traffic generation and its detrimental impacts;*
- *Reducing carbon emissions and climate impacts;*
- *Creating accessible, connected, inclusive communities;*
- *Improving health outcomes and quality of life;*
- *Improving road safety; and*
- *Reducing the need for new development to increase existing road capacity or provide new roads."*

1.3.2 The guidance on Transport Assessments and Statements re-iterates the circumstances in which either document would usually be required. It is clear that a development of the size and nature of this development requires a Transport Statement (TS). It also clarifies the process for establishing a scope for what the documents should contain. The NPPG has been considered in the production of this TS and the accompanying Interim Travel Plan (TP) (Document Reference: **88153-CUR-XX-XX-T-TP-00002**).

1.3.3 As outlined above, this TS demonstrates that the site is accessible by active and sustainable modes of travel, and that safe and suitable access can be gained to the development. The development proposals, which include a fully car-free development, apply the principles set out in the NPPG by promoting sustainable transport, reducing reliance on private vehicles, and supporting the creation of a of a well-connected, low-carbon neighbourhood that makes a positive contribution to the local area

1.4 Manchester Core Strategy (2012 – 2027)

1.4.1 The Manchester Core Strategy promotes similar principles to the NPPF. It contains three specific "Transport" policies, comprising:

- Policy T1 – Sustainable Transport;
- Policy T2 – Accessible Areas of Opportunity and Need; and
- Policy T3 – Strategic Integration.

1.4.2 Policy T1 focuses on sustainable transport and access for all. The accessibility of the site would encourage users of the proposed development to travel by sustainable modes.

1.4.3 Policy T2 of the Manchester Core Strategy states:

"The Council will actively manage the pattern of development to ensure that [outside the City Centre] … all new development should provide appropriate car parking facilities, taking account of the guidance in appendix B… In all parts of the City proposals should have regard to the need for disabled and cycle parking, in line with appendix B."

1.4.4 Appendix B does not specify minimum parking requirements for residential developments, allowing for a flexible approach based on context.

1.4.5 Given the site's highly accessible city centre location, the proposed car-free development is considered appropriate and consistent with the policy's intent. The development reflects a realistic and sustainable response to the site's great access to public transport and active travel infrastructure.

1.4.6 Policy T3 is in relation to strategic integration of developments with the sustainable transport network. The proposed development would not prejudice the implementation of any of the strategic integration projects.

1.5 Greater Manchester Transport Strategy 2040

1.5.1 In 2021, TfGM updated the 2040 Vision for Transport to deliver a transport system which enables residents, businesses, and visitors in Greater Manchester to travel to a wide range of different destinations and opportunities, and where sustainable transport can be a viable and attractive alternative to the car.

1.5.2 Under Policy 3, the Transport Strategy states that TfGM will "maintain a programme of interventions designed to encourage people to make sustainable journeys. We will support this through journey planning tools and information to encourage travel behaviour change and mode shift, and in order to make the most efficient use of available capacity (particularly during peak periods)." Such interventions comprise:

- *"Reducing the carbon and environmental cost of journeys;*
- *New ways of working which make the best use of the transport network;*
- *Maximising the benefit of new, integrated transport infrastructure and services;*
- *Delivering public health benefits through enabling more active travel;*
- *Supporting town and city centre economic vitality and sustainability;*
- *Improving access to key services and jobs;*
- *Maximising sustainable travel in new developments; and*
- *Becoming more resilient to disruption."*

1.5.3 The above measures and additional initiatives have also been provided in greater detail in the accompanying Interim Travel Plan (**Document Reference 88153-CUR-XX-XX-T-TP-00002**).

1.5.4 Under Policy 4, TfGM will also *"work with developers to ensure that new developments are accessible by sustainable modes, and to reduce transport emissions and impacts on the highway network."* This will be in accordance with the principles of:

- *"Reducing the need to travel;*

- *Reducing the need to travel by car, and the distance travelled;*
- *Maximising accessibility by sustainable modes;*
- *Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes;*
- *Maximising opportunities to provide additional public transport; and*
- *Designing to encourage active travel."*

1.5.5 It is considered that the development proposals, as a car-free scheme, will not adversely impact the transport network. Instead, they will support the Transport Strategy by promoting sustainable travel and enhancing connectivity through integration with existing active and public transport infrastructure.

1.6 Manchester Residential Quality Guidance

1.6.1 In 2017, MCC adopted the Manchester Residential Quality Guidance which sets out the standards of design for residential developments in the city. It is structured around nine components to ensure high-quality developments: make it happen, make it a home, make it future proof, make it practical, make it Manchester, make it bring people together, make it animate street and spaces, make it easy to get around, make it work with the landscape.

1.6.2 MCC stipulates in the document that development proposals:

- *"Incorporate sufficient car parking in an appropriate location that does not harm pedestrian movement;*
- *Provide secure cycle parking for residents and visitors, which is safe and convenient and within the envelope of the building;*
- *Provide sufficient bin storage to accord with MCC's standards and is conveniently located with minimal impact on the streetscene; and*
- *Have considered where temporary stopping could be accommodated"*

1.6.3 In line with the principles of the Manchester Residential Quality Guidance, the scheme will be car-free, offering secure, convenient cycle parking and on-site bin storage.

1.7 Places for Everyone Joint Development Plan (2024)

1.7.1 Places for Everyone (PfE) is the joint development plan for the nine Greater Manchester authorities, providing a strategic framework for growth in housing, employment, and infrastructure up to 2039. PfE seeks to promote sustainable patterns of development, reduce reliance on private car travel, improve air quality, and protect designated environmental assets.

1.7.2 The Holcroft Moss Planning Obligations Supplementary Planning Document (SPD) is one of a number of documents prepared by the Greater Manchester authorities to support the implementation of the strategic policies set out in PfE. The SPD provides guidance on how PfE policies should be applied

where development has the potential to give rise to traffic-related air quality effects on the Manchester Mosses Special Area of Conservation (SAC), including consideration of appropriate assessment and mitigation where relevant

1.7.3 Policy JP-C8 – Transport Requirements of New Development - requires early engagement with the highway authority to agree the scope of Transport Assessments, including potential effects on Holcroft Moss. The SPD identifies that developments generating more than 100 additional vehicles per day or 20 HGVs per day on the M62 past Holcroft Moss should include measures to reduce car use, limit trip generation, promote ultra-low emission vehicles, and, where necessary, contribute to habitat restoration.

1.7.4 The proposed car-free residential development at Lord Street, Manchester city centre, has no on-site parking and is located in a highly sustainable area with excellent access to walking, cycling, and public transport. As such, it is not expected to generate material new vehicular movements on the M62 near Holcroft Moss, which is several miles from the site. Notwithstanding this, a TRICS assessment of comparable city centre residential developments has been undertaken to provide an estimate of potential trips generated by similar developments. The assessment suggests the development could generate up to 189 two-way daily vehicular movements. Given the car-free nature of the scheme, this represents a conservative assumption, with residual trips associated only with servicing, deliveries, visitors or taxis, which would likely disperse across the wider network rather than route via the M62 past Holcroft Moss. As a result, it is anticipated that the SPD thresholds would not be exceeded.

1.8 Purpose of the Report

1.8.1 This TS has been prepared to inform Highway Officers at Manchester City Council (MCC) as the Local Highway and Planning Authority, of the development proposals and their potential impact on the surrounding area from a traffic and transportation perspective.

1.8.2 The TS is supported by a number of appendices, with access drawings showing visibility splays and swept path assessments.

1.8.3 Additionally, the TS is supported by an Interim Travel Plan (Document Reference: **88153-CUR-XX-XX-T-TP-00002**) with measures and initiatives to encourage active and sustainable travel. The travel planning process forms an integral part of the envisaged stewardship and long-term management of the proposed development.

1.9 Scope of the Report

1.9.1 The scope of this report is consistent with local and national transport planning policy and guidance.

1.9.2 Additional scoping information where appropriate.

1.9.3 On this basis, the TS contains the following:

- A review of the relevant local and national transport planning policy.
- Details of the existing use and the development proposals, together with a proposed site layout plan;
- A review of highway safety within the vicinity of the site for the most recent five years;
- A review of accessibility by all modes of travel including walking, cycling, and public transport;
- Drawings showing the site access proposals, vehicle tracking and visibility splays;
- Details of future vehicular trips and commentary on any highway impacts; and

1.10 Structure of the Report

1.10.1 Following this introduction, **Section 2** of the report provides a comprehensive description of the existing site and its location. This includes the local highway network and facilities for pedestrians, cyclists and public transport users.

1.10.2 **Section 2** also reviews the local area in terms of highways safety by way of obtaining records of collisions adjacent to the site over the most recent five-year period available.

1.10.3 **Section 3** considers the site's accessibility by sustainable modes of transport, including walking, cycling and public transport.

1.10.4 **Section 4** gives an overview of the development proposals including details on proposed access, cycle parking, and a servicing and refuse strategy.

1.10.5 **Section 5** outlines the traffic forecasting methodology used to establish the likely traffic generation associated with the development proposals, and the highway impact.

1.10.6 **Section 6** provides a report summary and conclusion.

2.0 Existing Situation

2.1 Site Location

2.1.1 The proposed development site is located off Lord Street in the Green Quarter to the northern edge of Manchester city centre.

2.1.2 The site is bounded by Fernie Street to the east, Lord Street to the north and Cheetham Hill Road to the west. **Figure 2.1** below shows the site in a local context relating to the local highway network:

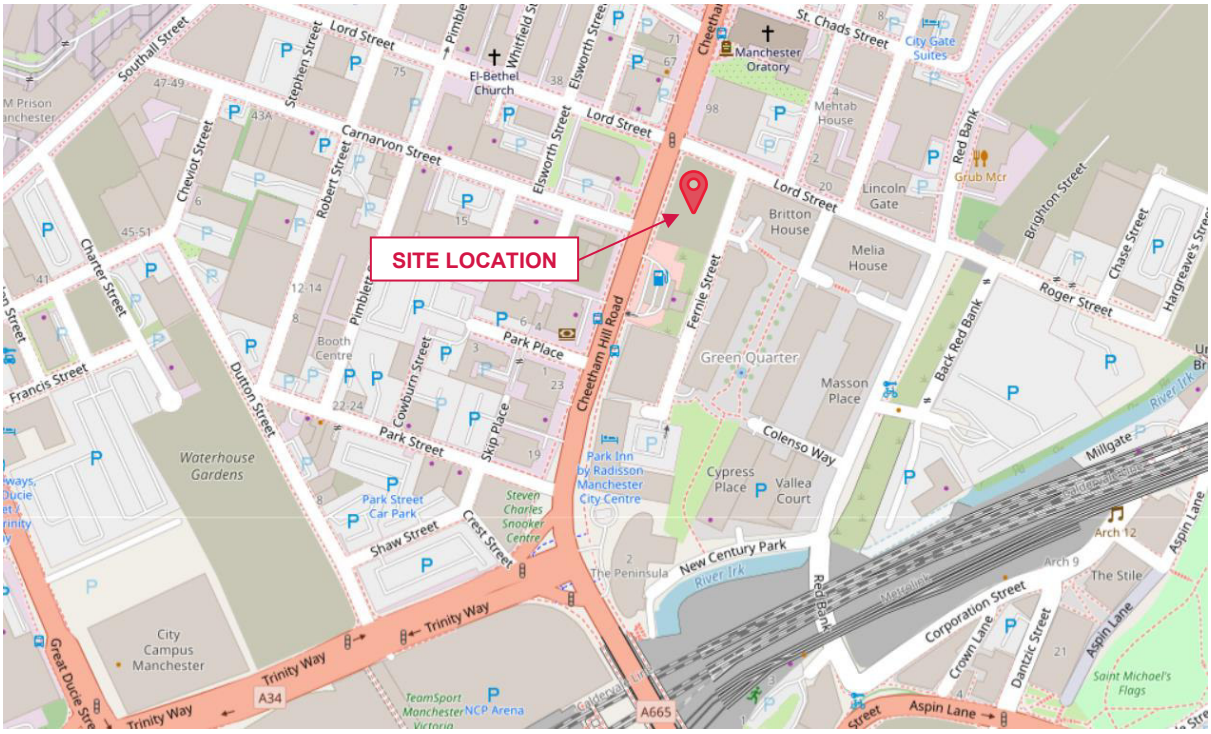


Figure 2.1 – Site Location

(Source: OpenStreetMap, 2025)

2.2 Existing Use and Access

2.2.1 The application site is currently a brownfield site, previously occupied by 7 commercial units.

2.3 Surrounding Highway Network

Fernie Street

2.3.1 The proposed development would be accessed via Fernie Street, which runs along a north east/south west alignment linking with Lord Street to the north. It provides access to the residential apartments along its length as well as the Park Inn Hotel.

2.3.2 Fernie Street is a single lane two way road with footways provided along both sides of the carriageway. Street lighting is provided along the western edge of the carriageway.

2.3.3 The road forms a priority junction with Lord Street to the north.

Lord Street

2.3.4 Lord Street is a two-way single carriageway road which links the site to Cheetham Hill Road. It extends between Red Bank to the east and Southall Street to the west.

2.3.5 Lord Street forms a signalised junction with Cheetham Hill Road to the north western corner of the site. Pedestrian crossings facilities have been incorporated into this junction and advanced stop lines have also been provided on all arms of the junction.

2.3.6 There are well lit footways on both sides of the carriageway. In the vicinity of site there are traffic regulation orders in the form of double yellow lines. It is worth noting that the double yellow lines are intermittent and that on-street parking also occurs to the northern edge of the carriageway in the vicinity of the site.

Cheetham Hill Road

2.3.7 Cheetham Hill Road runs west of the site on a north/south alignment. In the vicinity of the site the road forms part of the IRR and extends between Bury Old Road to the north and New Bridge Street.

2.3.8 It is approximately 2.8km in length and runs from Manchester's Green Quarter to Cheetham Hill and becomes Bury Old Road in the Crumpsall area, north of the site.

2.3.9 It connects the site to Middleton and Prestwich to the north and Manchester City Centre to the south of the proposed development.

2.3.10 The road has a 30mph speed limit with speed cameras located within close proximity of the site for enforcement. There are footways on each side of the carriageway with street lighting also provided. There are bus stops located on this road which are within desirable walking distance of the site. There are many complementary existing uses along both sides of this road. There are crossing facilities at vantage points on the road to enable safe crossing of the road.

2.4 Highway Safety

2.4.1 Collision data for the highway network adjacent to the site has been obtained from the CollisionPlot reported road incidents database for the most recent five years (2019 – 2023 inclusive). The details of the search are contained in **F**igure **2.2** and a breakdown of the information is contained in **Table 2.1**.

Junction/Link	Slight	Serious	Fatal	Totals
Cheetham Hill Road	5	1	0	**6**
Cheetham Hill Road / Lord Street junction	2	0	0	**2**
Lord Street	2	0	0	**2**
Pimblett Street	1	0	0	**1**
Total	**10**	**1**	**0**	**11**

Table 2.1 – Collision Data Summary

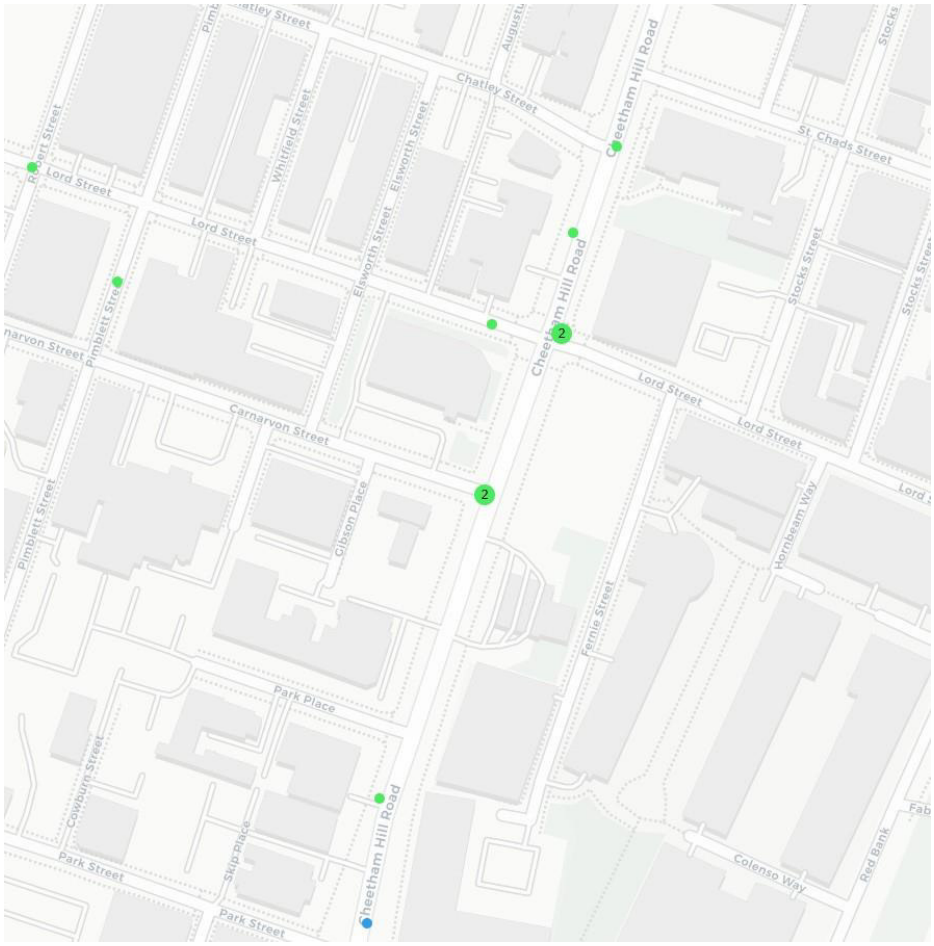


Figure 2.2 – Area Assessed for Collision Data (5 years)
(Source: CollisionPlot, www.collisionplot.co.uk)

2.4.2 There has been a total of 11 collisions in the latest five-year period available, 10 of which were 'slight' severity incidents and 1 of which was 'serious' severity incidents. No fatal incidents have been recorded in the study area and period.

2.4.3 A single incident classified as "serious" occurred in March 2022 on Cheetham Hill Road, near the junction with Park Street. It involved two cars and resulted in two casualties. The conditions at the time were light and dry.

2.4.4 Two incidents of "slight" severity took place at the junction of Lord Street and Cheetham Hill Road in February 2019 and August 2021. Both occurred under light and dry conditions. The most recent incident involved a car and a cyclist, while the earlier one involved two cars.

2.4.5 Five "slight" severity incidents occurred along Cheetham Hill Road, with the latest recorded in June 2023 at the junction with Carnarvon Street. This incident involved two cars and took place under light and dry conditions.

2.4.6 Two "slight" severity incidents were recorded along Lord Street. The most recent occurred in November 2021 at the junction with Robert Street, involving two cars and resulting in two casualties under dark and wet conditions. The earlier incident took place just west of Cheetham Hill Road in June 2019, involving a car and a pedestrian, and resulted in one pedestrian casualty. Conditions at the time were light and dry.

2.4.7 No significant correlations have been identified to suggest that highway condition, layout or design were significant contributory factors in any of the collisions. It is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.

3.0 Accessibility by Sustainable Modes of Travel

3.1 Introduction

3.1.1 A key element of national and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

3.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian Accessibility;
- Cycle Accessibility; and
- Public Transport Accessibility.

3.2 Pedestrian Accessibility

3.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution for Highways and Transportation (CIHT) document entitled 'Providing for Journeys on Foot' suggests walking distances which are relevant to this planning application. These are reproduced in **Table 3.1**.

CIHT Category	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 3.1 – CIHT Recommended Walking Distances

3.2.2 The average pedestrian can walk approximately 400m every five minutes, based on the CIHT document 'Planning for Walking' (2015).

3.2.3 Within the 'desirable' 500 metres walking distance, there are multiple food retail outlets located along Cheetham Hill Road as well as public houses and restaurants.

3.2.4 There is the Manchester Arena and food outlets located south of the site which provides leisure facilities for users of the development. There are excellent pedestrian facilities in the vicinity of the site which would link future residents by foot to these uses.

3.2.5 Within 1,000m 'acceptable' walking catchment there are multiple opportunities for employment such as NOMA and other office buildings within close proximity to the site. In addition, there are retail, leisure

and food outlets located within the Printworks and Arndale Centre to the south and south east of the site, which could also provide employment opportunities for future residents.

3.2.6 Within 1000m of the site, access can be gained to parts of the City Centre which provides more opportunities for employment and leisure.

3.2.7 There is also Manchester Fort shopping arcade located approximately 700m north of the site off Cheetham Hill Road.

3.2.8 Within 2,000m 'maximum' walking catchment all of Manchester city centre is accessible. In addition to the City Centre other local areas including parts of Lower Broughton to the east, Cheetham Hill To the north and Ancoats to the east are all accessible by foot.

3.2.9 It is clear from the above that the site is highly accessible on foot and that there is an abundance of complementary uses within walking distance of the site, with good pedestrian facilities linking to them to the site.

3.3 Cycle Accessibility

3.3.1 Cycling is a cheap, efficient, and healthy way to travel. Cycling also provides a predictable arrival time which depending on location, can be quicker than driving or using public transport, and is subject to fewer delays.

3.3.2 National Travel Survey statistics demonstrate that 80% and 84% of cycling trips were under 5 miles / 8km in 2022 and 2023, respectively (see dataset NTS0308b). This distance is also referenced by both the National Model Design Code – Part 2 (DLUHC (now MHCLG), 2021) and LTN1/20.

3.3.3 Within an 8km catchment area, cyclists can travel as far as Middleton and Whitefield in the north, Failsworth and Audenshaw to the east, Chorlton-cum-Hardy in the south and Swinton and Eccles to the west. It is worth noting that the whole of Manchester city centre and surrounding areas are also contained within the 8km catchment.

3.3.4 Local Routes are located within close proximity to the site along the A56 Bury New Road, Corporation Street and along the River Irwell. There are cycle lanes on Cheetham Hill Road to the north of the site as well as advanced cycle stop lines on all the signal junctions along this road.

3.3.5 There are many cycle routes surrounding the site which provides connection to the routes within the centre of Manchester, such as along Fountain Street. These routes link the site to the National Cycle Routes network.

3.3.6 National Cycle Route 66 runs from Manchester to Spurn Head and runs through Ancoats and Failsworth. In addition, there is National Route 6 which links to Bury and Prestwich as well as Radcliff.

3.4 Public Transport Accessibility

3.4.1 The site benefits from its highly accessible location for public transport with train, tram and bus services available within a short walking distance. Accessibility by these modes are considered in further detail within the subsections below.

Bus Accessibility

3.4.2 CIHT guidance – from *'Buses in Urban Developments'* (2018) – indicates that a bus stop should be located within the following walking distances from a new development based on its location and the number and frequency of services:

Situation	Maximum Walking Distance
Core bus corridors with two or more high-frequency services	500m
Single high-frequency routes (every 12 minutes or better)	400m
Less frequent routes	300m
Town/city centres	250m

Table 3.2 – CIHT Maximum Suggested Walking Distances to Bus Stops

3.4.3 The nearest bus stop to the site is located approximately 75m to the south of the site along the A665 Cheetham Hill Road, which provide services to Manchester city centre and Sale. **Table 3.3** details the services that call at this stop, and their associated frequencies:

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
41	Middleton - Bowker Vale - Manchester City Centre - Sale	20 mins	20 mins	30 mins
135	Bury - Whitefield - Cheetham Hill - Piccadilly Gardens	10 mins	10 mins	10 mins

Table 3.3 – Summary of Bus Service Frequencies in the vicinity of the Site

3.4.4 These stops provide frequent access to range of areas in around Manchester, including Bury, Sale and Manchester city centre. Additionally, the site is within walking distance of both the Shudehill Interchange and Victoria Station, offering convenient access to a wider range of frequent bus services connecting to surrounding areas across Manchester and the wider Greater Manchester area.

Rail Accessibility

3.4.5 The nearest train station is Victoria located approximately 700m to the southwest of the site. The station provides frequent services to a number of key destinations including Burnley, Huddersfield, Blackpool, Newcastle, Wigan, Leeds, Chester, Hull, and Manchester Airport.

Metrolink (Light Rail) Accessibility

3.4.6 The nearest Metrolink station is located within Victoria Train Station, located approximately 700m southwest of the site. This stop provides frequent services to areas along the route to Bury, Altrincham, Manchester Piccadilly, Rochdale, East Didsbury, and Shaw and Crompton, directly.

3.4.7 Users can change at the Deansgate-Castlefield Metrolink stop to access the entire Metrolink network, including MediaCityUK, Eccles, Trafford Centre and Asthon-under-Lyne

3.5 Summary

3.5.1 It is considered the site is accessible by sustainable modes of transport. The surrounding area exhibits good levels of pedestrian and cycling infrastructure, and there are a number of public transport opportunities within acceptable walking distance of the site.

4.0 Development Proposals

4.1 Overview of Proposals

4.1.1 This Transport Statement has been prepared in order to support the proposed residential development on land located on Lord Street, in the Green Quarter area of Manchester.

4.1.2 The proposals seek construct a 24-storey tower comprising 251 residential units. This includes a mix of one- and two-bedroom apartments and townhouses. The development will be car-free and will include dedicated cycle parking facilities at the basement level. The proposed site layout is provided in **Appendix A**.

4.2 Proposed Access

Pedestrian and Cycle Access

4.2.1 The main pedestrian entrance to the building will be located off Cheetham Hill Road.

4.2.2 Cyclists would enter the site via Fernie Street to access the cycle stores located at the basement level of the site, as illustrated below in **F**igure 4.1 **–** Basement Level Layout

4.2.3 .

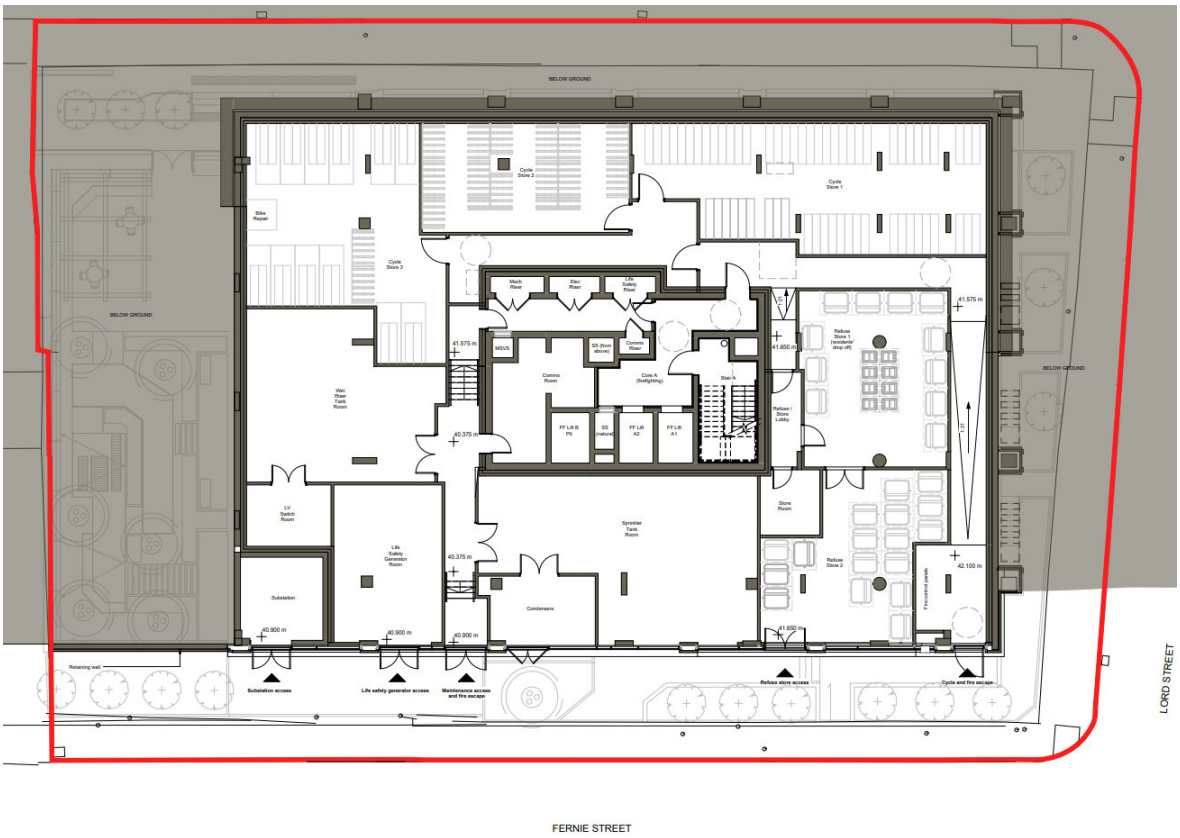


Figure 4.1 – Basement Level Layout
(Source: AEW Architects, 2025)

Proposed Cycle Parking

4.2.4 The proposals include a total of 251 cycle parking spaces, including 239 standard cycle spaces and 12 non-standard cycle spaces.

4.2.5 The cycle strategy has been developed in line with MCC guidelines, providing 1 cycle space per apartment. All cycle spaces are located within the basement, with resident access from the central circulation core.

4.2.6 The strategy also allows for 5% non-standard cycle spaces (12no. in total) to accommodate larger adapted cycles as described in LTN 1/20. Additionally, a dedicated cycle cleaning and maintenance area is provided in the store.

Proposed Car Parking Provision

4.2.7 The proposed development will be car-free. The site is accessible by sustainable modes of transport. It is likely that site residents and users will utilise the various public transport and cycle options available to access places of work and leisure within Greater Manchester, and the multitude of amenities that are available are within walking distance across the city centre. Therefore, the site is located in an enviable location to make use of existing and future sustainable modes of transportation without relying on car ownership.

4.2.1 The proposed car parking strategy is consistent with other city centre developments.

4.2.2 As prospective residential occupiers come forward, they would be aware of the parking restrictions living in the proposed development would bring and would decide on whether to move to such development. The absence of any on-site parking would also act as an initiative to encourage alternative modes of transport.

Nearby Car Parking Opportunities

4.2.3 Nonetheless, it is recognised that a small minority of residents may choose to own a car. These residents would be able to use several car parks within close proximity which offer long-term parking permits:

- Park Place car park (75 spaces) – c. 190m / 3-minute walk
- 1 Place car park (17 spaces) – c. 190m / 3-minute walk
- Skip Place car park (35 spaces) – c. 210m / 3-minute walk
- Stocks Street car park (32 spaces) - c. 130m / 2-minute walk
- Shaw Street Parking (87 spaces) - c. 300m / 5-minute walk
- Car Park Manchester Park Street (95 spaces) - c. 290m / 5-minute walk

- 32 Dutton Street Parking (41 spaces) - c. 350m / 5-minute walk
- Manchester AO Arena (970 spaces) - c. 350m / 6-minute walk
- Red Bank car park (220 spaces) - c. 350m / 6-minute walk

4.2.4 It is therefore considered there is adequate opportunity for off-site parking should future residents/visitors chose to commute by car.

Existing On-Street Parking

4.2.5 There are opportunities for on-street parking within the immediate vicinity of the site with a number of free parking spaces up to 2 hours along Lord Street, Stocks Street, Stocks Street East, St Chads Street or Stanley Street.

4.3 Proposed Servicing Arrangements

4.3.1 Waste will be collected from Fernie Street, via a proposed 2.7 x 12.5m loading/ servicing bay, which has been strategically located to minimise conflicts with regular traffic. Delivery of this loading/ servicing bay requires amendments to the existing double yellow line TRO provision along Fernie Street. Bins will be collected and returned directly from the external collection point, which is located along the northeastern frontage of the site.

4.3.2 Refuse collection vehicles are expected to utilise existing turning heads along Fernie Street to turn around and exit towards Lord Street; as is understood to be the existing collection strategy in this area.

4.3.1 Drawing ref.: **88153-CUR-00-XX-DR-TP-05001** at the rear of this report demonstrate that a refuse vehicle can access Fernie Street, turn at the existing turning head south of the site, and access the proposed loading bay before egressing into Lord Street.

4.3.2 On collection days, refuse bins will be brought up from the basement bin store to the street for collection.

4.3.3 More details on the waste collection schedule and number of bins proposed are provided in a Waste Management Strategy prepared by Curtins (Document Reference: **88153-CUR-XX-XX-T-TP-00003**).

5.0 Traffic Forecasting and Highway Impact

5.1 Introduction

5.1.1 The following section contains trip generation analysis based on the proposed development during the weekday AM and PM peak hours.

5.1.2 In order to undertake the assessment, the TRICS database has been used. TRICS is the industry recognised tool for calculating the anticipated future trip demand of a proposed development. The database contains multi-modal surveys of varying land uses in multiple destinations across the UK, including office land uses.

5.1.3 Whilst TRICS is the industry recognised tool for calculating the anticipated future trip demand of a proposed development, it must be noted that many of the office and residential sites are in no way comparable to modern buildings located in highly sustainable areas of Manchester City Centre, with even those in accessible city centres typically having significantly higher parking provision than the level proposed.

5.2 Existing Trip Generation

5.2.1 The site is currently a brownfield site and does not generate any trips.

5.3 Forecasted Trip Generation

5.3.1 The full search criteria used in the TRICS database are included in **Appendix B**, applying the following:

- Land Use: 02/A – Flats Privately Owned;
- Regions: Great Britain;
- Location Type: Town Centre; and
- Parking Spaces Per Dwelling: 0.5 or fewer.

5.3.2 The TRICS sample is limited to one survey of 194 flats (slightly less than a quarter of that proposed) with 0.27 car parking spaces per dwelling in April 2019.

5.3.3 As such, it does not account for post-Covid travel trends, particularly the rise of home working, which is likely to have lowered people and vehicle trips in the peak hours.

5.3.4 The total people trip rates and generation for the proposed flats are provided in **Table 6.4** below:

Time Period	Trip Rates			Trip Generation		
	Arrive	Depart	Total	Arrive	Depart	Total
People						
AM (08:00 – 09:00)	0.077	0.521	0.598	17	113	130
PM (17:00 – 18:00)	0.206	0.108	0.314	45	23	68
Daily (07:00-21:00)	2.212	2.423	4.635	480	526	1006
Vehicles						
AM (08:00 – 09:00)	0.021	0.031	0.052	5	7	11
PM (17:00 – 18:00)	0.046	0.021	0.067	10	5	15
Daily (07:00-21:00)	0.453	0.418	0.871	98	91	189

Table 5.1 – Proposed Flats Trip Rates and Generation

5.3.5 **Table 6.4** demonstrates that there could be 11 and 15 two-way vehicular movements generated by the proposed flats in the AM and PM peak, respectively.

5.4 Highway Impact Summary

5.4.1 On the above basis, Curtins do not believe that capacity assessments would be required, and that the highway network would not experience any adverse traffic impact resulting from the proposed development.

6.0 Summary and Conclusions

6.1 Summary

6.1.1 Curtins has been appointed by Linear Living Ltd (the Client) to provide transport and highways advice in relation to a planning application for residential development on Lord Street, in the Green Quarter area of Manchester.

6.1.2 The proposals consist of a 24-storey tower comprising 251 residential units. This includes a mix of one- and two-bedroom apartments and townhouses.

6.1.3 The proposals include a total of 251 cycle parking spaces, including 239 standard cycle spaces and 12 non-standard cycle spaces.

6.1.4 A review of baseline conditions and highway safety in the vicinity of the site has been undertaken. It is not considered that there is an existing highway safety issue that is likely to be exacerbated by the proposed development.

6.1.5 Relevant details of the proposed site layout, access, and servicing arrangements have been provided.

6.1.6 The site is accessible by sustainable modes of transport. The surrounding area exhibits good levels of pedestrian and cycling infrastructure, and there are several public transport opportunities within acceptable walking distance of the site.

6.1.7 Trip generation forecasts using TRICS data have demonstrated that there could be 11 and 15 two-way vehicular movements generated by the proposed flats in the AM and PM peak, respectively. As such, any vehicular impact would be negligible on the surrounding area in terms of highways, traffic and transportation.

6.1.8 Additionally, measures are proposed in the accompanying Interim Travel Plan to increase the level of walking, cycling and public transport use to and from the site, and to reduce reliance on the private car.

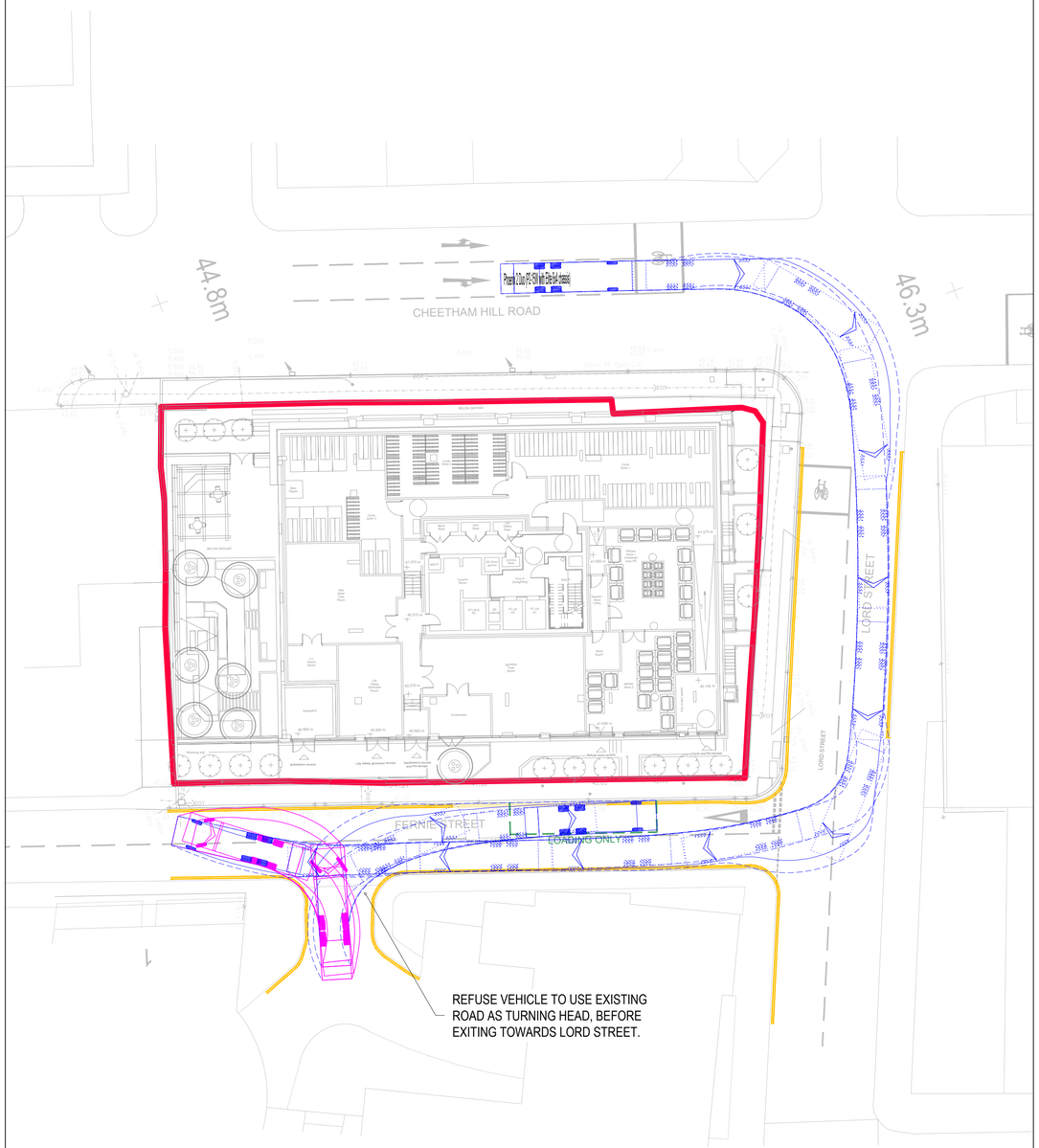
6.1.9 A review of relevant national transport planning guidance has been undertaken. It is considered that the proposed development conforms with such policy.

6.2 Conclusions

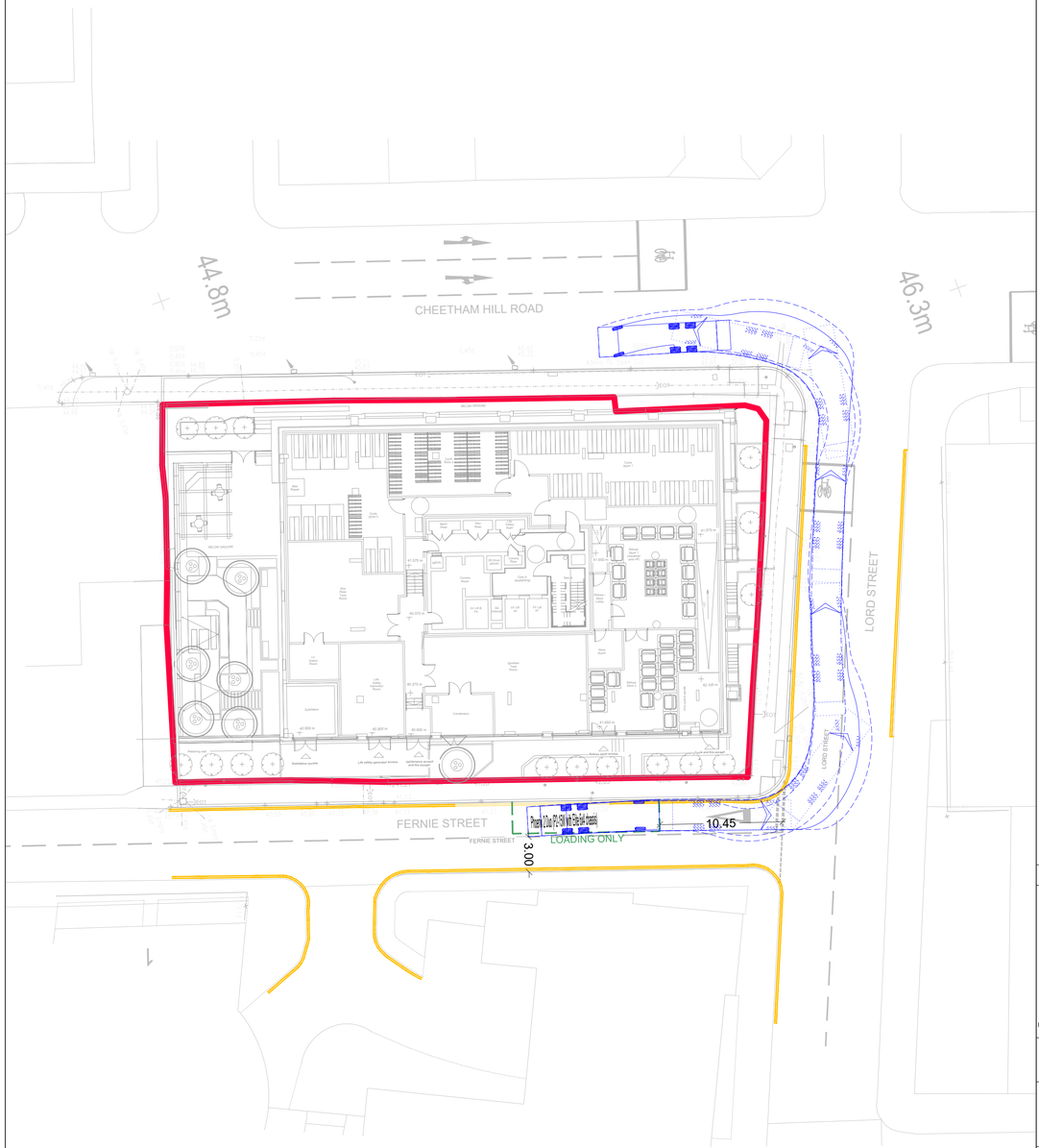
6.2.1 It is Curtins' view that from a highways and transport perspective there are no reasons why the development proposals should not be granted planning approval.

Drawings

PROPOSED WASTE MANAGEMENT STRATEGY



SWEPT PATH ANALYSIS: REFUSE VEHICLE - EGRESS

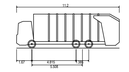


GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. THE CONTENT OF THIS DRAWING IS FOR INDICATIVE INFORMATION ONLY AND NOT SUITABLE FOR CONSTRUCTION PURPOSES
6. BASED ON OS MAPPING AND TOPO SURVEY MAPPING PROVIDED BY AEW ARCHITECTS
7. BASED ON AEW ARCHITECTS' SITE LAYOUT DRAWING REF.: "NO1LOR-AEW-XX-B1-DR-A-05200-P04-Proposed GA Plan - Basement"

KEY:
- INDICATIVE RED LINE BOUNDARY (as supplied by AEW)
- PROPOSED ROAD MARKINGS

VEHICLE PROFILE:



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.550m
Overall Body Height	3.763m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.60s
Kerb to Kerb Turning Radius	9.000m

Rev:	Description:	Date:	By:	Chkd:

Curtins

Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG
0161 236 2394
manchester@curtins.com
www.curtins.com

Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: PRELIMINARY

Project: LORD STREET, MANCHESTER

Drg Title: SWEPT PATH ANALYSIS 11.2m REFUSE VEHICLE

Drawn By	Designed By	Checked By
MQ	MQ	AT
	Date: 28/01/26	Scales @ A1: 1:250

Project No - Originator - Function - Spatial - Form - Discipline - Number	Revision
88153 - CUR - XX - 00 - D -TP- 05001	P01

\\MA-FS-1\Projects\088001 - 089000\088153 - Lord Street, Manchester\03-2 Delivery\11TP6-Drawings\

Appendix A – Proposed Site Layout

CHEETHAM HILL ROAD



NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

This drawing contains the following model files: -

NO1LOR-AEW-B1-ZZ-M3-A-00100
NO1LOR-CIV-XX-XX-M3-S-00001

0 1 2 3 4 5m

Scale @ 1:100

Planning Application Boundary
Area: 1,946m² / 0.48 acre / 0.19 hec

Red boundary lines based on topographical survey by ND Oliver & Co titled "13189 / 001" dated 31/01/2025.

Apartment Type Key

- 1b2p M4(3)
- 2b3p
- 2b3p M4(3)
- 2b4p
- Residential Amenity

Rev	Date	Description	Drawn by	Checked By
P04	19/12/25	Red line boundary updated to include footpath	RC	BS
P03	18/12/25	Core updated	RC	PBH
P02	14/11/25	Draft Planning Issue	KS	PBH
P01	21/08/25	Initial issue	KS	BS

Status: S2 — Purpose of Issue: For Information

drawing stage: **Stage 3**

client: **Linear UK**

project: **Manchester, Lord Street**

drawing title: **Proposed GA Plan - Ground Floor**

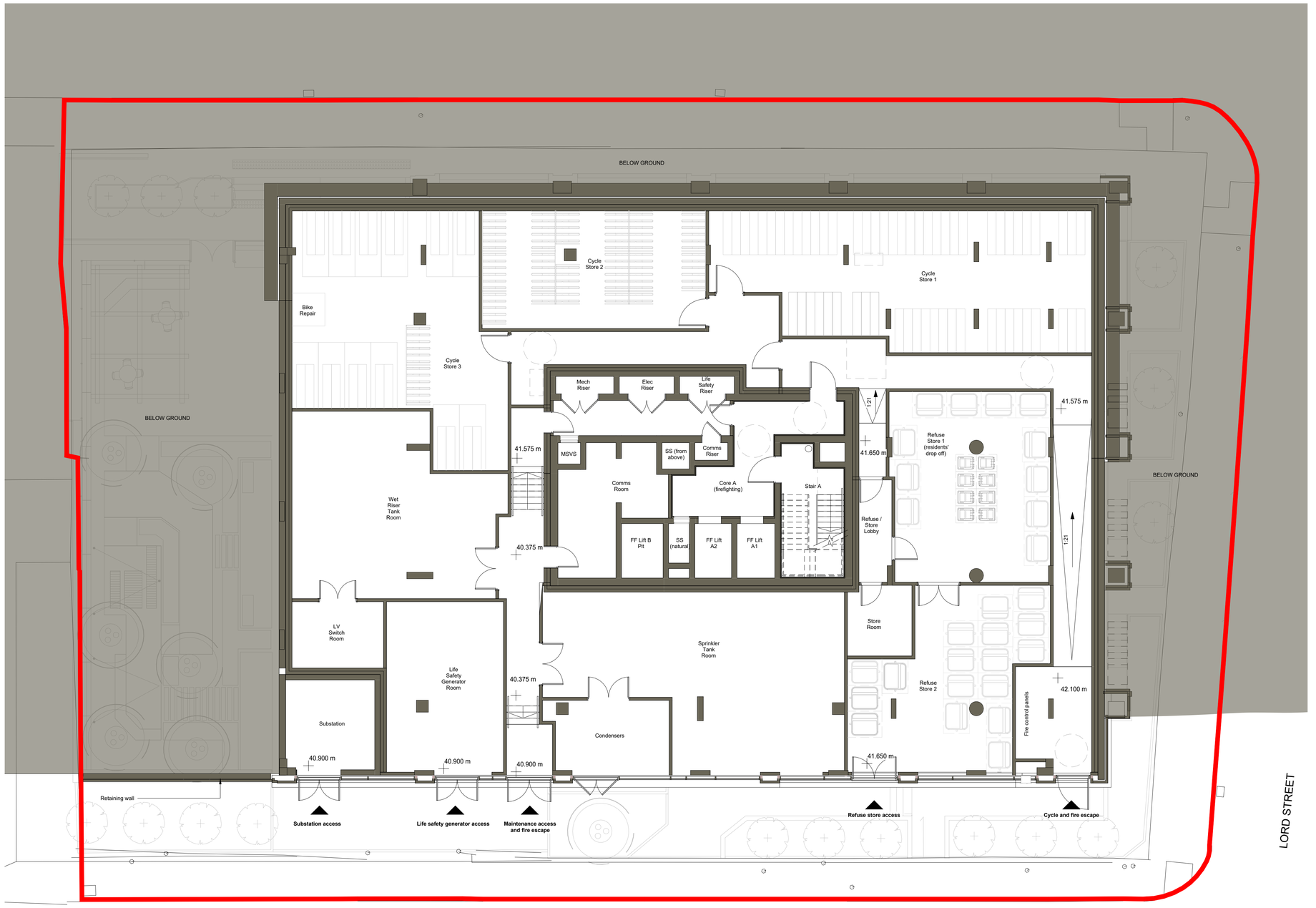
date: 26/06/25 — drawn: KS
scale @ A1: As indicated — checked: BS

Rev: **P04**

Dwg No: **NO1LOR-AEW-XX-00-DR-A-05201**

aew architects
0161 214 4370
www.aewarchitects.com

AEW Internal Ref Number: 14374



NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

This drawing contains the following model files: -

NO1LOR-AEW-B1-ZZ-M3-A-00100
NO1LOR-CIV-XX-XX-M3-S-00001

0 1 2 3 4 5m

Scale @ 1:100

Planning Application Boundary
Area: 1,946m² / 0.48 acre / 0.19 hec

Red boundary lines based on topographical survey by ND Oliver & Co titled "13189 / 001" dated 31/01/2025.

Rev	Date	Description	Drawn by	Checked By
P04	19/12/25	Red line boundary updated to include footpath	RC	BS
P03	18/12/25	Core updated	RC	PBH
P02	14/11/25	Draft Planning Issue	KS	PBH
P01	21/08/25	Initial issue	KS	BS

Status: S2 — Purpose of Issue: For Information

drawing stage: **Stage 3**

client: **Linear UK**

project: **Manchester, Lord Street**

drawing title: **Proposed GA Plan - Basement**

date: 18/08/25 drawn: KS
scale @ A1: As indicated checked: BS

Rev: **P04**

Dwg No: **NO1LOR-AEW-XX-B1-DR-A-05200**

aew architects
0161 214 4370
www.aewarchitects.com

Appendix B – TRICS Output

Calculation Reference: AUDIT-148301-250116-0138

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01 GREATER LONDON

HM	HAMMERSMITH AND FULHAM	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 194 to 194 (units:)
Range Selected by User: 6 to 724 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: Selected: 0.07 to .5 Actual: 0.07 to 4.38

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 05/09/24

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Tuesday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centre 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
Built-Up Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:
Servicing vehicles Included 1 days - Selected
Servicing vehicles Excluded X days - Selected

Secondary Filtering selection:

Use Class:
C3 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:
50,001 to 100,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
500,001 or More 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.5 or Less 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:
Yes 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
6b (High) Excellent 1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 HM-03-C-02 BLOCKS OF FLATS HAMMERSMITH AND FULHAM
GLENTHORNE ROAD
HAMMERSMITH

Town Centre
Built-Up Zone
Total No of Dwellings: 194
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 5.32

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.031	**1**	**194**	**0.052**	1	194	0.083
08:00 - 09:00	1	194	0.021	1	194	0.031	1	194	0.052
09:00 - 10:00	1	194	0.041	1	194	0.036	1	194	0.077
10:00 - 11:00	1	194	0.041	1	194	0.031	1	194	0.072
11:00 - 12:00	1	194	0.021	1	194	0.036	1	194	0.057
12:00 - 13:00	1	194	0.015	1	194	0.021	1	194	0.036
13:00 - 14:00	1	194	0.021	1	194	0.031	1	194	0.052
14:00 - 15:00	1	194	0.010	1	194	0.010	1	194	0.020
15:00 - 16:00	1	194	0.031	1	194	0.026	1	194	0.057
16:00 - 17:00	1	194	0.057	1	194	0.031	1	194	0.088
17:00 - 18:00	1	194	0.046	1	194	0.021	1	194	0.067
18:00 - 19:00	**1**	**194**	**0.062**	1	194	0.036	**1**	**194**	**0.098**
19:00 - 20:00	1	194	0.046	1	194	0.046	1	194	0.092
20:00 - 21:00	1	194	0.010	1	194	0.010	1	194	0.020
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.453			0.418			0.871

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	194 - 194 (units:)
Survey date date range:	01/01/16 - 05/09/24
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.005	1	194	0.005	1	194	0.010
08:00 - 09:00	1	194	0.000	1	194	0.000	1	194	0.000
09:00 - 10:00	1	194	0.005	1	194	0.005	1	194	0.010
10:00 - 11:00	**1**	**194**	**0.010**	**1**	**194**	**0.010**	**1**	**194**	**0.020**
11:00 - 12:00	1	194	0.000	1	194	0.000	1	194	0.000
12:00 - 13:00	1	194	0.000	1	194	0.000	1	194	0.000
13:00 - 14:00	1	194	0.000	1	194	0.000	1	194	0.000
14:00 - 15:00	1	194	0.000	1	194	0.000	1	194	0.000
15:00 - 16:00	1	194	0.005	1	194	0.005	1	194	0.010
16:00 - 17:00	1	194	0.000	1	194	0.000	1	194	0.000
17:00 - 18:00	1	194	0.000	1	194	0.000	1	194	0.000
18:00 - 19:00	1	194	0.000	1	194	0.000	1	194	0.000
19:00 - 20:00	1	194	0.010	1	194	0.010	1	194	0.020
20:00 - 21:00	1	194	0.000	1	194	0.000	1	194	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.035			0.035			0.070

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.000	1	194	0.000	1	194	0.000
08:00 - 09:00	**1**	**194**	**0.005**	**1**	**194**	**0.005**	**1**	**194**	**0.010**
09:00 - 10:00	1	194	0.005	1	194	0.005	1	194	0.010
10:00 - 11:00	1	194	0.000	1	194	0.000	1	194	0.000
11:00 - 12:00	1	194	0.005	1	194	0.005	1	194	0.010
12:00 - 13:00	1	194	0.000	1	194	0.000	1	194	0.000
13:00 - 14:00	1	194	0.000	1	194	0.000	1	194	0.000
14:00 - 15:00	1	194	0.000	1	194	0.000	1	194	0.000
15:00 - 16:00	1	194	0.000	1	194	0.000	1	194	0.000
16:00 - 17:00	1	194	0.000	1	194	0.000	1	194	0.000
17:00 - 18:00	1	194	0.000	1	194	0.000	1	194	0.000
18:00 - 19:00	1	194	0.000	1	194	0.000	1	194	0.000
19:00 - 20:00	1	194	0.000	1	194	0.000	1	194	0.000
20:00 - 21:00	1	194	0.000	1	194	0.000	1	194	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.015			0.030

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.000	1	194	0.000	1	194	0.000
08:00 - 09:00	1	194	0.000	1	194	0.010	1	194	0.010
09:00 - 10:00	1	194	0.000	1	194	0.000	1	194	0.000
10:00 - 11:00	1	194	0.005	**1**	**194**	**0.015**	**1**	**194**	**0.020**
11:00 - 12:00	1	194	0.000	1	194	0.000	1	194	0.000
12:00 - 13:00	1	194	0.000	1	194	0.000	1	194	0.000
13:00 - 14:00	1	194	0.000	1	194	0.000	1	194	0.000
14:00 - 15:00	**1**	**194**	**0.010**	1	194	0.005	1	194	0.015
15:00 - 16:00	1	194	0.000	1	194	0.000	1	194	0.000
16:00 - 17:00	1	194	0.010	1	194	0.000	1	194	0.010
17:00 - 18:00	1	194	0.005	1	194	0.005	1	194	0.010
18:00 - 19:00	1	194	0.000	1	194	0.000	1	194	0.000
19:00 - 20:00	1	194	0.010	1	194	0.000	1	194	0.010
20:00 - 21:00	1	194	0.005	1	194	0.005	1	194	0.010
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.045			0.040			0.085

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.005	1	194	0.041	1	194	0.046
08:00 - 09:00	1	194	0.015	**1**	**194**	**0.113**	1	194	0.128
09:00 - 10:00	1	194	0.015	1	194	0.062	1	194	0.077
10:00 - 11:00	1	194	0.046	1	194	0.010	1	194	0.056
11:00 - 12:00	1	194	0.026	1	194	0.021	1	194	0.047
12:00 - 13:00	1	194	0.005	1	194	0.026	1	194	0.031
13:00 - 14:00	1	194	0.036	1	194	0.031	1	194	0.067
14:00 - 15:00	1	194	0.041	1	194	0.062	1	194	0.103
15:00 - 16:00	1	194	0.052	1	194	0.041	1	194	0.093
16:00 - 17:00	1	194	0.072	1	194	0.041	1	194	0.113
17:00 - 18:00	1	194	0.052	1	194	0.036	1	194	0.088
18:00 - 19:00	**1**	**194**	**0.144**	1	194	0.082	**1**	**194**	**0.226**
19:00 - 20:00	1	194	0.072	1	194	0.026	1	194	0.098
20:00 - 21:00	1	194	0.046	1	194	0.082	1	194	0.128
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.627			0.674			1.301

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.026	1	194	0.247	1	194	0.273
08:00 - 09:00	1	194	0.041	**1**	**194**	**0.356**	**1**	**194**	**0.397**
09:00 - 10:00	1	194	0.041	1	194	0.057	1	194	0.098
10:00 - 11:00	1	194	0.057	1	194	0.062	1	194	0.119
11:00 - 12:00	1	194	0.031	1	194	0.077	1	194	0.108
12:00 - 13:00	1	194	0.052	1	194	0.067	1	194	0.119
13:00 - 14:00	1	194	0.062	1	194	0.041	1	194	0.103
14:00 - 15:00	1	194	0.062	1	194	0.036	1	194	0.098
15:00 - 16:00	1	194	0.031	1	194	0.046	1	194	0.077
16:00 - 17:00	1	194	0.041	1	194	0.052	1	194	0.093
17:00 - 18:00	1	194	0.077	1	194	0.036	1	194	0.113
18:00 - 19:00	**1**	**194**	**0.247**	1	194	0.041	1	194	0.288
19:00 - 20:00	1	194	0.124	1	194	0.021	1	194	0.145
20:00 - 21:00	1	194	0.077	1	194	0.026	1	194	0.103
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.969			1.165			2.134

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 5.32

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.072	1	194	0.356	1	194	0.428
08:00 - 09:00	1	194	0.077	**1**	**194**	**0.521**	1	194	0.598
09:00 - 10:00	1	194	0.103	1	194	0.170	1	194	0.273
10:00 - 11:00	1	194	0.155	1	194	0.129	1	194	0.284
11:00 - 12:00	1	194	0.077	1	194	0.139	1	194	0.216
12:00 - 13:00	1	194	0.072	1	194	0.119	1	194	0.191
13:00 - 14:00	1	194	0.119	1	194	0.124	1	194	0.243
14:00 - 15:00	1	194	0.124	1	194	0.113	1	194	0.237
15:00 - 16:00	1	194	0.119	1	194	0.113	1	194	0.232
16:00 - 17:00	1	194	0.201	1	194	0.124	1	194	0.325
17:00 - 18:00	1	194	0.206	1	194	0.108	1	194	0.314
18:00 - 19:00	**1**	**194**	**0.485**	1	194	0.170	**1**	**194**	**0.655**
19:00 - 20:00	1	194	0.258	1	194	0.108	1	194	0.366
20:00 - 21:00	1	194	0.144	1	194	0.129	1	194	0.273
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.212			2.423			4.635

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.015	**1**	**194**	**0.036**	1	194	0.051
08:00 - 09:00	1	194	0.005	1	194	0.021	1	194	0.026
09:00 - 10:00	1	194	0.015	1	194	0.005	1	194	0.020
10:00 - 11:00	1	194	0.005	1	194	0.010	1	194	0.015
11:00 - 12:00	1	194	0.010	1	194	0.015	1	194	0.025
12:00 - 13:00	1	194	0.015	1	194	0.015	1	194	0.030
13:00 - 14:00	1	194	0.010	1	194	0.021	1	194	0.031
14:00 - 15:00	1	194	0.005	1	194	0.000	1	194	0.005
15:00 - 16:00	1	194	0.005	1	194	0.000	1	194	0.005
16:00 - 17:00	1	194	0.031	1	194	0.005	1	194	0.036
17:00 - 18:00	1	194	0.041	1	194	0.015	1	194	0.056
18:00 - 19:00	**1**	**194**	**0.046**	1	194	0.021	**1**	**194**	**0.067**
19:00 - 20:00	1	194	0.015	1	194	0.015	1	194	0.030
20:00 - 21:00	1	194	0.010	1	194	0.010	1	194	0.020
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.228			0.189			0.417

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.010	1	194	0.010	1	194	0.020
08:00 - 09:00	1	194	0.010	1	194	0.005	1	194	0.015
09:00 - 10:00	1	194	0.015	**1**	**194**	**0.021**	1	194	0.036
10:00 - 11:00	1	194	0.010	1	194	0.005	1	194	0.015
11:00 - 12:00	1	194	0.005	1	194	0.010	1	194	0.015
12:00 - 13:00	1	194	0.000	1	194	0.000	1	194	0.000
13:00 - 14:00	1	194	0.010	1	194	0.010	1	194	0.020
14:00 - 15:00	1	194	0.000	1	194	0.005	1	194	0.005
15:00 - 16:00	1	194	0.015	1	194	0.015	1	194	0.030
16:00 - 17:00	**1**	**194**	**0.021**	1	194	0.021	**1**	**194**	**0.042**
17:00 - 18:00	1	194	0.005	1	194	0.005	1	194	0.010
18:00 - 19:00	1	194	0.005	1	194	0.005	1	194	0.010
19:00 - 20:00	1	194	0.010	1	194	0.010	1	194	0.020
20:00 - 21:00	1	194	0.000	1	194	0.000	1	194	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.116			0.122			0.238

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.000	1	194	0.000	1	194	0.000
08:00 - 09:00	1	194	0.000	1	194	0.000	1	194	0.000
09:00 - 10:00	1	194	0.000	1	194	0.000	1	194	0.000
10:00 - 11:00	**1**	**194**	**0.015**	1	194	0.005	**1**	**194**	**0.020**
11:00 - 12:00	1	194	0.000	1	194	0.005	1	194	0.005
12:00 - 13:00	1	194	0.000	1	194	0.005	1	194	0.005
13:00 - 14:00	1	194	0.000	1	194	0.000	1	194	0.000
14:00 - 15:00	1	194	0.005	1	194	0.005	1	194	0.010
15:00 - 16:00	1	194	0.005	1	194	0.005	1	194	0.010
16:00 - 17:00	1	194	0.005	1	194	0.005	1	194	0.010
17:00 - 18:00	1	194	0.000	1	194	0.000	1	194	0.000
18:00 - 19:00	1	194	0.010	**1**	**194**	**0.010**	1	194	0.020
19:00 - 20:00	1	194	0.010	1	194	0.010	1	194	0.020
20:00 - 21:00	1	194	0.000	1	194	0.000	1	194	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.050			0.050			0.100

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL Servicing Vehicles
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	194	0.015	1	194	0.015	1	194	0.030
08:00 - 09:00	1	194	0.015	1	194	0.015	1	194	0.030
09:00 - 10:00	1	194	0.021	1	194	0.021	1	194	0.042
10:00 - 11:00	1	194	0.015	1	194	0.010	1	194	0.025
11:00 - 12:00	1	194	0.010	1	194	0.015	1	194	0.025
12:00 - 13:00	1	194	0.000	1	194	0.000	1	194	0.000
13:00 - 14:00	1	194	0.015	1	194	0.015	1	194	0.030
14:00 - 15:00	1	194	0.000	1	194	0.000	1	194	0.000
15:00 - 16:00	1	194	0.015	1	194	0.015	1	194	0.030
16:00 - 17:00	**1**	**194**	**0.026**	**1**	**194**	**0.026**	**1**	**194**	**0.052**
17:00 - 18:00	1	194	0.005	1	194	0.005	1	194	0.010
18:00 - 19:00	1	194	0.010	1	194	0.010	1	194	0.020
19:00 - 20:00	1	194	0.010	1	194	0.010	1	194	0.020
20:00 - 21:00	1	194	0.000	1	194	0.000	1	194	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.157			0.157			0.314

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Our Locations

Birmingham
2 The Wharf
Bridge Street
Birmingham
B1 2JS
T. 0121 643 4694
birmingham@curtins.com

Bristol
Quayside
40-58 Hotwell Road
Bristol
BS8 4UQ
T. 0117 302 7560
bristol@curtins.com

Cambridge
50 Cambridge Place
Cambridge
CB2 1NS
T. 01223 631 799
cambridge@curtins.com

Cardiff
3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 029 2068 0900
cardiff@curtins.com

Douglas
Varley House
29-31 Duke Street
Douglas
Isle of Man
IM1 2AZ
T. 01624 624 585
douglas@curtins.com

Dublin
11 Pembroke Lane
Dublin 2
D02 CX82
Ireland
T. +353 1 507 9447
dublin@curtins.com

Edinburgh
1a Belford Road
Edinburgh
EH4 3BL
T. 0131 225 2175
edinburgh@curtins.com

Glasgow
Queens House
29 St Vincent Place
Glasgow
G1 2DT
T. 0141 319 8777
glasgow@curtins.com

Kendal
Units 24 & 25 Riverside Place
K Village
Lound Road
Kendal
LA9 7FH
T. 01539 724 823
kendal@curtins.com

Leeds
Ground Floor
Rose Wharf
78-80 East Street
Leeds
LS9 8EE
T. 0113 274 8509
leeds@curtins.com

Liverpool
51-55 Tithebarn Street
Liverpool
L2 2SB
T. 0151 726 2000
liverpool@curtins.com

London
40 Compton Street
London
EC1V 0BD
T. 020 7324 2240
london@curtins.com

Manchester
Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG
T. 0161 236 2394
manchester@curtins.com

Nottingham
32-34 Stoney Street
Nottingham
NG1 1LL
T. 0115 941 5551
nottingham@curtins.com

Curtins

Curtins Consulting Ltd registered in England and Wales No: 2054159
Registered office: 51-55 Tithebarn Street, Liverpool, L2 2SB

Curtins | Building a better future

Lord Street, Manchester

Interim Travel Plan

Curtins Ref: 088153 Lord Street, Manchester-CUR-XX-XX-T-TP-00003

Revision: P02

Issue Date: 02 February 2026

Client Name: Linear Living Ltd

Control Sheet

Rev	Description	Checked	Issued	Date
P01	First Issue	JM	AT	10 September 2025
P02	Second Issue	JM	AT	02 February 2026

This report has been prepared for the sole benefit, use, and information for the client. The liability of Curtins with respect to the information contained in the report will not extend to any third party.

Author	Signature	Date
Joe Matthew MCIHT, EngTech Transport Planning Technician		02 February 2026
Miguel Quental BSc (Hons) MSc MCIHT Senior Transport Planner		02 February 2026

Reviewed	Signature	Date
Aaron Tilley FCIHT CMILT Transport Planning Director		02 February 2026

Authorised	Signature	Date
Aaron Tilley FCIHT CMILT Transport Planning Director		02 February 2026

Table of Contents

1.0 Introduction 1
1.1 Background 1
1.2 What is a Travel Plan? 1
1.3 Purpose of the Report 1
1.4 Structure of the Report 2
2.0 Travel Plan Benefits 4
2.1 Summary 4
2.2 Primary Benefits 4
3.0 Existing Situation 9
3.1 Site Location 9
3.2 Existing Use and Access 9
3.3 Surrounding Highway Network 9
3.4 Existing Access Arrangements 10
3.5 Key Facilities 11
4.0 Development Proposals 13
4.1 Overview of Proposals 13
4.2 Proposed Access 13
4.3 Proposed Parking Provision 15
5.0 Accessibility by Sustainable Modes of Travel 16
5.1 Introduction 16
5.2 Pedestrian Accessibility 16
5.3 Cycle Accessibility 17
5.4 Public Transport Accessibility 18
5.5 Summary 20
6.0 Travel Plan Initiatives 21
6.1 Introduction, Aim and Objectives 21
6.2 Appointment of Travel Plan Coordinator (TPC) 21

6.3 Provision of Sustainable Travel Information 21
6.4 Marketing and Promotional Measures 22
6.5 Measures to Encourage Walking 23
6.6 Measures to Encourage Cycling 23
6.7 Measures to Encourage Public Transport Use 24
6.8 Reducing the Need to Travel 25
6.9 Summary 25
7.0 Targets 26
7.1 Introduction 26
7.2 Data Collection and Analysis 26
7.3 SMART Targets 27
8.0 Monitoring and Review 29
8.1 Introduction 29
8.2 Responsibility and Management 29
8.3 Travel Plan Coordinator (TPC) 30
8.4 Monitoring and Evaluation 31
9.0 Action Plan 32
9.1 Introduction 32

Figures

Figure 2-1 – Willingness to Switch Mode of Travel 4
Figure 2-2 – Benefits of Active Travel for Greater Manchester / Index Cities 5
Figure 2-3 – Activity Levels for Adults 6
Figure 2-4 – The Impact of Travel Behaviour on Public Health 7
Figure 3-1 – Site Location 9
Figure 3-2 – Fernie Street – disused vehicular and pedestrian access gates 11
Figure 4-1 – Basement Level Layout 13
Figure 5-1 – Local Cycling Facilities 18
Figure 5-2 – Local Public Transport Context 20

Tables

Table 3.2 – CIHT Maximum Suggested Walking Distances to Bus Stops 19
Table 3.3 – Summary of Bus Service Frequencies in the vicinity of the Site 19
Table 6.1 – Sustainable Travel Information 22
Table 7.1 – Example of Potential Targets 27
Table 9.1 – Action Plan 32

Appendices

Appendix A – Proposed Site Layout

1.0 Introduction

1.1 Background

1.1.1 This Interim Travel Plan (ITP) has been prepared by Curtins in support of a full planning application for residential development at Lord Street, Cheetham Hill, Manchester. The site is within the jurisdiction of Manchester City Council (hereafter referred to as 'MCC').

1.1.2 The proposals seek to construct a 24-storey tower comprising 251 residential units, including the demolition of existing structures and the erection of a residential apartment development comprising 251no. dwellings (Use Class C3) with landscaping and associated works. The development will be car-free and will include dedicated cycle parking facilities at the basement level.

1.1.3 The principle of residential development on the Lord Street site has already been established through previous planning approvals. Planning permission was first granted on 21 November 2016 under application reference 113914/FO/2016 for the following development:

1.1.4 In contrast to the previous approvals, the current proposal increases the total number of residential units to 251 and eliminates all on-site car parking, delivering a fully car-free development.

1.1.5 The proposed site layout is provided in **Appendix A**.

1.2 What is a Travel Plan?

1.2.1 A Travel Plan (TP) is defined[1] as:

> *"A long-term management strategy for an organisation or site that details how agreed sustainable transport objectives are to be delivered, and which is monitored and regularly reviewed."*

1.2.2 In essence, a TP is intended to encourage people to choose alternative transport modes over single occupancy car use and, where possible, reduce the need to travel at all. Such a plan should include a range of measures designed to achieve this goal.

1.3 Purpose of the Report

1.3.1 This Interim Travel Plan is intended to be read alongside the accompanying Transport Statement (TS) (**Ref: 088153 Lord Street, Manchester-CUR-XX-XX-T-TP-00001**) that has been prepared to assess the potential traffic and transportation impacts of the development proposals.

[1] Department for Levelling Up, Housing and Communities (2024). National Planning Policy Framework [Online]. Available at https://www.gov.uk/government/publications/national-planning-policy-framework--2

1.3.2 An ITP is the first stage of the Travel Plan process and is often prepared during the planning stage prior to the construction of the development. It includes a list of potential measures that could be implemented to affect modal choice, and a management strategy for producing a full Travel Plan in the future.

1.3.3 Transport for Greater Manchester (TfGM)[2] strongly endorses the need for TPs in order to reduce the impact of transport on the local environment, to improve accessibility and to encourage 'active travel' which improves peoples' health, stating that a TP should achieve:

- *"A reduction in car use (particularly for single occupancy trips) and increase travel by sustainable modes, namely active travel and public transport;*
- *A reduction in the impact of the generated traffic, both in the immediate neighbourhood and on the wider highway network;*
- *Safe access for pedestrians and cyclists; and*
- *A coordinated approach to developing and implementing realistic travel options."*

1.3.4 This document has been written in accordance with the above statements and with reference to the following key documents:

- National Planning Policy Framework, DLUHC, 2024;
- National Planning Practice Guidance, DCLG (now DLUHC), 2014;
- Greater Manchester Transport Strategy 2040;

1.4 Structure of the Report

1.4.1 Following this introductory section, **Section 2** of the report provides background information on the benefits which can be derived from a successful Travel Plan.

1.4.2 **Section 3** describes the existing situation and surrounding area, including the local highway layout; and **Section 4** provides a summary of the development proposals.

1.4.3 **Section 5** assesses the accessibility of the site by sustainable modes of transport, including walking, cycling and public transport.

1.4.4 **Section 6** sets out key aims and objectives for the Travel Plan process and outlines various initiatives that will be considered to encourage maximum uptake in sustainable modes of travel.

1.4.5 **Section 7** outlines the strategy for Travel Plan targets.

[2] Transport for Greater Manchester (2013). Transport for Sustainable Communities: A Guide for Developers [Online]. Available at: https://assets.ctfassets.net/nv7y93idf4jq/4WYTBSVa9O42aqgYISGQ42/0294b2b3811a6907a7d323572a80058e/12-1386_Transport-for-sustainable-communities.pdf

1.4.6 **Section 8** provides details on the monitoring and review process, responsibility and management of the document, and the appointment of a Travel Plan Coordinator (TPC) as the Travel Plan progresses.

1.4.1 **Section 9** concludes the report by providing an Action Plan that summarises the key actions to be completed as part of the travel planning process.

2.0 Travel Plan Benefits

2.1 Summary

2.1.1 Successful implementation of the travel planning process can have various environmental, health, financial and social benefits for individuals and the wider population.

2.1.2 Greater uptake of active travel and public transport could combat climate change and poor air quality, improve physical and mental health, relieve pressure on the NHS[3], boost local businesses, improve the mobility and independence of those who cannot drive[4], and encourage greater social cohesion[5].

2.1.3 Poor air quality, of which road transport is a major driver, is the largest environmental risk to public health in the UK[6].

2.1.4 A reduction in private car usage can also reduce local congestion (making for more pleasant journeys for active travellers and those who cannot avoid driving) and release land for more productive uses.

2.2 Primary Benefits

2.2.1 Most car journeys are within cycling distance, and many could be walked[7]. If some of these trips shifted to walking/ cycling there would be a significant environmental, health, financial & social benefits. **Figure 2.1** illustrates people's willingness to switch from car to other modes for journeys under 2 miles / 3.2km[8]:

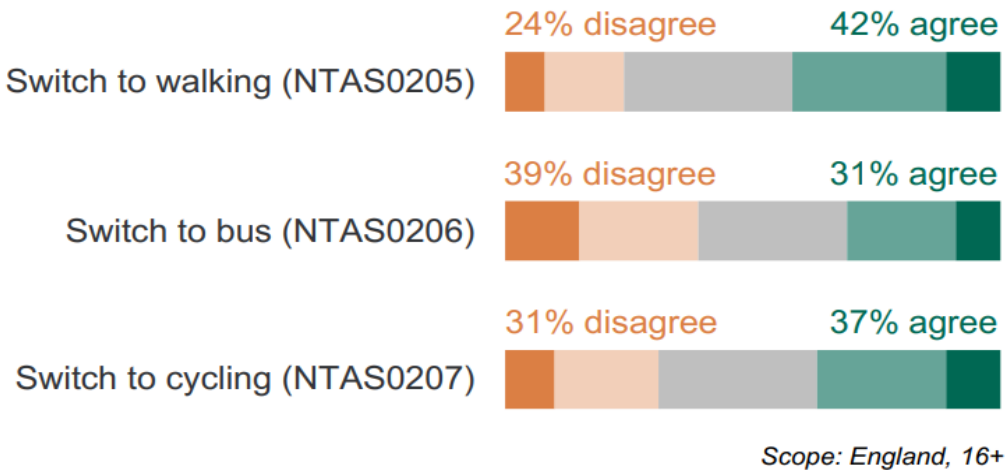


Figure 2-1 – Willingness to Switch Mode of Travel

[3] Jarrett J, Woodcock J, Griffiths UK, Chalabi Z, Edwards P, Roberts I, Haines A (2012). Effect of increasing active travel in urban England and Wales on costs to the National Health Service. Lancet, 379(9832): 2198-2205
[4] Aldred R in association with Leigh Day for British Cycling (2014). Benefits of Investing in Cycling [Online]. Available at: https://www.britishcycling.org.uk/zuvvi/media/bc_files/campaigning/BENEFITS_OF_INVESTING_IN_CYCLING_DIGI_FINAL.pdf
[5] Department for Transport (2009). Good Practice Guidelines: Delivering Travel Plans through the Planning Process
[6] Public Health England (2018). Health Matters: Air Pollution [Online]. Available at: https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
[7] Department for Transport. Dataset NTSQ01019 and NTSQ01018 of the National Travel Survey [Online]. Available at: https://www.gov.uk/government/statistical-data-sets/ad-hoc-national-travel-survey-analysis
[8] Department for Transport (2019). National Travel Attitudes Study (NTAS) 2019: Wave 1 Report [Online]. Available at: https://www.gov.uk/government/statistics/national-travel-attitudes-study-ntas-2019-wave-1

2.2.2 **Figure 2.2** illustrates some of the benefits of walking, wheeling, and cycling in Sustrans' Index cities, which includes Greater Manchester[9].

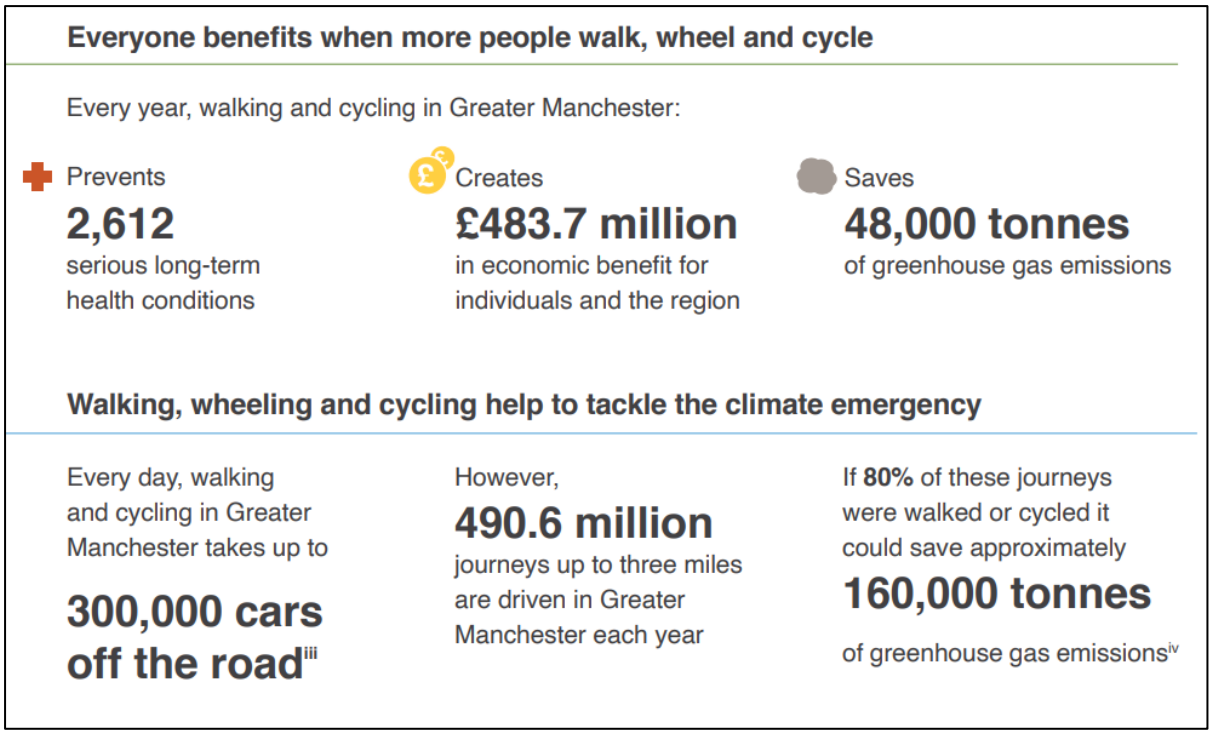


Figure 2-2 – Benefits of Active Travel for Greater Manchester / Index Cities

2.2.3 Within Greater Manchester, traffic is responsible for 65% of dangerous emissions linked to the early deaths of thousands and traffic congestion has a £1.3 billion cost to businesses in every year[10].

2.2.4 A reduction in polluting vehicles on the roads surrounding the site will mean better air quality throughout the area. There are also well documented health benefits associated with active travel, and activity levels across the UK could still be improved.

2.2.5 Air pollution, principally caused by transport emissions, has been linked to some cancers, stroke, high blood pressure and cardiovascular disease, including heart attacks and furring of the arteries[11]. Recent studies have also made links to dementia, reduced cognitive function and Type 2 diabetes.

2.2.6 Travelling by car is not safer than cycling and walking as vehicles are surrounded by exhaust fumes from traffic, which you can breathe in as air filters don't always remove all pollution from the air circulated, and being a short distance from traffic can make a difference in exposure.

[9] Sustrans and TfGM (2022). Greater Manchester Walking and Cycling Index 2021 [Online]. Available at: https://www.sustrans.org.uk/media/10485/greater-manchester-walking-and-cycling-index-2021.pdf
[10] Mayor of Greater Manchester, Greater Manchester Combined Authority and TfGM (2018). A Greater Manchester Congestion Deal [Online]. Available at: https://assets.ctfassets.net/nv7y93idf4jq/1JkCTKjf3Gg4cCG6SMOQil/4de8eb327adb2c8fecd2a654c6ce24c9/17-1821_GM_Congestion_Deal_2018_Final.pdf
[11] Clean Air Greater Manchester (undated). Air pollution and you [Online]. Available at: https://cleanairgm.com/air-pollution/

2.2.7 People in Greater Manchester can sign up to receive free air pollution alerts for when air quality is forecasted to 'moderate' or above at https://cleanairgm.com/data-hub/forecast-and-alerts/.

2.2.8 Within Greater Manchester, 1,200 premature deaths are linked to air pollution in the region annually[10].

2.2.9 NHS Guidance is for adults to do some type of physical activity every day, for a total of *"at least 150 minutes of moderate intensity activity a week or 75 minutes of vigorous intensity activity a week"*[12]. **Figure 2.3** below demonstrates that although most adults (63%) meet this guidance[13], a significant minority do not – including a quarter (26%) of adults who achieve less than one-fifth of the target. This is similar to pre-pandemic levels.

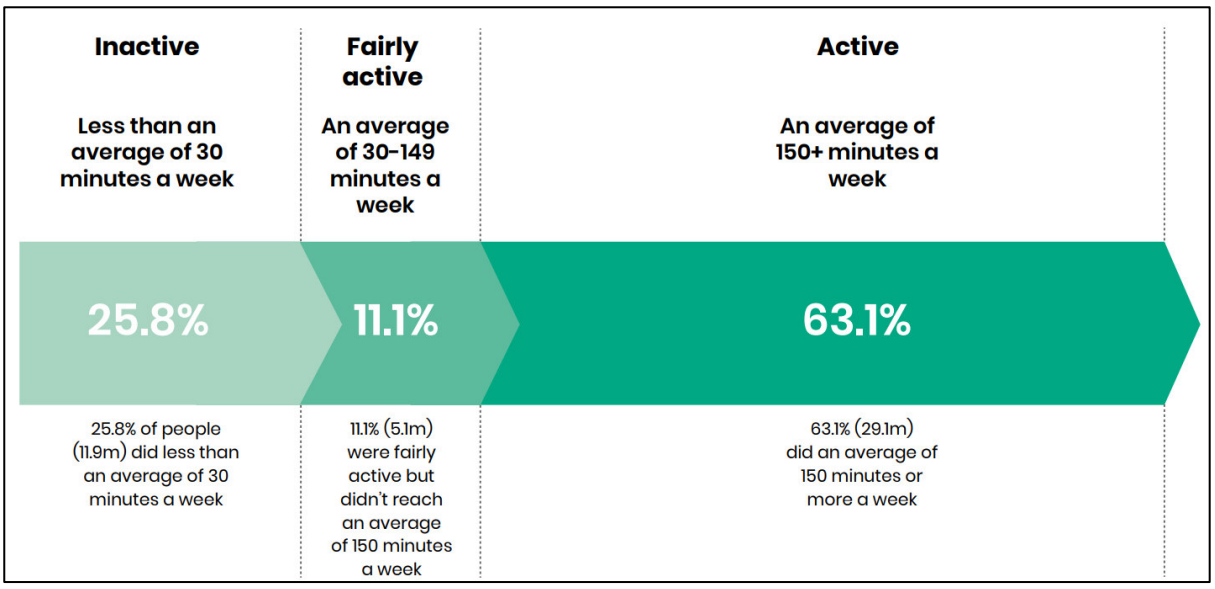


Figure 2-3 – Activity Levels for Adults

2.2.10 This has contributed to poor health in much of the adult population[14]:

> *"In 2021, 26% of adults in England were obese. [This is slightly lower than the 28% reported in 2019, although NHS Digital warns that the 2021 data is not directly comparable to prior years.]*
>
> *The prevalence of … diabetes increased with BMI group, from 3% of those who were not overweight nor obese, to 5% of overweight and 11% of obese adults.*
>
> *The prevalence of longstanding illness was similar for those who were not overweight nor obese (36%) and those who were overweight but not obese (35%). It was higher among those classified as obese (51%)."*

[12] Department of Health and Social Care (2019). UK Chief Medical Officers' Physical Activity Guidelines [Online]. Available at: https://www.gov.uk/government/publications/physical-activity-guidelines-uk-chief-medical-officers-report
[13] Sport England (2020). Active Lives Adult Survey: November 2021/22 Report [Online]. Available at: https://www.sportengland.org/research-and-data/data/active-lives?section=access_the_reports
[14] NHS Digital (2022). Health Survey for England, 2021 [Online]. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2021

2.2.11 The UK Chief Medical Officers[11] further state:

> *"If physical activity were a drug, we would refer to it as a miracle cure, due to the great many illnesses it can prevent and help treat."*

2.2.12 Poor air quality is the largest environmental risk to public health in the UK[15]. Road transport contributes to a third of all nitrogen dioxide (NO2) and an eighth of all particulate matter (PM) emissions, which are major components of urban air pollution. The short-term effects of air pollution can include exacerbation of asthma, and cough, wheezing, and shortness of breath; whereas long-term effects include stroke, lung cancer, respiratory conditions, and cardiovascular diseases.

2.2.13 Regular moderate physical activity (including walking and cycling) can help prevent and reduce the risk of cardiovascular disease, cancer, obesity, diabetes, stroke, mental health problems, high blood pressure, and musculoskeletal problems. Further examples of the impact of travel behaviour on public health is shown in **Figure 2.4** overleaf.

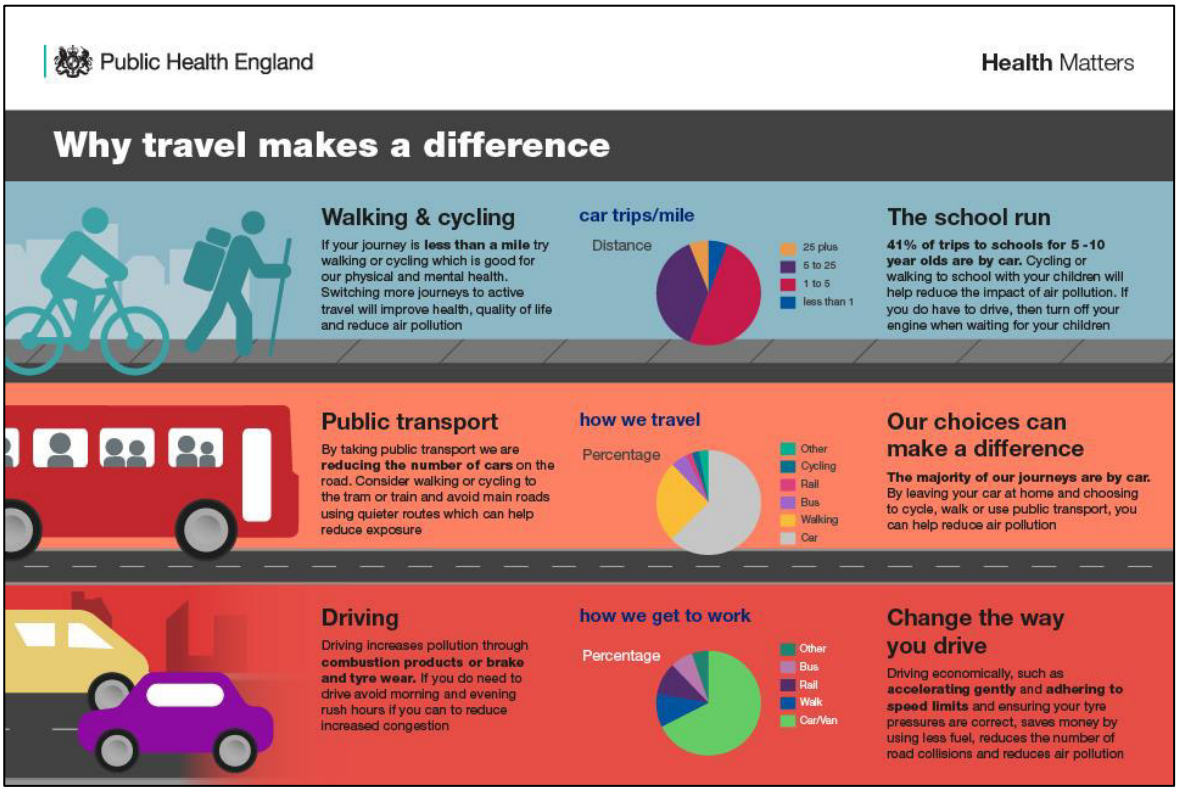


Figure 2-4 – The Impact of Travel Behaviour on Public Health

2.2.14 A major Glasgow University analysis of hundreds of thousands of commuters in the UK revealed significant health benefits of active travel, with those for cycling in particular being "staggering"[16].

[15] Public Health England (2018). Health Matters: Air Pollution [Online]. Available at: https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
[16] The Conversation (2017). Cycling to work: major new study suggests health benefits are staggering [Online]. Available at: https://theconversation.com/cycling-to-work-major-new-study-suggests-health-benefits-are-staggering-76292

Cycling to work was associated with a 41% lower risk of dying overall compared to commuting by car or public transport. ... They also had 46% lower risk of developing heart disease and a 45% lower risk of developing cancer at all.
Walking to work was not associated with a lower risk of dying from all causes. Walkers did, however, have a 27% lower risk of heart disease and a 36% lower risk of dying from it.
In addition, those who cycled part of the way to work still saw benefits – this is important as many people live too far from work to cycle the entire distance.

3.0 Existing Situation

3.1 Site Location

3.1.1 The proposed development site is located off Lord Street in the Green Quarter to the northern edge of Manchester city centre.

3.1.2 The site is bounded by Fernie Street to the east, Lord Street to the north and Cheetham Hill Road to the west. **Figure 3-1** below shows the site in a local context relating to the local highway network:

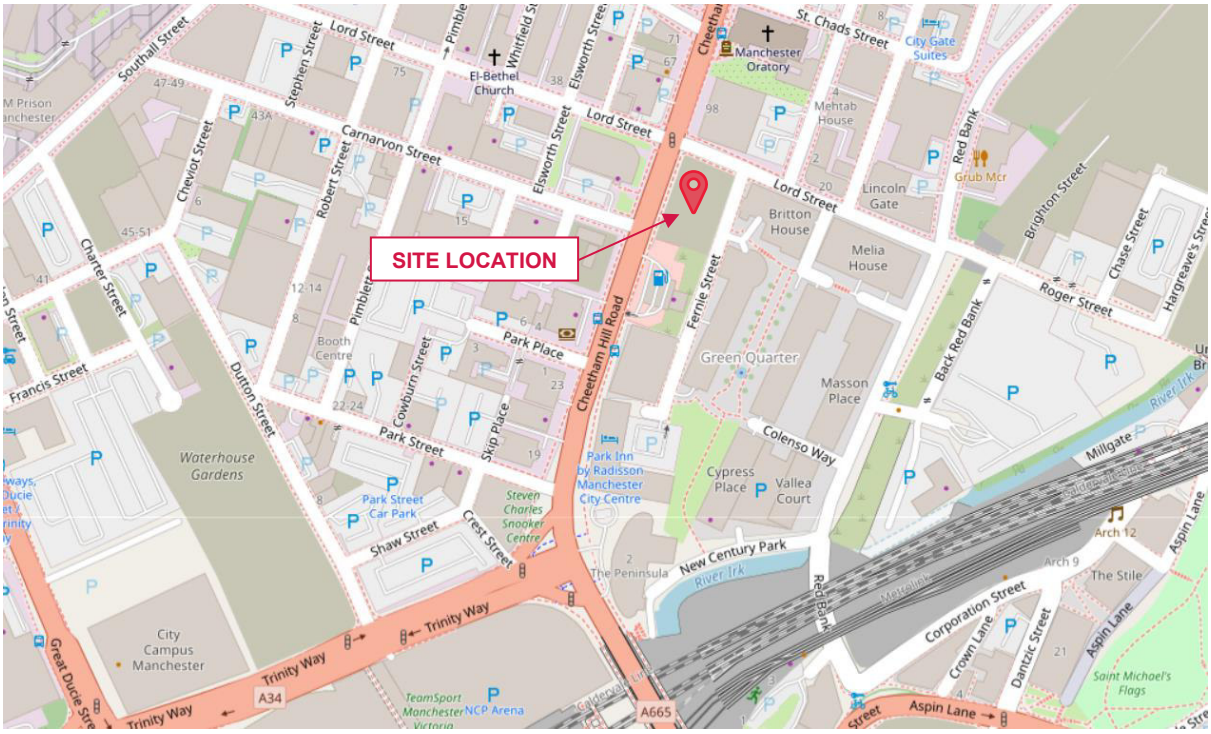


Figure 3-1 – Site Location

(Source: OpenStreetMap, 2025)

3.2 Existing Use and Access

3.2.1 The application site is currently a brownfield site, previously occupied by 7 commercial units.

3.3 Surrounding Highway Network

Fernie Street

3.3.1 The proposed development would be accessed via Fernie Street, which runs along a north east/south west alignment linking with Lord Street to the north. It provides access to the residential apartments along its length as well as the Park Inn Hotel.

3.3.2 Fernie Street is a single lane two way road with footways provided along both sides of the carriageway. Street lighting is provided along the western edge of the carriageway.

3.3.3 The road forms a priority junction with Lord Street to the north.

3.3.4 In the vicinity of site there are traffic regulation orders in the form of double yellow lines, which cover the immediate eastern frontage of the site.

Lord Street

3.3.5 Lord Street is a two-way single carriageway road which links the site to Cheetham Hill Road. It extends between Red Bank to the east and Southall Street to the west.

3.3.6 Lord Street forms a signalised junction with Cheetham Hill Road to the north western corner of the site. Pedestrian crossings facilities have been incorporated into this junction and advanced stop lines have also been provided on all arms of the junction.

3.3.7 There are well lit footways on both sides of the carriageway. In the vicinity of site there are traffic regulation orders in the form of double yellow lines. It is worth noting that the double yellow lines are intermittent and that on-street parking also occurs to the northern edge of the carriageway in the vicinity of the site.

Cheetham Hill Road

3.3.8 Cheetham Hill Road runs west of the site on a north/south alignment. In the vicinity of the site the road forms part of the IRR and extends between Bury Old Road to the north and New Bridge Street.

3.3.9 It is approximately 2.8km in length and runs from Manchester's Green Quarter to Cheetham Hill and becomes Bury Old Road in the Crumpsall area, north of the site.

3.3.10 It connects the site to Middleton and Prestwich to the north and Manchester City Centre to the south of the proposed development.

3.3.11 The road has a 30mph speed limit with speed cameras located within close proximity of the site for enforcement. There are footways on each side of the carriageway with street lighting also provided. There are bus stops located on this road which are within desirable walking distance of the site. There are many complementary existing uses along both sides of this road. There are crossing facilities at vantage points on the road to enable safe crossing of the road.

3.4 Existing Access Arrangements

Vehicular Access

3.4.1 Vehicular access into the site is currently limited to a gated compound adjacent to the maintenance building. There are no other points of vehicular access into the site.

Pedestrian and Cycle Access

3.4.2 There is no public pedestrian and cycle access directly into the site as it is in private ownership and is fenced throughout its perimeters. There is a previously utilised gated access along Fernie Street for pedestrians/ cyclists. This is shown below:



Figure 3-2 – Fernie Street – disused vehicular and pedestrian access gates

(Source: Google Maps Street View, July 2024)

3.5 Key Facilities

3.5.1 Due to the close proximity of the site to the City Centre and surrounding areas it benefits from many complementary key facilities including employment, retail, healthcare and leisure all within easy walking distance. In addition to the above there are also transport hubs and car parking facilities located within walking distance.

3.5.2 The site is located within 450m of Victoria Station and Manchester Arena to the south. Victoria Station provides access to trains and trams. The AO Arena (formerly Manchester Arena) hosts many live shows predominantly in the evenings and weekends.

3.5.3 Shudehill Interchange is located within 700m walk of the site. At this interchange access can be gained to many bus services providing connections to the local area and within the wider Greater Manchester.

3.5.4 Access to the tram can also be gained from this interchange. The tram provides access to the other tram stops within the City Centre as well as further afield to destinations including Rochdale, Bury and Ashton-under-Lyne. The National Football Museum is also located within 500m of the site.

3.5.1 The Printworks and the Arndale Centre are located approximately 700m to the southwest of the site. The Arndale Centre provides access to many high street retail outlets. The Printworks provides access to a variety of leisure facilities including multiple bars and restaurants, nightclubs and a cinema.

3.5.2 Aldi operates a store in the Arndale Centre and future residents could utilise this for their food shopping. Tesco Market Street is also located within 900m of the site and can also be utilised by future tenants for food shopping.

3.5.3 The site is located within 1000m of the Northern Quarter. Within the Northern Quarter access can be gained to many employment opportunities, multiple bars and restaurants as well as retail outlets. The application site is located approximately 700m of Manchester Fort Shopping Centre, where access can be gained to employment and retail opportunities.

3.5.4 Facilities such as high street banks and convenience stores are accessible along Market Street which is approximately 1000m from the site.

3.5.5 Piccadilly Gardens is located approximately 1000m to the south of the site. There are numerous facilities including public transport, banking, retail and employment within this location. Piccadilly Station is also located approximately 1300m to the south east of the site.

4.0 Development Proposals

4.1 Overview of Proposals

4.1.1 This Transport Statement has been prepared in order to support the proposed residential development on land located on Lord Street, in the Green Quarter area of Manchester.

4.1.2 The proposals seek to construct a 24-storey tower comprising 251 residential units, including the demolition of existing structures and the erection of a residential apartment development comprising 251no. dwellings (Use Class C3) with landscaping and associated works. The development will be car-free and will include dedicated cycle parking facilities at the basement level.

4.1.3 The proposed site layout is provided in **Appendix A**.

4.2 Proposed Access

Pedestrian and Cycle Access

4.2.1 The main pedestrian entrance to the building will be located off Cheetham Hill Road.

4.2.2 Cyclists would enter the site via Fernie Street to access the cycle stores located at the basement level of the site, as illustrated below in **F**igure 4-1 **–** Basement Level Layout

4.2.3 .

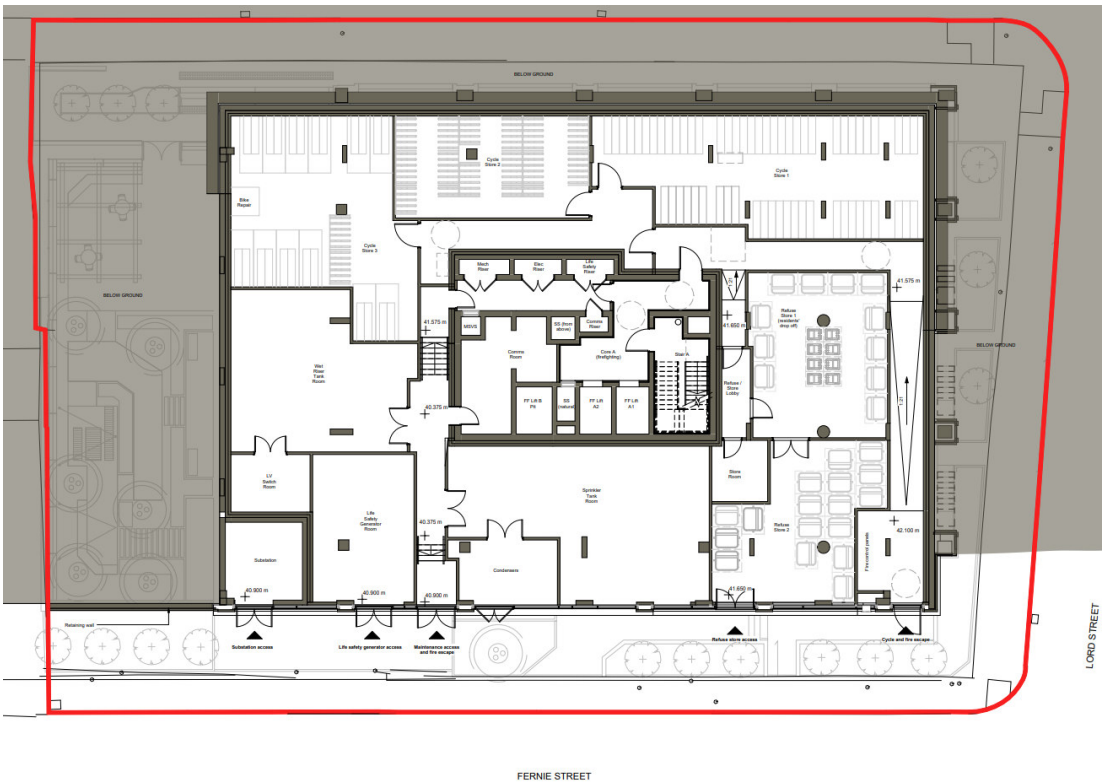


Figure 4-1 – Basement Level Layout
(Source: AEW Architects, 2025)

Proposed Cycle Parking

4.2.4 The proposals include a total of 251 cycle parking spaces, including 239 standard cycle spaces and 12 non-standard cycle spaces.

4.2.5 The cycle parking will be provided at the basement level, as shown in **Figure 4.1**.

Proposed Car Parking Provision

4.2.6 The proposed development will be car-free. The site is accessible by sustainable modes of transport. It is likely that site residents and users will utilise the various public transport and cycle options available to access places of work and leisure within Greater Manchester, and the multitude of amenities that are available are within walking distance across the city centre. Therefore, the site is located in an enviable location to make use of existing and future sustainable modes of transportation without relying on car ownership.

4.2.7 This is in line with other city centre developments. Planning permission was granted in 2016 (planning reference: 111003/FO/2016/C1) for a residential tower at 10-12 Whitworth Street West which would provide no on-site off-street car parking.

4.2.8 As prospective residential occupiers come forward, they would be aware of the parking restrictions living in the proposed development would bring and would decide on whether to move to such development. The absence of any on-site parking would also act as an initiative to encourage alternative modes of transport.

Nearby Car Parking Opportunities

4.2.9 Nonetheless, it is recognised that a small minority of residents may choose to own a car. These residents would be able to use several car parks within close proximity which offer long-term parking permits:

- Park Place car park (75 spaces) – c. 190m / 3-minute walk
- 1 Place car park (17 spaces) – c. 190m / 3-minute walk
- Skip Place car park (35 spaces) – c. 210m / 3-minute walk
- Stocks Street car park (32 spaces) - c. 130m / 2-minute walk
- Shaw Street Parking (87 spaces) - c. 300m / 5-minute walk
- Car Park Manchester Park Street (95 spaces) - c. 290m / 5-minute walk
- 32 Dutton Street Parking (41 spaces) - c. 350m / 5-minute walk
- Manchester AO Arena (970 spaces) - c. 350m / 6-minute walk
- Red Bank car park (220 spaces) - c. 350m / 6-minute walk

4.2.10 It is therefore considered there is adequate opportunity for off-site parking should future residents/visitors chose to commute by car.

Existing On-Street Parking

4.2.11 There are opportunities for on-street parking within the immediate vicinity of the site with a number of free parking spaces up to 2hours along Lord Street, Stocks Street, Stocks Street East, St Chads Street or Stanley Street.

4.3 Proposed Parking Provision

4.3.1 Given the ideal edge of city centre location of the residential development, the feasibility of travel by sustainable modes, as well as the abundance of surrounding parking facilities - the proposed scheme is anticipated to be a car-free development, with no additional parking provided on site.

5.0 Accessibility by Sustainable Modes of Travel

5.1 Introduction

5.1.1 A key element of national and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

5.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian Accessibility;
- Cycle Accessibility; and
- Public Transport Accessibility.

5.2 Pedestrian Accessibility

5.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The National Design Guide (DLUHC, 2021) states that well designed places are walkable, which is defined *"Local facilities are within walking distance, generally considered to be no more than a 10-minute walk (800m radius)."*

5.2.2 Within the 500 metres walking distance, there are multiple food retail outlets located along Cheetham Hill Road as well as public houses and restaurants.

5.2.3 There is the Manchester Arena and food outlets located south of the site which provides leisure facilities for users of the development. There are excellent pedestrian facilities in the vicinity of the site which would link future residents by foot to these uses.

5.2.4 Slightly further afield, within a 1,000m walking distances there are multiple opportunities for employment such as NOMA and other office buildings within close proximity to the site. In addition there are retail, leisure and food outlets located within the Printworks and Arndale Centre to the south and south east of the site, which could also provide employment opportunities for future residents.

5.2.5 There is also Manchester Fort shopping arcade located approximately 750m north of the site off Cheetham Hill Road.

5.2.6 Within 1000m of the site, access can be gained to parts of the City Centre which provides more opportunities for employment and leisure.

5.2.7 It is clear from the above that the site is highly accessible on foot and that there are abundance of complementary uses within walking distance of the site, with good pedestrian facilities available.

5.3 Cycle Accessibility

5.3.1 Cycling is a cheap, efficient, and healthy way to travel. Cycling also provides a predictable arrival time which depending on location, can be quicker than driving or using public transport, and is subject to fewer delays.

5.3.2 The average person in England cycled 16 times for a total distance of 54 miles in 2019, according to the Department for Transport's walking and cycling statistics. This equates to an average of 3.38 miles / 5.43km per trip, which is rounded to a 5.5km catchment. In 2020, the average cycling trip rose to 7.1km, significantly higher than previous years likely primarily due to the COVID-19 pandemic and associated restrictions on public transport. Whilst it is possible that in future years, the average may stay above 5.5km, the distance of 5.5km has been retained as the average cycling distance.

5.3.3 8km (5 miles) is considered to be the maximum acceptable cycling distance for most people and is based on the 2019 National Travel Survey statistics, which demonstrates that 82% of cycling trips were under 5 miles (8km). The National Model Design Code – Part 2 (DLUHC, 2021) also references this distance, expressing *"the aim that walking and cycling should be the first choice for short local journeys, particularly those of 5 miles or less."*

5.3.4 To further understand the site location in relation to surrounding cycle infrastructure**, Figure 5.1** has been extracted from https://tfgm.com/maps/cycling-district-maps. This figure highlights the availability of both cycling and pedestrian infrastructure surrounding the site, connecting the site to the nearby community and their facilities.

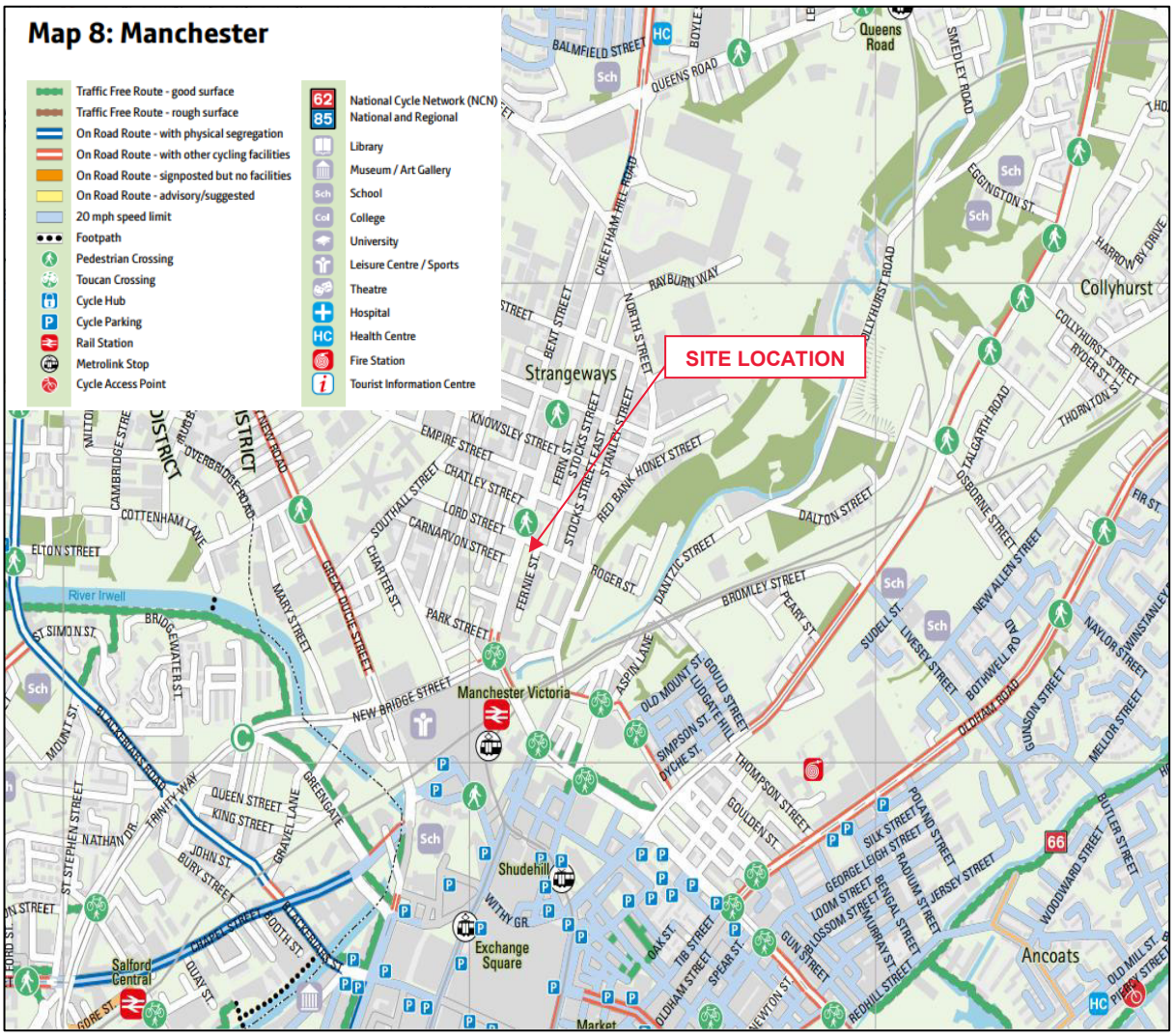


Figure 5-1 – Local Cycling Facilities
(Source: TfGM, 2025)

5.3.5 Whilst provision in the immediate vicinity of the site is limited, many of the roads are residential in nature and may be suitable for cycling. There are also off-road routes further afield.

5.3.6 The site is therefore well placed to take advantage of the existing and upcoming cycle connections around Manchester and Greater Manchester, and it is considered that cycling is a realistic mode of travel to and from the site; especially given the significant cycle parking facilities proposed as part of the scheme.

5.4 Public Transport Accessibility

5.4.1 The site benefits from its highly accessible location for public transport with train, tram and bus services available within a short walking distance. Accessibility by these modes is considered in further detail within the subsections below.

Bus Accessibility

5.4.2 CIHT guidance – from *'Buses in Urban Developments'* (2018) – indicates that a bus stop should be located within the following walking distances from a new development based on its location and the number and frequency of services:

Situation	Maximum Walking Distance
Core bus corridors with two or more high-frequency services	500m
Single high-frequency routes (every 12 minutes or better)	400m
Less frequent routes	300m
Town/city centres	250m

Table 5.1 – CIHT Maximum Suggested Walking Distances to Bus Stops

5.4.3 The nearest bus stop to the site is located approximately 75m to the south of the site along the A665 Cheetham Hill Road, which provide services to Manchester city centre and Sale. **Table 5.2** details the services that call at this stop, and their associated frequencies:

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
41	Middleton - Bowker Vale - Manchester City Centre - Sale	20 mins	20 mins	30 mins
135	Bury - Whitefield - Cheetham Hill - Piccadilly Gardens	10 mins	10 mins	10 mins

Table 5.2 – Summary of Bus Service Frequencies in the vicinity of the Site

5.4.4 These stops provide frequent access to range of areas in around Manchester, including Bury, Sale and Manchester city centre. Additionally, the site is within walking distance of both the Shudehill Interchange and Victoria Station, offering convenient access to a wider range of frequent bus services connecting to surrounding areas across Manchester and the wider Greater Manchester area.

Rail Accessibility

5.4.5 The nearest train station is Victoria located approximately 700m to the southwest of the site. The station provides frequent services to a number of key destinations including Burnley, Huddersfield, Blackpool, Newcastle, Wigan, Leeds, Chester, Hull, and Manchester Airport.

Metrolink (Light Rail) Accessibility

5.4.6 The nearest Metrolink station is located within Victoria Train Station, located approximately 700m southwest of the site. This stop provides frequent services to areas along the route to Bury, Altrincham, Manchester Piccadilly, Rochdale, East Didsbury, and Shaw and Crompton, directly.

5.4.7 Users can change at the Deansgate-Castlefield Metrolink stop to access the entire Metrolink network, including Eccles, Trafford Centre and Asthon-under-Lyne.

5.4.8 A summary of the public transport opportunities surrounding the site can be found in the image below, which has been extracted from https://tfgm.com/public-transport/network-maps-region

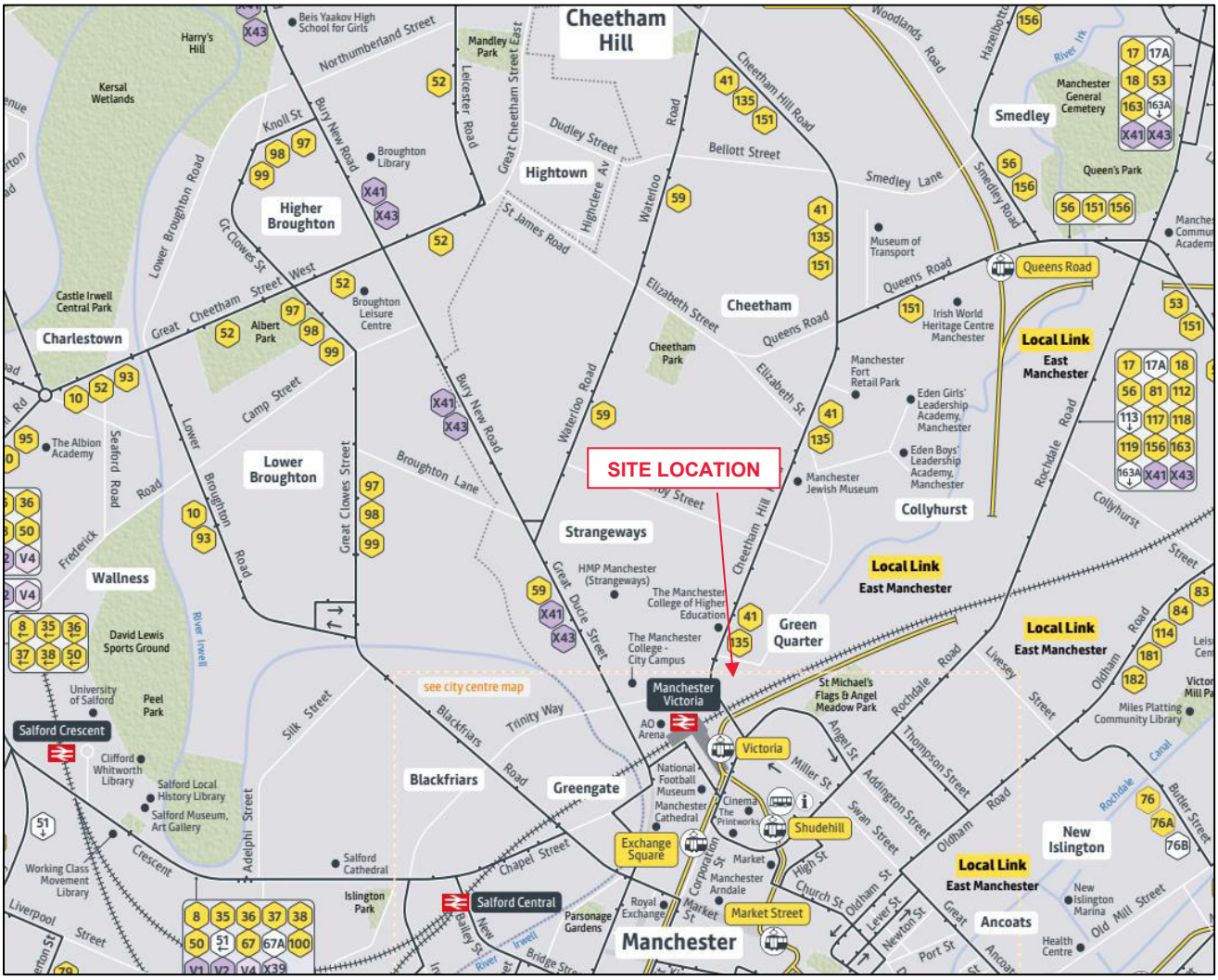


Figure 5-2 – Local Public Transport Context
(Source: TfGM, 2025)

5.5 Summary

5.5.1 It is considered the site is highly accessible by sustainable modes of transport. The surrounding area exhibits good levels of pedestrian and cycling infrastructure, and there are a number of public transport opportunities within acceptable walking distance of the site.

5.5.2 Overall, the site is accessible via rail as part of a multi-modal journey.

6.0 Travel Plan Initiatives

6.1 Introduction, Aim and Objectives

6.1.1 Taking into account the location of the proposed development and the accessibility of the site via walking, cycling and public transport, a series of measures and initiatives have been developed to encourage active and sustainable travel and reduce single occupancy car travel to and from the site.

6.1.2 This section of the ITP sets out the initiatives that could be implemented in a full Travel Plan at the site.

6.1.3 Considering the benefits in **Section 2** and the end users, this ITP aims to minimise the number of car trips generated by the development – particularly single occupancy ones and those undertaken in internal combustion engine vehicles.

6.1.4 The ITP will be guided by with the following objectives, all within the above overarching aim:

- **Objective 1 –** To increase the level of walking to and from the site;
- **Objective 2 –** To increase the level of cycling to and from the site;
- **Objective 3 –** To increase the level of public transport use to and from the site;

6.2 Appointment of Travel Plan Coordinator (TPC)

6.2.1 At least one month before first occupation of the proposed development, a Travel Plan Coordinator (TPC) will be appointed. The duty of the TPC will be to take responsibility for ensuring that the various elements of the Plan are monitored and operate effectively to offer a genuine choice of travel modes.

6.2.2 One of the primary responsibilities of the TPC is to engage with Trafford Council /TfGM, to implement and manage the TP, and to be the main point of contact for residents.

6.2.3 Additional responsibilities of a TPC are further detailed in **Section 7** of this report.

6.3 Provision of Sustainable Travel Information

6.3.1 Welcome Packs can be important in influencing travel patterns and therefore it is envisaged that they will be supplied to all residents at the development in the early stages of operation and be made available in a communal area for the apartment blocks, for example on a noticeboard.

6.3.2 The Welcome Packs will introduce the Travel Plan concept detailing the aims, objectives, and aspirations, provide contact details for the TPC, and include the following information

Objectives	Contents
1 – To increase the level of walking to and from the site	• A summary of the health, environmental, and social benefits of active travel and public transport, similar to that provided in **Section 2**; • The TfGM website at https://beeactive.tfgm.com/where-you-live/ which comprises details of walking routes and facilities accessible within a 15-minute walk; • The Greater Manchester Walking website at https://gmwalking.co.uk/ which provides resources on walking routes and tips on getting started with walking as a form of commute; • The https://www.plotaroute.com/ website for journey planning on foot; and • Calendar of events such as "National Walking Month'.
2 – To increase the level of cycling to and from the site	• A summary of the health, environmental, and social benefits of active travel and public transport, similar to that provided in **Section 2**; • Maps showing local cycling routes (for example https://tfgm.pindarcreative.co.uk/tfgm_interactive_mapping_county_map) • The TfGM website at https://beeactive.tfgm.com/ which comprises details on cycle training, parking, paths, maps, hire, or bringing bicycles on public transport; • Promote TfGM's cycle hire scheme (https://beeactive.tfgm.com/cycle-hire/) which users can access using the Beryl app • Cycle information, including route maps and useful tips and guidance, on the Sustrans website https://www.sustrans.org.uk/; • Details of local cycle shops; • Calendar of events such as 'National Bike Week'; and • The https://www.cyclestreets.net/ website for journey planning by bike.
3 – To increase the level of public transport use to and from the site	• A summary of the health, environmental, and social benefits of active travel and public transport, similar to that provided in **Section 2** • A map showing local bus and rail stations in the vicinity of the site • Links to up-to-date public transport services, timetables, and routes (for example https://tfgm.com/public-transport); and • Details of TfGM's online journey planning resources: https://tfgm.com/plan-a-journey. • Linking information systems regarding bus and rail travel timetables to the residents intra-web service / website to form a "One-Stop-Shop" for all public transport queries; • Advertise any promotions / discounts offered by public transport operators.

Table 6.1 – Sustainable Travel Information

6.3.3 This information will be periodically updated by the Travel Plan Coordinator (TPC).

6.4 Marketing and Promotional Measures

6.4.1 Providing easily accessible information on travel options can be important in influencing travel patterns. Relevant elements of the Travel Plan will be supplied to all residents at the site electronically (via a

Travel Page on the development's website if there is one) and/or physically on notice boards in communal areas. This will include:

- Providing a summary of the TP in the Welcome Pack;
- Publicising the TP with posters and notice boards in communal areas; and
- Organising a monthly promotional event in a communal area.

6.4.2 A version of the latest TP document should be made readily accessible to all future residents of the site.

6.5 Measures to Encourage Walking

6.5.1 Walking is the most sustainable and accessible mode of travel. Any individual in relatively fair health can incorporate walking into part of their journey. Furthermore, 30 minutes of moderate activity 5 or more times per week is likely to enhance the health and fitness of the individual.

6.5.2 It has been demonstrated throughout **Section 4** of this ITP that there is an existing good level of pedestrian infrastructure in the surrounding area.

6.5.3 The following measures will be provided in order to encourage residents to walk:

- Raise awareness of the health benefits of walking;
- Promote national events such as "National Walking Month";
- Provide clear signing of pedestrian routes within and adjacent to the site;
- Provide adequate lighting, landscaping, and shelter to create pleasant pedestrian areas; and
- Regularly review and update information (if necessary) provided within the Welcome Packs / notice boards / Travel Page on the development's website, such as:
  - Local pedestrian routes, including public footpaths and walking times to key destinations;
  - The www.plotaroute.com website for journey planning on foot; and
  - The Greater Manchester Walking website at gmwalking.co.uk/ which provides resources on routes, tips, local walking groups.

6.5.4 Additional measures such as the implementation of a 'walking buddy' scheme, issuing personal alarms, and a pool of umbrellas could also be considered.

6.6 Measures to Encourage Cycling

6.6.1 It has been demonstrated throughout **Section 4** of this ITP that there is currently a good level of cycle infrastructure in the area surrounding the development.

6.6.2 As part of the development proposals, there will also be a 251-space secure and covered cycle parking facility within the site, across three separate cycle stores. The provision of sufficient cycle parking of suitable quality has a key synergy with the successful implementation of travel plans.

6.6.3 Future residents will be able to access this area from a proposed cycle store access onto Fernie Street, or via the numerous lifts provided within the building.

6.6.4 To encourage residents to cycle, the following measures will be provided:

- Raise awareness of the health benefits of cycling;
- Encouraging local cycle clubs/forums to be invited to take part in Travel Plan promotional events to raise awareness;
- Ensure that there is sufficient cycling infrastructure and facilities on-site, such as:
  - Provision of signage in and around the site;
  - Sufficient security at proposed cycle parking facilities; and
  - Potential to provide an on-site cycle repair stand;
- Regularly review and update information (if necessary) provided within the Welcome Packs/ notice boards / Travel Page on the development's website, such as:
  - Local cycle network routes;
  - Cycle information, including route maps and useful tips and guidance, on the Sustrans website www.sustrans.org.uk;
  - Local information on cycle training, parking, paths, maps, hire, or bringing bicycles on public transport on the TfGM website https://beeactive.tfgm.com/;
  - TfGM's cycle hire scheme (https://beeactive.tfgm.com/cycle-hire/) which users can access using the Beryl app;
  - Local cycle shops; and
  - Marketing campaigns such as "National Bike Week".

6.6.5 Additional measures such as encouraging a "cycle buddy" scheme via a development-wide Bicycle User Group (BUG), making a 'bike doctor' available at BUG meetings to check bicycles and ensure they are road worthy (any recommended repairs will be identified but it will be the responsibility of the individual to fund the repairs), and having the TPC negotiate discounts with local cycle retailers could also be considered.

6.7 Measures to Encourage Public Transport Use

6.7.1 It has been demonstrated throughout **Section 4** of this ITP that the site is accessible by public transport, and that there are further opportunities for wider public transport travel throughout Greater Manchester. The following measures will be provided in order to encourage residents to travel by public transport:

- Advertise details of the 'My TfGM' mobile app and online Journey Planner http://my.tfgm.com/;
- Advertise details of the Traveline Journey Planning tool for the North West. Future residents travelling out of Greater Manchester can contact Traveline by phoning 0871 200 2233. They can also utilise the Traveline website at www.traveline-northwest.co.uk;
- Regularly review and update information (if necessary) provided within the Welcome Packs / notice boards / Travel Page on the development's website, such as:
  - Details of Traveline's online journey planning resources: https://www.traveline.info/;
  - Details of TfGM's community transport options for residents who may have difficulty accessing regular public transport: https://tfgm.com/

- Promotions/discounts offered by public transport operators;
- A map showing local bus and rail stations in the vicinity of the site; and
- Links to up-to-date bus, rail and Metrolink details including timetables / route maps.

6.7.2 Additional measures could include personalised travel planning by the TPC.

6.8 Reducing the Need to Travel

6.8.1 An effective way of lessening the travel impact of a development is to reduce the need to travel in the first instance. Therefore, the following measures will be considered:

- Promoting nearby services (i.e. facilities necessary for everyday functionality that would otherwise require travel away from the site (e.g. during lunchtimes);
- Equipping communal areas with high-speed broadband and free Wi-Fi hotspots to enable easy connection.

6.9 Summary

6.9.1 In summary, the ITP initiatives contained in this section can be implemented by the TPC to encourage residents to travel by sustainable modes of transport and contribute to the achievement of the aims and objectives set out earlier within this TP.

6.9.2 The list of measures above is by no means exhaustive, but form the basis of those to be explored by the TPC and to be agreed with TP officers at Manchester City Council.

7.0 Targets

7.1 Introduction

7.1.1 Target setting is an important part of any Travel Plan, providing a focus for the overall process and a measure against which the Travel Plan initiatives can be judged. This section sets out the strategy for the Travel Plan targets and provides an overview of the data that should be collected as part of future travel surveys to inform the full Travel Plan once developed.

7.2 Data Collection and Analysis

7.2.1 As the development has not yet been constructed, it is not possible to undertake any travel surveys of future residents and visitors. Therefore, it is not appropriate to provide a definitive set of targets at this stage.

7.2.2 In order to understand travel habits, a survey will be undertaken within 3 months of first occupation or when 50% occupancy has been reached, whichever is sooner. Recipients will be encouraged to participate, and the surveys would seek the following key information:

- Place(s) of work / residence;
- Usual mode of travel and reason for modal choice;
- Attractiveness of various active and sustainable modes;
- Any barriers to walking, cycling and public transport; and
- Initiatives that would encourage residents and visitors to travel more sustainably.

7.2.3 This information will enable analysis to be undertaken to establish final targets. It will also provide information on reasons for that modal split and identify any measures that may encourage a modal shift.

7.2.4 Questions will be transferred to an online survey service, such as SurveyMonkey or Microsoft Forms. Residents and visitors would be sent this link in the early stages of operation and can click on it to be directed to an internet-based survey.

7.2.5 Paper surveys will also made available across communal areas of the site. These results will be manually input for analysis alongside the electronic surveys.

7.2.6 The information obtained will be used to undertake modal split analysis. Residents and visitors will then be surveyed annually from the initial survey to review progress against current and targeted modal splits, as well as means of testing the effectiveness of the Travel Plan measures.

7.3 SMART Targets

7.3.1 All performance indicator targets and potential modal split targets are considered to be suitable interim measures before travel surveys are undertaken.

7.3.2 At this point, official targets will be set through consultation with Manchester City Council. The official targets will be **SMART** (**S**ite-specific – **M**easurable – **A**chievable – **R**ealistic – **T**imed).

7.3.3 Once the travel surveys have been undertaken, it is possible to monitor modal splits so that Travel Plan initiatives can be tailored to increase uptake of certain modes of travel. Modal split targets are set for a reduction in private car use offset by an increase in sustainable modes.

7.3.4 The following phrases have been used to give a general indication of timescales for the '**SMART**' targets following the adoption of the Travel Plan:

- Short-Term Target – within one year;
- Medium-Term Target – for between 1 – 3 years; and
- Long-Term Target – more than 3 years.

7.3.5 To provide an indication of potential targets, an example is provided in **Table 7.1** below:

Example of Potential Modal Shift Targets					
Travel Mode	**Existing**	**Short Term**	**Medium Term**	**Long Term**	**Total Target**
Car Driver	TBC following baseline survey	-2%	-4%	-4%	-10%
Car Share		+1%	+1%	+1%	**+3%**
Public Transport		+1%	+1%	+1%	**+3%**
Cycle		-	+1%	+1%	**+2%**
Foot		-	+1%	+1%	**+2%**
Other		-	-	-	**-**

Table 7.1 – Example of Potential Targets

7.3.6 The example modal split targets above aim for a 10% reduction in single occupancy car trips, whilst aiming for a 10% increase in trips by more sustainable modes such as public transport, walking, cycling, and car sharing.

7.3.7 The 10-percentage point reduction in car drivers has been informed by a major synthesis report[17] which found that workplace travel planning can induce a 3-18% drop in car use by commuters, while personalised (residential) travel planning can induce a 6-12% drop in car use share among residents.

[17] Kuss, P. and Nicholas, K. (2022). A dozen effective interventions to reduce car use in European cities: Lessons learned from a meta-analysis and transition management. *Case Studies on Transport Policy*, 10(3), 1494-1513.

7.3.8 The targets are considered to be realistic when considering the Travel Plan Initiatives as detailed throughout **Section 7** and follow the principles and goals of the Greater Manchester Transport Strategy 2040.

7.3.9 However, the above targets are indicative only, and final targets will be decided following the receipt of the travel surveys

8.0 Monitoring and Review

8.1 Introduction

8.1.1 This section of the report sets out the proposed management arrangements associated with the ITP.

8.1.2 DfT Good Practice Guidelines outlines six key messages regarding implementation and management, as follows:

- *"Travel plans are living documents that need to be updated in the light of experience and sustained throughout the life of a development.*
- *At all times a named individual needs to be responsible for leading the delivery of the travel plan.*
- *The developer/occupier should take the lead in respect of delivering the site-specific elements of the travel plan.*
- *Local authorities need to establish robust databases of all travel plans in their areas.*
- *Post-implementation management arrangements must be identified and included in the travel plan.*
- *Transport Management Associations may be an appropriate mechanism for assisting with the implementation and on-going management of travel plans within a wider area."*

Source: Good Practice Guidelines: *Delivering Travel Plans though the Planning Process.* DfT, 2009.

8.1.3 It is clear from the above that a TP document should be considered as merely the starting point of the process. The implementation of a TP is an on-going requirement and will require support and leadership in achieving its objectives.

8.2 Responsibility and Management

8.2.1 Overall responsibility for the TP will lie with Story Homes. Following initial occupation, the ITP will need to be updated to a full Travel Plan. This will involve the distribution of travel surveys.

8.2.2 The survey information will enable analysis to be undertaken to establish final targets. It will also provide information on the reasons for modal splits and identify measures that may encourage a modal shift.

8.2.3 At this point, the day-to-day responsibility will shift to the appropriately appointed Travel Plan Co-ordinator (TPC).

8.2.4 Notwithstanding, adequate consultation and support from Story Homes is required to ensure the smooth implementation of the TP. A number of measures to be undertaken comprise:

- Active management of the car and cycle parking;
- Provision of security measures within the site, such as CCTV, where appropriate;
- Maintenance of on-site walking and cycling facilities, lighting, and any CCTV installations;

- Support for a TPC in ways including, but not limited to, funding to enable them to fulfil their duties and deliver the TP as intended; and
- A commitment to actively promoting sustainable transport options at the site.

8.3 Travel Plan Coordinator (TPC)

8.3.1 The primary support and leadership for implementing a Travel Plan should come from an individual appointed as the Travel Plan Coordinator (TPC). The duty of the TPC will be to take responsibility for ensuring that the various elements of the Plan are monitored and operate effectively to offer a genuine choice of travel modes.

8.3.2 At least one month before occupation, a Travel Plan Coordinator (TPC) will be appointed.

8.3.3 One of the primary responsibilities of the TPC is to work with TfGM to deliver free personalised travel planning for residents incorporating a survey, events and then advice to residents on sustainable travel choices.

8.3.4 The TPC will take responsibility for ensuring that the various elements of the plan are monitored and operate effectively to offer a genuine choice of travel modes. Typical duties include:

- Leading on the delivery of the TP;
- Representing the human face of the TP and explaining its purpose and opportunities on offer;
- Implementing and promoting sustainable travel initiatives to ensure a coordinated approach across the site as a whole;
- Promoting individual measures / initiatives in the TP and instigate a marketing campaign upon first occupancy of the site;
- Liaising with public transport operators;
- Monitoring the TP and identifying trends in relation to the targets and reporting the findings to relevant parties (i.e. Manchester City Council); and
- Taking a key role in reviewing the TP according to the achievement of the modal shift targets specified therein.

8.3.5 The TPC will remain in-post for the duration of the monitoring period and the Council will be notified if the holder of the TPC role changes during this time.

8.3.6 As well as this document, the TPC should consult TfGM's interactive dedicated travel planning website for employers – https://tfgmbusinesstravel.exhibition.app/ – which aims to act as a 'one stop shop' providing guidance for businesses looking to make affordable and sustainable travel choices and support the wider regional economy. Visitors to the TfGM business portal will find resources for both employers and employees, ranging from travel planning tools such as travel survey templates through to information on new flexible tickets and active travel provision such as Greater Manchester's cycle hire scheme.

8.3.7 The TPC will remain in-post for the duration of the monitoring period and the Council will be notified if the holder of the TPC role changes during this time.

8.4 Monitoring and Evaluation

8.4.1 The monitoring of travel behaviour is vital to measure progress towards the targets and would be the responsibility of the appointed TPC. Apart from receiving regular updates from residents and liaising with Manchester City Council on transport-related matters, the main monitoring process will involve travel surveys as described in **Section 7** above.

8.4.2 Monitoring will be carried out for a period of at least five years from the date of the baseline travel surveys (or until a date to be agreed with Manchester City Council) to ensure that the TP reflects current opportunities and local circumstances. The five-year monitoring schedule will include five surveys: the initial monitoring survey and four follow-up surveys.

8.4.3 The results of each survey would be used to review progress against target modal splits, where the TPC will calculate the percentage share of all travel modes to and from the site. Where targets are not met, remedial actions will be proposed, agreed, and then monitored for effect. A summary of the survey results will be made available to residents by the TPC.

8.4.4 The modal split figures calculated will be compared with other data sources to ensure the robustness of the information provided.

8.4.5 In order to record and communicate the progression of the Travel Plan, the TPC will produce monitoring reports as and when requested by Manchester City Council. This report will include, but may not be limited to the following:

- Reporting of progress against the targets set once the travel survey is completed;
- Provision of information relating to new initiatives introduced (if applicable);
- Provision of information on proposed initiatives due for implementation (if applicable); and
- Details of relevant external transport-related news (e.g. new local bus services, new local cycle infrastructure) (if applicable).

8.4.6 Upon request, the monitoring reports will be provided to officers at Manchester City Council annually following the receipt of the surveys and a summary of the survey results made available to residents and visitors by the TPC.

9.0 Action Plan

9.1 Introduction

9.1.1 **Table 9.1** below summarises the key actions from the document by providing an Action Plan for the Travel Plan process:

Action	Target Date	Responsibility
Appoint TPC	One month before first occupation	The occupier
Produce Welcome Pack	Upon first occupation of the development	TPC
Implement TP Initiatives	During occupation of the development	TPC
Undertake Initial Travel Surveys	Within six months of occupation	TPC
Decide Targets	Within one month of undertaking the initial surveys	TPC in conjunction with Manchester City Council
Update ITP to a full Travel Plan	Within two months of agreeing modal splits with Manchester City Council	TPC
Distribute Travel Survey Results to Manchester City Council	Within three months of each travel survey phase	TPC
Carry Out Annual Travel Surveys and Monitoring	Annually for at least five years from the date of the baseline travel surveys (or until a date to be agreed with Manchester City Council)	TPC

Table 9.1 – Action Plan

9.1.2 As a TP is a living document which should be adapted and updated as and when required, the TPC should aim to progress these actions within the allocated timeframe, with support as required from the scheme developer / management.

9.1.3 Progress against measures can be directly recorded into a working version of an Action Plan, which could be updated on an annual basis as part of the monitoring and review process

Appendix A – Proposed Site Layout

CHEETHAM HILL ROAD



NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

This drawing contains the following model files: -

NO1LOR-AEW-B1-ZZ-M3-A-00100
NO1LOR-CIV-XX-XX-M3-S-00001

0 1 2 3 4 5m

Scale @ 1:100

Planning Application Boundary
Area: 1,946m² / 0.48 acre / 0.19 hec

Red boundary lines based on topographical survey by ND Oliver & Co titled "13189 / 001" dated 31/01/2025.

Apartment Type Key

- 1b2p M4(3)
- 2b3p
- 2b3p M4(3)
- 2b4p
- Residential Amenity

Rev	Date	Description	Drawn by	Checked By
P04	19/12/25	Red line boundary updated to include footpath	RC	BS
P03	18/12/25	Core updated	RC	PBH
P02	14/11/25	Draft Planning Issue	KS	PBH
P01	21/08/25	Initial issue	KS	BS

Status: S2 — Purpose of Issue: For Information

drawing stage: **Stage 3**

client: **Linear UK**

project: **Manchester, Lord Street**

drawing title: **Proposed GA Plan - Ground Floor**

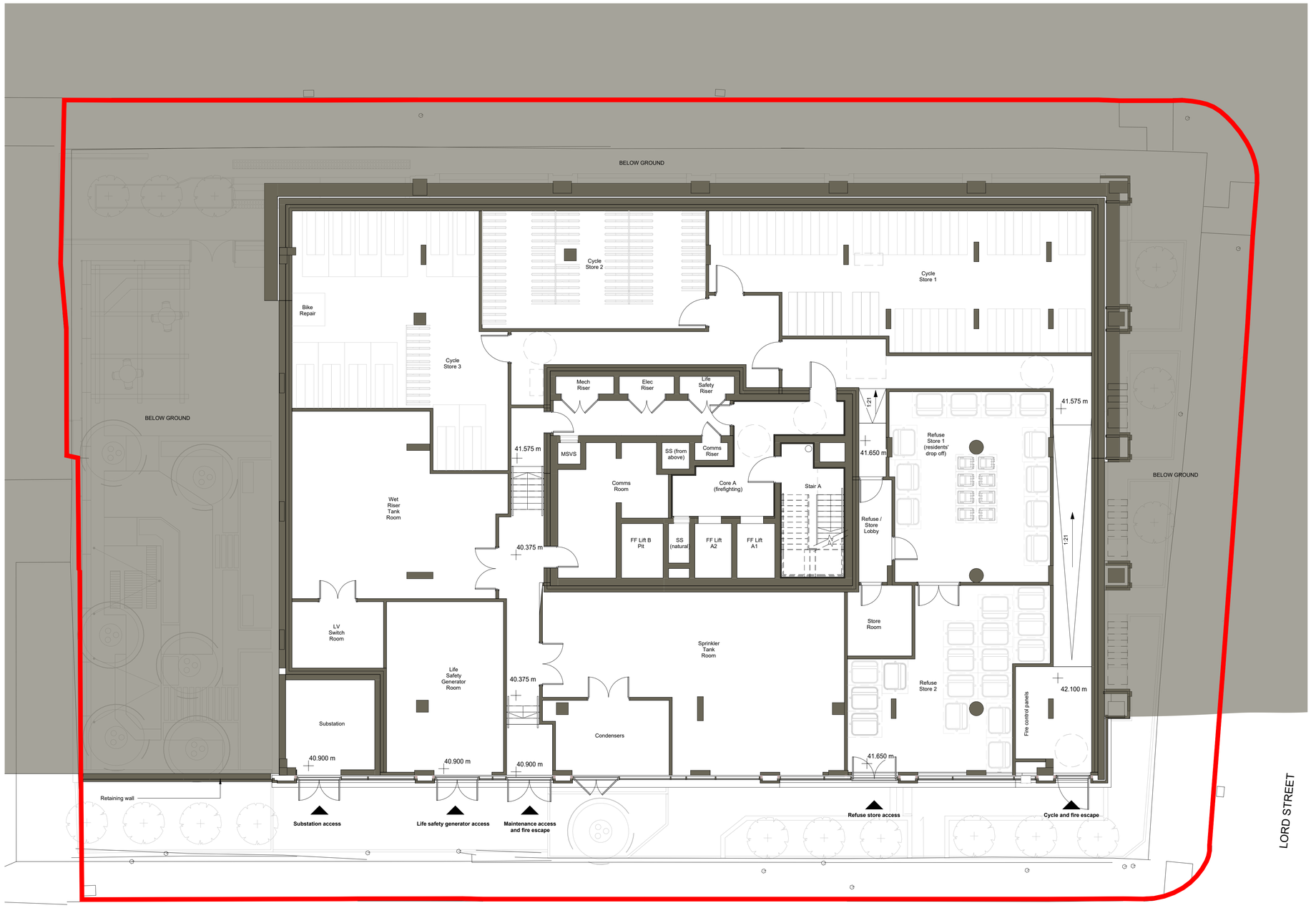
date: 26/06/25 — drawn: KS
scale @ A1: As indicated — checked: BS

Rev: **P04**

Dwg No: **NO1LOR-AEW-XX-00-DR-A-05201**

aew architects
0161 214 4370
www.aewarchitects.com

AEW Internal Ref Number: 14374



NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

This drawing contains the following model files: -

NO1LOR-AEW-B1-ZZ-M3-A-00100
NO1LOR-CIV-XX-XX-M3-S-00001

0 1 2 3 4 5m

Scale @ 1:100

Planning Application Boundary
Area: 1,946m² / 0.48 acre / 0.19 hec

Red boundary lines based on topographical survey by ND Oliver & Co titled "13189 / 001" dated 31/01/2025.

Rev	Date	Description	Drawn by	Checked By
P04	19/12/25	Red line boundary updated to include footpath	RC	BS
P03	18/12/25	Core updated	RC	PBH
P02	14/11/25	Draft Planning Issue	KS	PBH
P01	21/08/25	Initial issue	KS	BS

Status: S2 — Purpose of Issue: For Information

drawing stage: **Stage 3**

client: **Linear UK**

project: **Manchester, Lord Street**

drawing title: **Proposed GA Plan - Basement**

date: 18/08/25 drawn: KS
scale @ A1: As indicated checked: BS

Rev: **P04**

Dwg No: **NO1LOR-AEW-XX-B1-DR-A-05200**

aew architects
0161 214 4370
www.aewarchitects.com

Our Locations

Birmingham
2 The Wharf
Bridge Street
Birmingham
B1 2JS
T. 0121 643 4694
birmingham@curtins.com

Bristol
Quayside
40-58 Hotwell Road
Bristol
BS8 4UQ
T. 0117 302 7560
bristol@curtins.com

Cambridge
50 Cambridge Place
Cambridge
CB2 1NS
T. 01223 631 799
cambridge@curtins.com

Cardiff
3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 029 2068 0900
cardiff@curtins.com

Douglas
Varley House
29-31 Duke Street
Douglas
Isle of Man
IM1 2AZ
T. 01624 624 585
douglas@curtins.com

Dublin
11 Pembroke Lane
Dublin 2
D02 CX82
Ireland
T. +353 1 507 9447
dublin@curtins.com

Edinburgh
1a Belford Road
Edinburgh
EH4 3BL
T. 0131 225 2175
edinburgh@curtins.com

Glasgow
Queens House
29 St Vincent Place
Glasgow
G1 2DT
T. 0141 319 8777
glasgow@curtins.com

Kendal
Units 24 & 25 Riverside Place
K Village
Lound Road
Kendal
LA9 7FH
T. 01539 724 823
kendal@curtins.com

Leeds
Ground Floor
Rose Wharf
78-80 East Street
Leeds
LS9 8EE
T. 0113 274 8509
leeds@curtins.com

Liverpool
51-55 Tithebarn Street
Liverpool
L2 2SB
T. 0151 726 2000
liverpool@curtins.com

London
40 Compton Street
London
EC1V 0BD
T. 020 7324 2240
london@curtins.com

Manchester
Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG
T. 0161 236 2394
manchester@curtins.com

Nottingham
32-34 Stoney Street
Nottingham
NG1 1LL
T. 0115 941 5551
nottingham@curtins.com

Curtins

Curtins Consulting Ltd registered in England and Wales No: 2054159
Registered office: 51-55 Tithebarn Street, Liverpool, L2 2SB

Proximity

Daylight, Sunlight & Overshadowing
Lord Street, Manchester
Appendix 6.1 - Background and Methodology

Introduction

This appendix contains further information regarding the technical analysis of daylight and sunlight, and the methodology for assessing impacts of development on the daylight and sunlight amenity of the neighbouring receptors identified within the chapter.

The BRE Guidance

The assessment has been undertaken in accordance with the BRE Guidance document Site Layout Planning for Daylight and Sunlight – A Guide to Good Practise.

This document was produced following extensive consultation with architects, planning officers, consultants, professional institutions and Government officials.

The Guidance was first published in 1991 and superseded the Department of the Environment Guidance "Sunlight and Daylight Planning Criteria and Design of Buildings".

The current edition (3rd) of the BRE Guidance was published in June 2022.

Its overall purpose is to assist in evaluating the relationship between new and existing buildings to ensure that each retains the potential to achieve a "fair share" of available daylight and sunlight given their relative siting, height and mass.

The BRE Guidance is technically robust and has become the industry standard methodology for assessing daylight and sunlight amenity in the built environment.

The provisions of the BRE Guidance are not mandatory and the BRE have taken steps to confirm that it should not be read as an instrument of planning policy:

'The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural daylight is only one of many factors in site layout design'.

It is important to note that the BRE Guidance was principally developed for use in the assessment of low density suburban environments and should, therefore, be applied flexibly for developments in urban City or Town Centre sites, commercially influenced areas or areas where greater density is sought / encouraged.

The BRE targets should not, therefore, be seen as absolute and immoveable targets when applied in built environments either of existing high density or where increased density is being sought / encouraged. To facilitate the flexible application of the BRE Guidance in such circumstances, it promotes the setting of alternative target values.

The high density and the City Centre location of the Site and its surroundings justify the flexible application of the BRE Guidance in the daylight and sunlight amenity impact appraisal of this Proposed Development.

The BRE Guidance also notes that the guidelines contained therein may also be used as the basis for environmental impact assessment.

Assessment Methodology of the BRE Guidance

The primary purpose of any daylight and sunlight amenity impact assessment is to measure and evaluate the effects of any reduction in light on the identified key receptors of the surrounding built environment, that arise as a consequence of the Proposed Development.

Although the provisions of the BRE Guidance are not mandatory, nor are its aspirational targets by any means fixed, it does provide an objective means of appraising daylight and sunlight amenity impact. Using the provisions of the BRE Guidance as a starting point, professional judgement and experience has been used to further assess the significance of any impact identified, taking into account such things as the sensitivity of the receptors, and the nature / character of the impact and any other relevant factors that would justify the further flexible interpretation of the results.

The methodology adopted follows that set out in the BRE Guidance, which provides criteria and methods for measuring daylight and sunlight amenity. The BRE Guidance establishes a set of parameters intended to assist in the quantification of daylight and sunlight levels.

A distinction can be drawn between “daylight” and “sunlight”. Daylight is directly received from an unobstructed overcast sky. Sunlight is light received directly from the sun.

In accordance with the BRE Guidance, the daylight amenity impact has been appraised through establishing the Vertical Sky Component (“VSC”) for all relevant neighbouring windows, and, where appropriate, by measuring the No Sky Line (“NSL”) of the rooms.

The BRE Guidance promotes that sunlight amenity to buildings is assessed through establishing the winter and summer Annual Probable Sunlight Hours (“APSH”) for certain windows that face within 90 degrees of due south. Sunlight amenity to external land is appraised through establishing the number of sunlight hours received (“Time in Sun”).

To technically appraise the impact that the Proposed Development will have on the daylight and sunlight amenity of the surrounding built environment, it is necessary to build a computer generated 3D model representing the configuration and massing of the Site and its surroundings in the Baseline, Proposed and Cumulative conditions.

The metrics that are measured in the assessment of daylight and sunlight amenity impacts are Vertical Sky Component, the No Sky Line, and Probable Sunlight Hours.

Details of what these are and how they are measured is set out below.

Vertical Sky Component ("VSC")

The VSC is a unit of measurement that represents the amount of visible sky that is capable of being measured at the midpoint of the external face of a window.

The more unobstructed sky or sky visibility available to a window, then, in theory, the potential daylighting capability of the room that it serves will increase.

The unit is expressed as a percentage, as it is the ratio between the amount of visible sky available to the window being tested, compared to what would be available from a totally unobstructed sky. To put this unit of measurement into perspective, the maximum percentage VSC value of a window located in a vertical plane is 50%, but in practice the VSC values do not typically exceed 40%, because of projecting window reveals and window heads which reduce the angles of measurement.

The BRE Guidance for daylight sets out that:

"... daylighting of an existing building may be adversely affected ... if ... the VSC measured at the centre of an existing window is less than 27%, and less than 0.8 times its former value".

Daylight amenity will therefore not be materially or adversely affected if it can be established that a window achieves 27% VSC in the proposed condition.

If a window has a VSC of less than 27%, then a reduction in daylight is not considered material by the BRE so long as the reduction does not exceed 20% (i.e. 0.8 x) the baseline value. This loss is not considered material by the BRE as it is unlikely to be noticed by the building occupants.

No Sky Line ("NSL")

The BRE Guidance confirms that the internal daylight distribution of an existing building can be found by plotting the NSL for each main room, which would include living rooms, dining rooms and kitchens (bedrooms can also be analysed, but the BRE consider them less important)

The NSL is measured at an internal working plane within a room and divides those parts of it which can and cannot see the sky through its window provision.

Those parts of a room beyond the NSL usually look dark and gloomy, compared with the rest of the room, because they receive no direct light from the sky.

The BRE Guidance considers that it is acceptable for the area of a room within the NSL to be reduced by 20% (or 0.8x) from the baseline coverage, on the grounds that such a reduction in NSL coverage is unlikely to be noticed by the room occupants.

Annual Probable Sunlight Hours ("APSH")

Unlike daylight, which is not materially influenced by orientation and assumes that light from the sky is uniform, the availability of sunlight is dependent upon orientation.

As the United Kingdom is in the northern hemisphere, sun is only received from the south, rising in the east and setting in the west. The availability of sunlight is therefore dependent upon the compass orientation of the window or room being tested relative to the position of due south.

The BRE Guidance for sunlight sets out that:

"If a living room of an existing dwelling has a main window facing within 90° of due south and any part of the new development subtends at an angle of more than 25° to the horizontal, measured from the centre of the window in a vertical section perpendicular to the window, the sunlighting of the existing dwelling may be adversely affected".

Further, that sunlight may also be adversely affected if the main living room window:

"... receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March".

From this, it is established that sunlight amenity will not be materially affected if 25% of all anticipated APSH is received, with 5% being received during the winter months.

The winter months are September through to March.

Again, the BRE considers it acceptable to reduce the availability of sunlight by 20% (0.8 x its former value) in circumstances where the target APSH is not achieved, the justification being that such a reduction is unlikely to be noticed by the building or room occupants.

Sunlight to Open Spaces

The BRE recommends that the availability of sunlight should be checked for all external spaces where sunlight would be appreciated / expected. They provide a list of examples which includes the back garden of dwelling houses, parks and playing fields and external sitting out areas, such as public squares and around fountains / monuments.

The BRE recommends that at least half the area of the external amenity space must be capable of receiving at least 2 hours of sunlight, on 21 March (the spring equinox). Again, if this is not achieved in the baseline condition, then the BRE consider a 20% (0.8x) reduction of the area that receives 2 hours sunlight to be acceptable on the grounds that the reduction is unlikely to be noticed by the occupants or users.

Setting Alternative Daylight and Sunlight targets

The BRE acknowledge the need for the provisions of the Guidance to be applied and interpreted flexibly, including adjustment, where it is used outside of the low density suburban environments for which it was principally designed, in confirming that:

"... the Developer or Planning Authority may wish to use different target values. For example, in a historic City Centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportion of existing buildings".

This is logical. It is unrealistic to rigidly impose the BRE's low density massing targets in a higher density environments because it is obvious that they are unlikely to be met.

Generic Alternative Daylight & Sunlight Targets

A generic or non-site specific alternative VSC value of 21.6% is capable of being established / interpreted as being an Alternative Target that is within a perceived acceptable tolerance of the 27% BRE target for higher density environments through the application of BRE principles.

To explain, the BRE Guidance confirms that the 27% target VSC is an acceptable level of daylight, and one that is capable and accepted of being reduced by 20%. In this regard, if a window enjoys 27% VSC in the existing condition, it would be acceptable to reduce that VSC to 21.6% (i.e. a reduction of 5.4% VSC, which is 20% of 27%). In such circumstances, it would be concluded that a VSC of 21.6% would be adequate to satisfy the BRE's daylight test criterion.

That conclusion would be drawn on the basis that the reduction in direct sky light would not be noticed by the building or room occupants. However, that is not the same, and this is an important distinction, as concluding that 21.6% VSC is in anyway an insufficient or detrimental amount of direct sky light for a window or room to receive.

A VSC value of 21.6% is established to be an appropriate VSC Alternative Target suitable for impact assessment within in a high density City Centre environment. A window with a VSC of 21.6% means that the window would still have access to more than half of the available sky dome from which daylight is typically derived.

Using the same principle, APSH values of 4% for winter APSH (rather than the low density 5%) and 20% for annual APSH (rather than 25%) can be / are deemed to be within a perceived acceptable tolerance of the unmodified BRE targets, and appropriate for City Centre environments.

Site Specific Daylight & Sunlight Targets

There are also occasions that, rather than assess amenity impacts against generic alternative targets, it is appropriate to set Site-specific alternative daylight and sunlight targets, based on the specific massing conditions of a Site and the surrounding context.

Examples of approaches for setting Site specific alternative daylight and sunlight targets include the comparison of a Proposed massing against a massing established in planning policy; the impact of the receptor's own massing mirrored onto the proposed development Site; or comparison with a former massing of a development Site.

Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Plan View
Existing Site

SCALE @ A2:	DATE:	DRAWN:	CHECKED:
NTS	03.12.2025	SC	DMH

DRAWING NUMBER:	REV:
2375_MA-01	02

REV:	NOTES:	DRWN:	DATE:

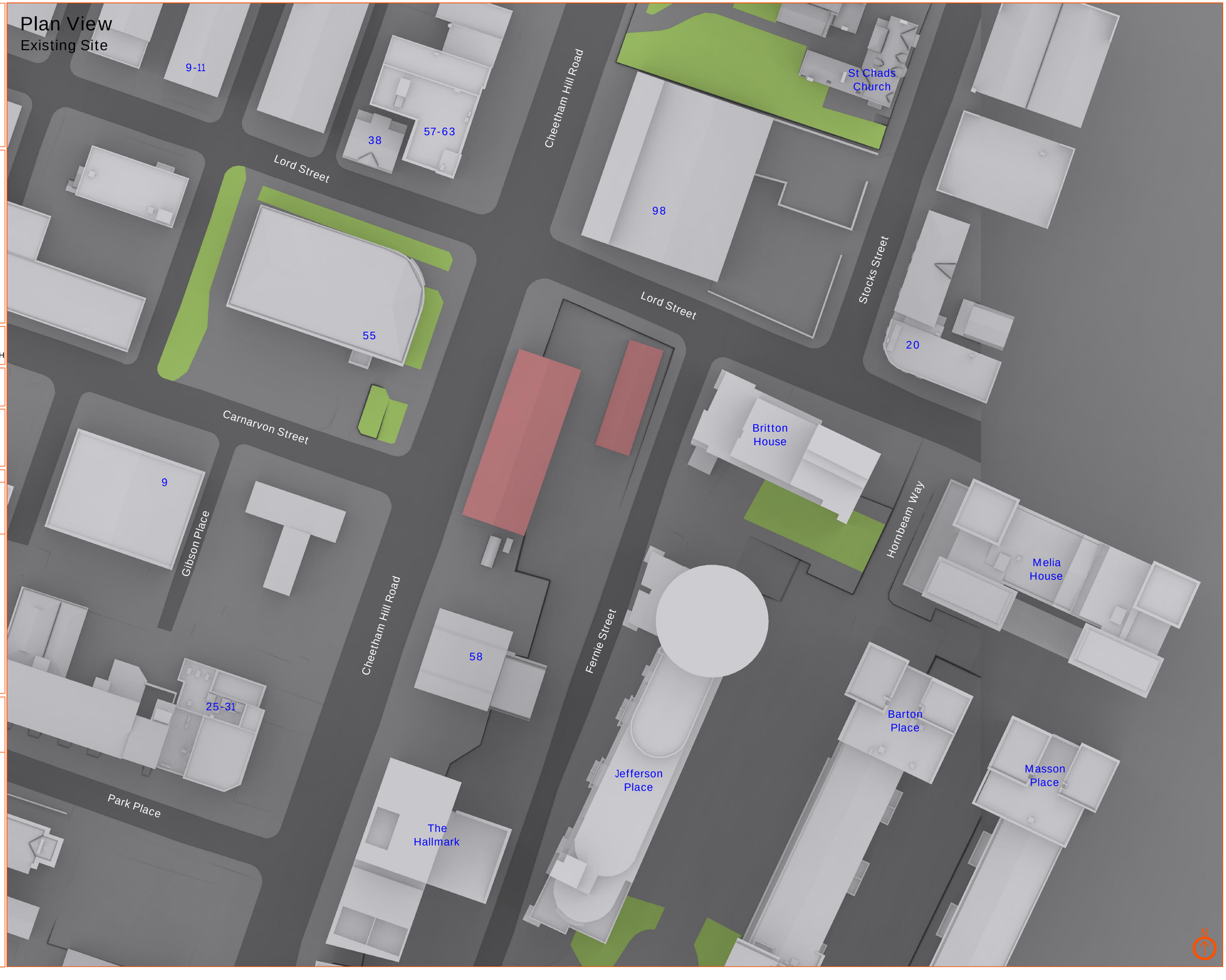
Massing Legend

- Existing
- Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Plan View
Existing Site



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	03.12.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-02	02

REV:	NOTES:	DRWN:	DATE:

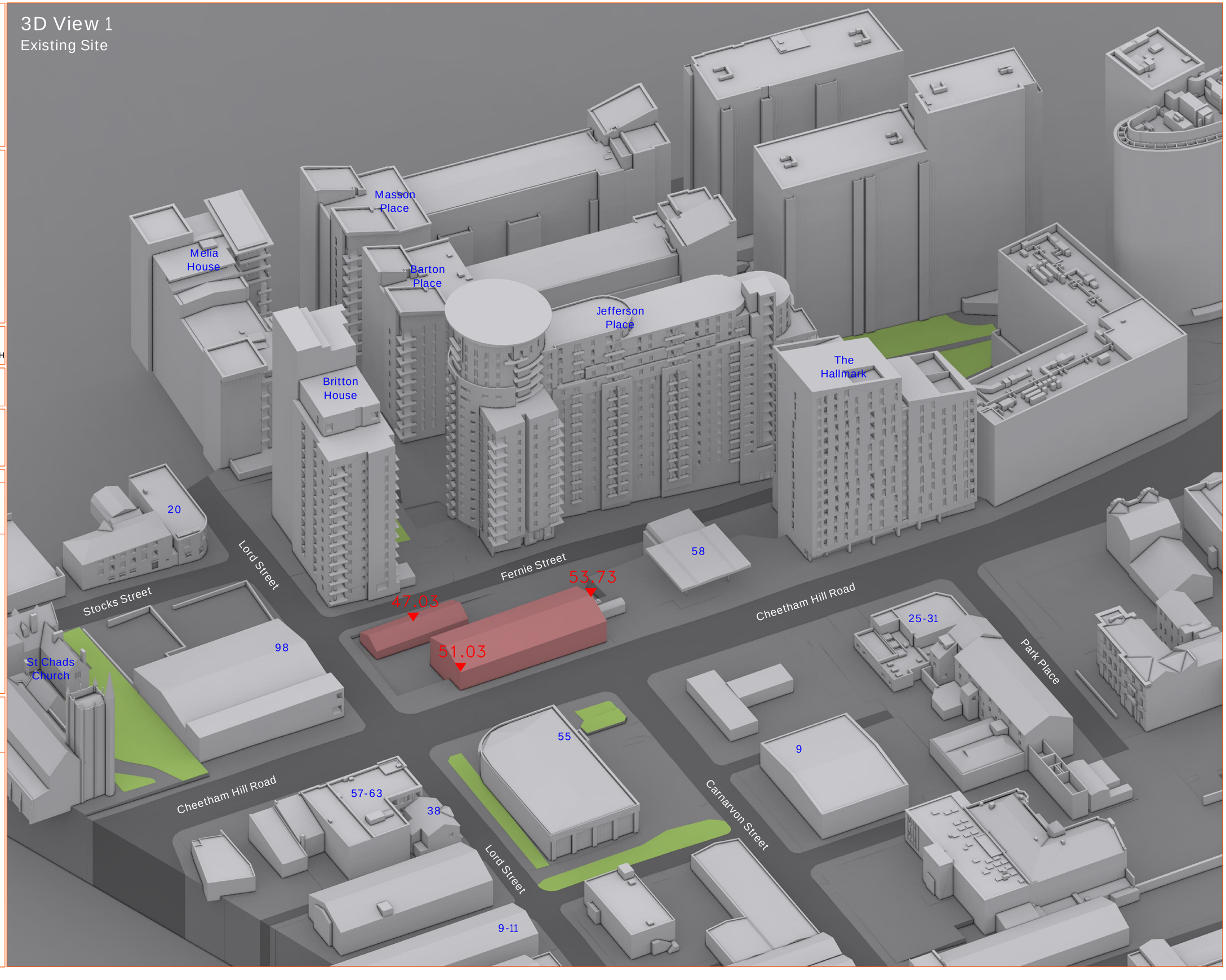
Massing Legend

Existing
Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

3D View 1
Existing Site



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Plan View
Proposed Site

SCALE @ A2:	DATE:	DRAWN:	CHECKED:
NTS	03.12.2025	SC	DMH

DRAWING NUMBER:	REV:
2375_MA-03	02

REV:	NOTES:	DRWN:	DATE:

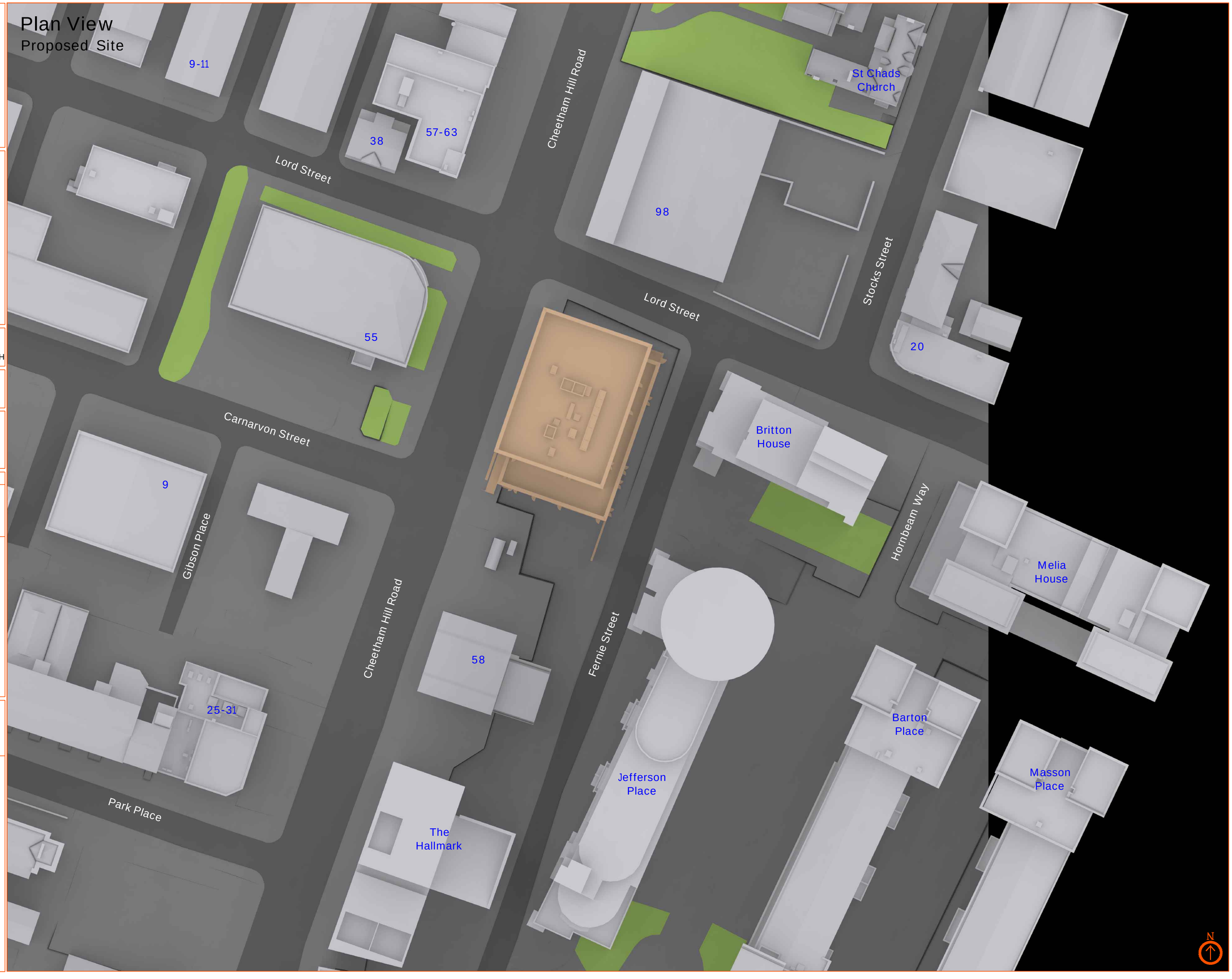
Massing Legend

Existing
Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Plan View
Proposed Site



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
3D View 1
Proposed Site

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	03.12.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-04	02

REV:	NOTES:	DRWN:	DATE:

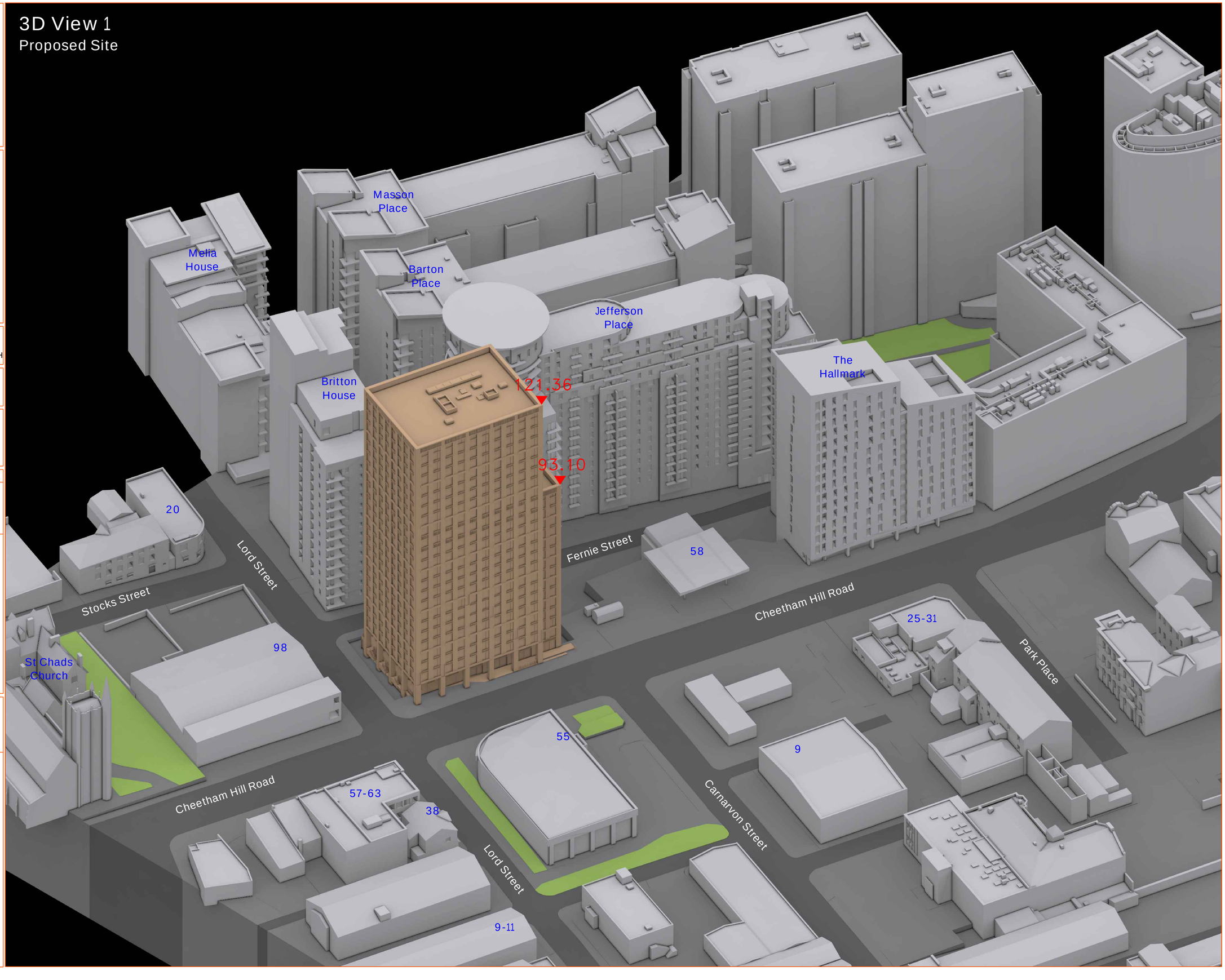
Massing Legend

- Existing
- Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

3D View 1
Proposed Site



Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
St Chads Church								
Ground	R1	Commercial	Pastoral	W1	31.15	26.41	4.74	0.85
				W2	31.12	26.41	4.71	0.85
	R2	Commercial	Pastoral	W3	30.97	26.25	4.72	0.85
				W4	30.93	26.23	4.70	0.85
				W5	30.80	26.13	4.67	0.85
	R3	Commercial	Pastoral	W6	20.30	17.91	2.39	0.88
				W7	31.05	26.36	4.69	0.85
				W8	23.77	23.77	0.00	1.00
				W9	62.58	58.28	4.30	0.93
				W10	36.78	36.78	0.00	1.00
				W11	36.73	36.73	0.00	1.00
				W12	36.68	36.68	0.00	1.00
				W13	36.54	36.54	0.00	1.00
First	R1	Commercial	Pastoral	W1	32.64	31.23	1.41	0.96
				W2	32.82	31.37	1.45	0.96
				W3	33.02	31.53	1.49	0.95
				W4	32.84	27.90	4.94	0.85
				W5	31.93	27.00	4.93	0.85
				W6	59.00	53.65	5.35	0.91
	R2	Commercial	Pastoral	W7	32.99	28.08	4.91	0.85
				W8	32.95	28.09	4.86	0.85
				W9	64.91	59.78	5.13	0.92
	R3	Commercial	Pastoral	W10	32.76	27.93	4.83	0.85
				W11	32.76	27.96	4.80	0.85
				W12	58.78	53.81	4.97	0.92
Britton House								
Ground	R1	Residential	LKD	W1	33.33	33.33	0.00	1.00
				W2	25.23	13.74	11.49	0.54
				W3	24.66	10.89	13.77	0.44
	R2	Residential	Bedroom	W4	29.89	10.80	19.09	0.36
	R3	Residential	Bedroom	W5	27.88	10.43	17.45	0.37
	R4	Residential	LKD	W6	33.03	8.17	24.86	0.25
				W7	8.30	3.86	4.44	0.47

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Bedroom	W8	8.73	7.54	1.19	0.86
	R6	Residential	Bedroom	W9	18.42	12.34	6.08	0.67
	R7	Residential	LKD	W10	18.02	12.73	5.29	0.71
	R8	Residential	Bedroom	W11	17.64	13.29	4.35	0.75
	R9	Residential	LKD	W12	5.61	5.08	0.53	0.91
	R10	Residential	LKD	W13	16.86	13.74	3.12	0.81
				W14	16.73	14.03	2.70	0.84
	R11	Residential	Bedroom	W15	3.55	3.55	0.00	1.00
	R12	Residential	LKD	W16	12.24	12.24	0.00	1.00
	R13	Residential	Bedroom	W17	14.05	12.31	1.74	0.88
First	R1	Residential	LKD	W1	35.59	35.59	0.00	1.00
				W2	27.21	14.85	12.36	0.55
				W3	26.73	11.90	14.83	0.45
	R2	Residential	Bedroom	W4	32.23	12.00	20.23	0.37
	R3	Residential	Bedroom	W5	30.25	11.29	18.96	0.37
	R4	Residential	LKD	W6	16.21	14.53	1.68	0.90
				W7	35.14	8.26	26.88	0.24
				W8	11.65	5.36	6.29	0.46
	R5	Residential	Bedroom	W9	9.14	7.97	1.17	0.87
	R6	Residential	Bedroom	W10	19.46	13.11	6.35	0.67
	R7	Residential	LKD	W11	18.87	13.74	5.13	0.73
	R8	Residential	Bedroom	W12	18.62	14.10	4.52	0.76
	R9	Residential	LKD	W13	8.63	7.85	0.78	0.91
	R10	Residential	LKD	W14	17.83	14.59	3.24	0.82
				W15	17.70	14.92	2.78	0.84
	R11	Residential	Bedroom	W16	5.24	5.24	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R12	Residential	LKD	W17	13.05	13.05	0.00	1.00
	R13	Residential	Bedroom	W18	14.75	12.95	1.80	0.88
Second	R1	Residential	LKD	W1	37.07	37.07	0.00	1.00
				W2	29.46	16.16	13.30	0.55
				W3	28.95	13.09	15.86	0.45
	R2	Residential	Bedroom	W4	34.01	12.96	21.05	0.38
	R3	Residential	Bedroom	W5	31.77	11.94	19.83	0.38
	R4	Residential	LKD	W6	17.05	15.33	1.72	0.90
				W7	36.90	8.72	28.18	0.24
				W8	12.70	5.84	6.86	0.46
	R5	Residential	Bedroom	W9	9.61	8.44	1.17	0.88
	R6	Residential	Bedroom	W10	20.47	13.88	6.59	0.68
	R7	Residential	LKD	W11	19.84	14.55	5.29	0.73
	R8	Residential	Bedroom	W12	19.60	14.92	4.68	0.76
	R9	Residential	LKD	W13	9.42	8.59	0.83	0.91
	R10	Residential	LKD	W14	18.82	15.49	3.33	0.82
				W15	18.70	15.84	2.86	0.85
	R11	Residential	Bedroom	W16	5.71	5.71	0.00	1.00
	R12	Residential	LKD	W17	13.89	13.89	0.00	1.00
	R13	Residential	Bedroom	W18	15.46	13.63	1.83	0.88
Third	R1	Residential	LKD	W1	38.18	38.18	0.00	1.00
				W2	30.91	17.00	13.91	0.55
				W3	30.39	13.88	16.51	0.46
	R2	Residential	Bedroom	W4	35.38	13.69	21.69	0.39
	R3	Residential	Bedroom	W5	33.07	12.48	20.59	0.38
	R4	Residential	LKD	W6	17.79	16.03	1.76	0.90

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W7	38.39	9.14	29.25	0.24
				W8	13.44	6.23	7.21	0.46
	R5	Residential	Bedroom	W9	10.11	8.94	1.17	0.88
	R6	Residential	Bedroom	W10	21.47	14.71	6.76	0.69
	R7	Residential	LKD	W11	20.83	15.41	5.42	0.74
	R8	Residential	Bedroom	W12	20.59	15.82	4.77	0.77
	R9	Residential	LKD	W13	10.02	9.17	0.85	0.92
	R10	Residential	LKD	W14	19.86	16.47	3.39	0.83
				W15	19.75	16.84	2.91	0.85
	R11	Residential	Bedroom	W16	6.08	6.08	0.00	1.00
	R12	Residential	LKD	W17	14.82	14.82	0.00	1.00
	R13	Residential	Bedroom	W18	16.20	14.36	1.84	0.89
Fourth	R1	Residential	LKD	W1	38.69	38.69	0.00	1.00
				W2	31.54	17.49	14.05	0.55
				W3	30.99	14.34	16.65	0.46
	R2	Residential	Bedroom	W4	35.86	14.11	21.75	0.39
	R3	Residential	Bedroom	W5	33.47	12.76	20.71	0.38
	R4	Residential	LKD	W6	18.27	16.48	1.79	0.90
				W7	38.92	9.39	29.53	0.24
				W8	13.98	6.66	7.32	0.48
	R5	Residential	Bedroom	W9	10.68	9.53	1.15	0.89
	R6	Residential	Bedroom	W10	22.36	15.63	6.73	0.70
	R7	Residential	LKD	W11	21.74	16.37	5.37	0.75
	R8	Residential	Bedroom	W12	21.51	16.79	4.72	0.78
	R9	Residential	LKD	W13	10.64	9.78	0.86	0.92
	R10	Residential	LKD	W14	20.86	17.53	3.33	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W15	20.77	17.93	2.84	0.86
	R11	Residential	Bedroom	W16	6.47	6.47	0.00	1.00
	R12	Residential	LKD	W17	15.81	15.81	0.00	1.00
	R13	Residential	Bedroom	W18	16.93	15.14	1.79	0.89
Fifth	R1	Residential	LKD	W1	39.01	39.01	0.00	1.00
				W2	31.71	17.63	14.08	0.56
				W3	31.16	14.49	16.67	0.47
	R2	Residential	Bedroom	W4	35.99	14.31	21.68	0.40
	R3	Residential	Bedroom	W5	33.57	12.88	20.69	0.38
	R4	Residential	LKD	W6	18.54	16.74	1.80	0.90
				W7	39.07	9.57	29.50	0.24
				W8	14.51	7.16	7.35	0.49
	R5	Residential	Bedroom	W9	11.31	10.18	1.13	0.90
	R6	Residential	Bedroom	W10	23.28	16.65	6.63	0.72
	R7	Residential	LKD	W11	22.68	17.39	5.29	0.77
	R8	Residential	Bedroom	W12	22.45	17.83	4.62	0.79
	R9	Residential	LKD	W13	11.27	10.42	0.85	0.92
	R10	Residential	LKD	W14	21.89	18.64	3.25	0.85
				W15	21.83	19.06	2.77	0.87
	R11	Residential	Bedroom	W16	6.89	6.89	0.00	1.00
	R12	Residential	LKD	W17	16.87	16.87	0.00	1.00
	R13	Residential	Bedroom	W18	17.70	15.97	1.73	0.90
Sixth	R1	Residential	LKD	W1	39.26	39.26	0.00	1.00
				W2	31.81	17.73	14.08	0.56
				W3	31.25	14.61	16.64	0.47
	R2	Residential	Bedroom	W4	36.00	14.42	21.58	0.40

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R3	Residential	Bedroom	W5	33.63	12.99	20.64	0.39
	R4	Residential	LKD	W6	18.77	16.97	1.80	0.90
				W7	39.15	9.77	29.38	0.25
				W8	15.08	7.77	7.31	0.52
	R5	Residential	Bedroom	W9	12.00	10.91	1.09	0.91
	R6	Residential	Bedroom	W10	24.27	17.75	6.52	0.73
	R7	Residential	LKD	W11	23.67	18.51	5.16	0.78
	R8	Residential	Bedroom	W12	23.46	18.95	4.51	0.81
	R9	Residential	LKD	W13	11.92	11.11	0.81	0.93
	R10	Residential	LKD	W14	22.96	19.82	3.14	0.86
				W15	22.93	20.25	2.68	0.88
	R11	Residential	Bedroom	W16	7.31	7.31	0.00	1.00
	R12	Residential	LKD	W17	17.97	17.97	0.00	1.00
	R13	Residential	Bedroom	W18	18.49	16.83	1.66	0.91
Seventh	R1	Residential	LKD	W1	39.42	39.42	0.00	1.00
				W2	31.90	17.81	14.09	0.56
				W3	31.34	14.73	16.61	0.47
	R2	Residential	Bedroom	W4	36.14	14.68	21.46	0.41
	R3	Residential	Bedroom	W5	33.69	13.10	20.59	0.39
	R4	Residential	LKD	W6	18.96	17.16	1.80	0.91
				W7	39.23	9.98	29.25	0.25
				W8	15.77	8.52	7.25	0.54
	R5	Residential	Bedroom	W9	12.79	11.75	1.04	0.92
	R6	Residential	Bedroom	W10	25.33	18.96	6.37	0.75
	R7	Residential	LKD	W11	24.74	19.71	5.03	0.80
	R8	Residential	Bedroom	W12	24.53	20.15	4.38	0.82

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R9	Residential	LKD	W13	12.68	11.92	0.76	0.94
	R10	Residential	LKD	W14	24.07	21.03	3.04	0.87
				W15	24.05	21.47	2.58	0.89
	R11	Residential	Bedroom	W16	7.81	7.81	0.00	1.00
	R12	Residential	LKD	W17	19.07	19.07	0.00	1.00
	R13	Residential	Bedroom	W18	19.29	17.70	1.59	0.92
Eighth	R1	Residential	LKD	W1	39.47	39.47	0.00	1.00
				W2	31.95	17.86	14.09	0.56
				W3	31.38	14.82	16.56	0.47
	R2	Residential	Bedroom	W4	36.19	14.87	21.32	0.41
	R3	Residential	Bedroom	W5	33.72	13.20	20.52	0.39
	R4	Residential	LKD	W6	19.06	17.27	1.79	0.91
				W7	39.28	10.20	29.08	0.26
				W8	16.60	9.47	7.13	0.57
	R5	Residential	Bedroom	W9	13.69	12.71	0.98	0.93
	R6	Residential	Bedroom	W10	26.51	20.31	6.20	0.77
	R7	Residential	LKD	W11	25.92	21.05	4.87	0.81
	R8	Residential	Bedroom	W12	25.70	21.47	4.23	0.84
	R9	Residential	LKD	W13	13.66	12.96	0.70	0.95
	R10	Residential	LKD	W14	25.26	22.35	2.91	0.88
				W15	25.26	22.79	2.47	0.90
	R11	Residential	Bedroom	W16	8.53	8.53	0.00	1.00
	R12	Residential	LKD	W17	20.27	20.27	0.00	1.00
	R13	Residential	Bedroom	W18	20.17	18.66	1.51	0.93
Ninth	R1	Residential	LKD	W1	39.52	39.52	0.00	1.00
				W2	31.99	17.90	14.09	0.56
				W3	31.42	14.92	16.50	0.47

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Bedroom	W4	36.23	15.07	21.16	0.42
	R3	Residential	Bedroom	W5	33.75	13.31	20.44	0.39
	R4	Residential	LKD	W6	19.21	17.43	1.78	0.91
				W7	39.33	10.46	28.87	0.27
				W8	17.48	10.54	6.94	0.60
	R5	Residential	Bedroom	W9	14.68	13.77	0.91	0.94
	R6	Residential	Bedroom	W10	27.75	21.76	5.99	0.78
	R7	Residential	LKD	W11	27.18	22.50	4.68	0.83
	R8	Residential	Bedroom	W12	26.97	22.91	4.06	0.85
	R9	Residential	LKD	W13	14.75	14.12	0.63	0.96
	R10	Residential	LKD	W14	26.54	23.77	2.77	0.90
				W15	26.55	24.20	2.35	0.91
	R11	Residential	Bedroom	W16	9.35	9.35	0.00	1.00
	R12	Residential	LKD	W17	21.51	21.51	0.00	1.00
	R13	Residential	Bedroom	W18	21.09	19.67	1.42	0.93
Tenth	R1	Residential	LKD	W1	39.57	39.57	0.00	1.00
				W2	32.04	17.95	14.09	0.56
				W3	31.47	15.03	16.44	0.48
	R2	Residential	Bedroom	W4	36.27	15.31	20.96	0.42
	R3	Residential	Bedroom	W5	33.80	13.46	20.34	0.40
	R4	Residential	LKD	W6	19.49	17.71	1.78	0.91
				W7	39.38	10.76	28.62	0.27
				W8	18.44	11.73	6.71	0.64
	R5	Residential	Bedroom	W9	15.76	14.93	0.83	0.95
	R6	Residential	Bedroom	W10	29.06	23.31	5.75	0.80
	R7	Residential	LKD	W11	28.48	24.01	4.47	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R8	Residential	Bedroom	W12	28.25	24.39	3.86	0.86
	R9	Residential	LKD	W13	15.88	15.32	0.56	0.96
	R10	Residential	LKD	W14	27.81	25.19	2.62	0.91
				W15	27.84	25.62	2.22	0.92
	R11	Residential	Bedroom	W16	10.23	10.23	0.00	1.00
	R12	Residential	LKD	W17	22.79	22.79	0.00	1.00
	R13	Residential	Bedroom	W18	22.06	20.74	1.32	0.94
Eleventh	R1	Residential	LKD	W1	39.60	39.60	0.00	1.00
				W2	32.07	18.00	14.07	0.56
				W3	31.50	15.13	16.37	0.48
	R2	Residential	Bedroom	W4	36.34	15.61	20.73	0.43
	R3	Residential	Bedroom	W5	33.88	13.66	20.22	0.40
	R4	Residential	LKD	W6	20.09	18.33	1.76	0.91
				W7	39.43	11.12	28.31	0.28
				W8	19.39	12.96	6.43	0.67
	R5	Residential	Bedroom	W9	16.85	16.13	0.72	0.96
	R6	Residential	Bedroom	W10	30.32	24.86	5.46	0.82
	R7	Residential	LKD	W11	29.62	25.39	4.23	0.86
	R8	Residential	Bedroom	W12	29.31	25.67	3.64	0.88
	R9	Residential	LKD	W13	16.82	16.34	0.48	0.97
	R10	Residential	LKD	W14	28.90	26.45	2.45	0.92
				W15	28.98	26.91	2.07	0.93
	R11	Residential	Bedroom	W16	11.14	11.14	0.00	1.00
	R12	Residential	LKD	W17	23.98	23.98	0.00	1.00
	R13	Residential	Bedroom	W18	23.04	21.81	1.23	0.95

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Twelfth	R1	Residential	LKD	W1	39.61	39.61	0.00	1.00
				W2	32.09	18.08	14.01	0.56
				W3	31.53	15.24	16.29	0.48
	R2	Residential	Bedroom	W4	36.73	16.27	20.46	0.44
	R3	Residential	Bedroom	W5	34.03	13.94	20.09	0.41
	R4	Residential	LKD	W6	21.11	19.36	1.75	0.92
				W7	39.47	11.53	27.94	0.29
				W8	20.30	14.19	6.11	0.70
	R5	Residential	Bedroom	W9	17.93	17.32	0.61	0.97
	R6	Residential	Bedroom	W10	31.46	26.34	5.12	0.84
	R7	Residential	LKD	W11	30.66	26.71	3.95	0.87
	R8	Residential	Bedroom	W12	30.32	26.93	3.39	0.89
	R9	Residential	LKD	W13	17.80	17.40	0.40	0.98
	R10	Residential	LKD	W14	29.99	27.71	2.28	0.92
				W15	30.09	28.17	1.92	0.94
	R11	Residential	Bedroom	W16	12.15	12.15	0.00	1.00
	R12	Residential	LKD	W17	25.04	25.04	0.00	1.00
	R13	Residential	Bedroom	W18	24.02	22.89	1.13	0.95
Thirteenth	R1	Residential	LKD	W1	39.62	39.62	0.00	1.00
				W2	39.53	23.61	15.92	0.60
				W3	39.49	21.43	18.06	0.54
	R2	Residential	Bedroom	W4	39.35	19.20	20.15	0.49
	R3	Residential	Bedroom	W5	34.21	14.30	19.91	0.42
	R4	Residential	LKD	W6	22.22	20.48	1.74	0.92
				W7	39.50	12.00	27.50	0.30
				W8	27.36	19.74	7.62	0.72
	R5	Residential	Bedroom	W9	18.08	17.60	0.48	0.97

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6	Residential	Bedroom	W10	32.53	27.76	4.77	0.85
	R7	Residential	LKD	W11	31.79	28.13	3.66	0.88
	R8	Residential	Bedroom	W12	31.43	28.30	3.13	0.90
	R9	Residential	LKD	W13	16.00	15.70	0.30	0.98
	R10	Residential	LKD	W14	31.05	28.96	2.09	0.93
				W15	31.12	29.36	1.76	0.94
	R11	Residential	Bedroom	W16	10.64	10.64	0.00	1.00
	R12	Residential	LKD	W17	24.56	24.56	0.00	1.00
	R13	Residential	Bedroom	W18	23.26	22.33	0.93	0.96
Fourteenth	R1	Residential	Unknown	W1	39.54	39.50	0.04	1.00
				W2	39.57	25.65	13.92	0.65
	R2	Residential	LKD	W3	39.55	21.22	18.33	0.54
				W4	35.01	31.54	3.47	0.90
	R3	Residential	Bedroom	W5	34.56	31.90	2.66	0.92
	R4	Residential	LKD	W6	34.27	32.14	2.13	0.94
	R5	Residential	Bedroom	W7	34.08	32.26	1.82	0.95
	R6	Residential	LKD	W8	33.29	31.89	1.40	0.96
	R7	Residential	LKD	W9	32.20	31.02	1.18	0.96
	R8	Residential	Bedroom	W10	25.63	24.61	1.02	0.96
Fifteenth	R1	Residential	Bedroom	W1	26.98	26.09	0.89	0.97
Sixteenth	R1	Residential	Bedroom	W1	28.44	27.66	0.78	0.97
Jefferson Pl								
Lower Ground	R1	Residential	Unknown	W1	13.20	11.65	1.55	0.88
				W2	12.45	10.98	1.47	0.88
				W3	11.20	9.77	1.43	0.87

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Ground	R1	Residential	Unknown	W1	22.60	15.93	6.67	0.70
				W2	20.80	15.01	5.79	0.72
				W3	20.38	14.82	5.56	0.73
				W4	18.05	13.33	4.72	0.74
				W5	21.48	15.96	5.52	0.74
				W6	12.06	12.06	0.00	1.00
				W7	10.65	10.65	0.00	1.00
First	R1	Residential	Unknown	W1	3.78	0.65	3.13	0.17
				W2	3.57	1.01	2.56	0.28
				W3	15.34	5.23	10.11	0.34
	R2	Residential	Unknown	W4	18.32	5.30	13.02	0.29
				W5	12.64	5.80	6.84	0.46
				W6	13.76	6.66	7.10	0.48
	R3	Residential	Unknown	W7	15.45	7.93	7.52	0.51
				W8	15.42	8.19	7.23	0.53
	R4	Residential	Unknown	W9	13.91	11.74	2.17	0.84
	R5	Residential	Unknown	W10	8.82	7.14	1.68	0.81
				W11	12.38	12.38	0.00	1.00
				W12	11.34	11.34	0.00	1.00
	R6	Residential	Unknown	W13	16.36	16.48	-0.12	1.01
	R7	Residential	Unknown	W14	21.62	21.28	0.34	0.98
	R8	Residential	Unknown	W15	18.99	16.78	2.21	0.88
				W16	20.57	17.90	2.67	0.87
	R9	Residential	Unknown	W17	25.75	21.70	4.05	0.84
	R10	Residential	Unknown	W18	22.45	17.70	4.75	0.79
				W19	19.36	15.22	4.14	0.79
	R11	Residential	Unknown	W20	15.62	15.64	-0.02	1.00
				W21	20.78	18.22	2.56	0.88
	R12	Residential	Unknown	W22	25.36	22.22	3.14	0.88
	R13	Residential	Unknown	W23	25.73	21.87	3.86	0.85
	R14	Residential	Unknown	W24	20.45	17.10	3.35	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W25	19.21	16.31	2.90	0.85
	R15	Residential	Unknown	W26	12.50	12.50	0.00	1.00
				W27	17.16	16.27	0.89	0.95
	R16	Residential	Unknown	W28	22.33	20.28	2.05	0.91
	R17	Residential	Unknown	W29	22.54	19.97	2.57	0.89
	R18	Residential	Unknown	W30	21.38	18.99	2.39	0.89
	R19	Residential	Unknown	W31	14.17	12.01	2.16	0.85
	R20	Residential	Unknown	W32	10.55	6.40	4.15	0.61
				W33	17.97	16.04	1.93	0.89
	R21	Residential	Unknown	W34	11.66	10.12	1.54	0.87
	R22	Residential	Unknown	W35	10.05	8.58	1.47	0.85
	R23	Residential	Unknown	W36	4.73	3.42	1.31	0.72
				W37	3.67	2.40	1.27	0.65
				W38	3.60	2.48	1.12	0.69
				W39	13.62	13.62	0.00	1.00
				W40	20.54	20.54	0.00	1.00
Second	R1	Residential	Unknown	W1	3.96	0.68	3.28	0.17
				W2	3.72	1.11	2.61	0.30
				W3	16.20	5.72	10.48	0.35
	R2	Residential	Unknown	W4	19.32	5.77	13.55	0.30
				W5	13.58	6.46	7.12	0.48
				W6	14.50	7.18	7.32	0.50
	R3	Residential	Unknown	W7	16.52	8.73	7.79	0.53
				W8	12.92	6.02	6.90	0.47
				W9	12.92	5.51	7.41	0.43
				W10	13.56	5.44	8.12	0.40
				W11	27.54	16.47	11.07	0.60
	R4	Residential	Unknown	W12	34.20	22.78	11.42	0.67
	R5	Residential	Unknown	W13	8.46	8.77	-0.31	1.04
	R6	Residential	Unknown	W14	34.12	24.25	9.87	0.71

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W15	27.99	20.06	7.93	0.72
				W16	26.79	20.15	6.64	0.75
				W17	26.89	20.63	6.26	0.77
				W18	10.70	10.70	0.00	1.00
	R7	Residential	Unknown	W19	13.48	13.48	0.00	1.00
	R8	Residential	Unknown	W20	12.15	12.15	0.00	1.00
	R9	Residential	Unknown	W21	17.29	17.30	-0.01	1.00
	R10	Residential	Unknown	W22	22.82	22.36	0.46	0.98
	R11	Residential	Unknown	W23	20.38	17.94	2.44	0.88
				W24	22.07	19.15	2.92	0.87
	R12	Residential	Unknown	W25	27.22	22.94	4.28	0.84
	R13	Residential	Unknown	W26	24.22	19.20	5.02	0.79
				W27	20.89	16.46	4.43	0.79
	R14	Residential	Unknown	W28	17.13	17.14	-0.01	1.00
				W29	22.73	19.96	2.77	0.88
	R15	Residential	Unknown	W30	26.98	23.70	3.28	0.88
	R16	Residential	Unknown	W31	27.28	23.29	3.99	0.85
	R17	Residential	Unknown	W32	22.03	18.58	3.45	0.84
				W33	20.71	17.67	3.04	0.85
	R18	Residential	Unknown	W34	13.41	13.41	0.00	1.00
				W35	18.53	17.59	0.94	0.95
	R19	Residential	Unknown	W36	23.59	21.50	2.09	0.91
	R20	Residential	Unknown	W37	23.70	21.13	2.57	0.89
	R21	Residential	Unknown	W38	22.34	19.96	2.38	0.89
	R22	Residential	Unknown	W39	14.87	12.70	2.17	0.85
	R23	Residential	Unknown	W40	11.08	6.92	4.16	0.62
				W41	18.77	16.83	1.94	0.90

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R24	Residential	Unknown	W42	15.29	13.69	1.60	0.90
	R25	Residential	Unknown	W43	12.36	10.79	1.57	0.87
	R26	Residential	Unknown	W44	10.72	9.24	1.48	0.86
	R27	Residential	Unknown	W45	5.31	3.99	1.32	0.75
				W46	4.27	2.98	1.29	0.70
				W47	4.21	3.06	1.15	0.73
				W48	14.92	14.92	0.00	1.00
				W49	21.96	21.96	0.00	1.00
Third	R1	Residential	Unknown	W1	4.13	0.73	3.40	0.18
				W2	3.87	1.23	2.64	0.32
				W3	17.06	6.27	10.79	0.37
	R2	Residential	Unknown	W4	20.28	6.28	14.00	0.31
				W5	14.38	7.05	7.33	0.49
				W6	15.34	7.80	7.54	0.51
	R3	Residential	Unknown	W7	17.45	9.38	8.07	0.54
				W8	13.78	6.49	7.29	0.47
				W9	13.72	5.89	7.83	0.43
				W10	14.37	5.82	8.55	0.41
				W11	29.16	16.92	12.24	0.58
	R4	Residential	Unknown	W12	35.63	23.36	12.27	0.66
	R5	Residential	Unknown	W13	8.81	8.88	-0.07	1.01
	R6	Residential	Unknown	W14	35.52	24.94	10.58	0.70
				W15	29.37	20.80	8.57	0.71
				W16	28.22	20.95	7.27	0.74
				W17	28.36	21.49	6.87	0.76
				W18	11.57	11.57	0.00	1.00
	R7	Residential	Unknown	W19	14.23	14.23	0.00	1.00
	R8	Residential	Unknown	W20	12.74	12.74	0.00	1.00
	R9	Residential	Unknown	W21	17.85	17.86	-0.01	1.00
	R10	Residential	Unknown	W22	23.65	23.04	0.61	0.97
	R11	Residential	Unknown	W23	21.37	18.68	2.69	0.87

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W24	23.15	19.96	3.19	0.86
	R12	Residential	Unknown	W25	28.23	23.73	4.50	0.84
	R13	Residential	Unknown	W26	25.46	20.19	5.27	0.79
				W27	21.98	17.30	4.68	0.79
	R14	Residential	Unknown	W28	18.08	18.08	0.00	1.00
				W29	24.11	21.16	2.95	0.88
	R15	Residential	Unknown	W30	28.24	24.85	3.39	0.88
	R16	Residential	Unknown	W31	28.49	24.41	4.08	0.86
	R17	Residential	Unknown	W32	23.21	19.68	3.53	0.85
				W33	21.84	18.67	3.17	0.85
	R18	Residential	Unknown	W34	14.18	14.18	0.00	1.00
				W35	19.58	18.59	0.99	0.95
	R19	Residential	Unknown	W36	24.64	22.49	2.15	0.91
	R20	Residential	Unknown	W37	24.67	22.06	2.61	0.89
	R21	Residential	Unknown	W38	23.27	20.85	2.42	0.90
	R22	Residential	Unknown	W39	15.41	13.23	2.18	0.86
	R23	Residential	Unknown	W40	11.51	7.31	4.20	0.64
				W41	19.48	17.52	1.96	0.90
	R24	Residential	Unknown	W42	15.93	14.32	1.61	0.90
	R25	Residential	Unknown	W43	13.01	11.43	1.58	0.88
	R26	Residential	Unknown	W44	11.35	9.87	1.48	0.87
	R27	Residential	Unknown	W45	5.96	4.64	1.32	0.78
				W46	4.95	3.67	1.28	0.74
				W47	4.94	3.75	1.19	0.76
				W48	16.29	16.29	0.00	1.00
				W49	23.46	23.46	0.00	1.00
Fourth	R1	Residential	Unknown	W1	4.38	0.86	3.52	0.20
				W2	4.09	1.42	2.67	0.35

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W3	17.95	6.90	11.05	0.38
	R2	Residential	Unknown	W4	21.23	6.87	14.36	0.32
				W5	15.24	7.74	7.50	0.51
				W6	16.24	8.51	7.73	0.52
	R3	Residential	Unknown	W7	18.39	10.10	8.29	0.55
				W8	14.75	7.14	7.61	0.48
				W9	14.58	6.42	8.16	0.44
				W10	15.24	6.35	8.89	0.42
				W11	30.52	17.26	13.26	0.57
	R4	Residential	Unknown	W12	36.78	23.82	12.96	0.65
	R5	Residential	Unknown	W13	9.12	8.95	0.17	0.98
	R6	Residential	Unknown	W14	36.56	25.43	11.13	0.70
				W15	30.30	21.22	9.08	0.70
				W16	29.18	21.42	7.76	0.73
				W17	29.34	21.98	7.36	0.75
				W18	12.28	12.28	0.00	1.00
	R7	Residential	Unknown	W19	14.93	14.93	0.00	1.00
	R8	Residential	Unknown	W20	13.30	13.30	0.00	1.00
	R9	Residential	Unknown	W21	18.23	18.23	0.00	1.00
	R10	Residential	Unknown	W22	24.24	23.50	0.74	0.97
	R11	Residential	Unknown	W23	22.01	19.13	2.88	0.87
				W24	23.83	20.45	3.38	0.86
	R12	Residential	Unknown	W25	28.78	24.19	4.59	0.84
	R13	Residential	Unknown	W26	26.09	20.72	5.37	0.79
				W27	22.42	17.59	4.83	0.78
	R14	Residential	Unknown	W28	18.44	18.44	0.00	1.00
				W29	24.80	21.76	3.04	0.88
	R15	Residential	Unknown	W30	28.87	25.47	3.40	0.88
	R16	Residential	Unknown	W31	29.07	24.97	4.10	0.86

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R17	Residential	Unknown	W32	23.70	20.15	3.55	0.85
				W33	22.29	19.06	3.23	0.86
	R18	Residential	Unknown	W34	14.46	14.46	0.00	1.00
				W35	20.10	19.09	1.01	0.95
	R19	Residential	Unknown	W36	25.25	23.09	2.16	0.91
	R20	Residential	Unknown	W37	25.28	22.68	2.60	0.90
	R21	Residential	Unknown	W38	23.87	21.45	2.42	0.90
	R22	Residential	Unknown	W39	15.65	13.47	2.18	0.86
	R23	Residential	Unknown	W40	11.77	7.60	4.17	0.65
				W41	19.98	18.04	1.94	0.90
	R24	Residential	Unknown	W42	16.45	14.85	1.60	0.90
	R25	Residential	Unknown	W43	13.59	12.03	1.56	0.89
	R26	Residential	Unknown	W44	11.99	10.53	1.46	0.88
	R27	Residential	Unknown	W45	6.64	5.33	1.31	0.80
				W46	5.69	4.42	1.27	0.78
				W47	5.72	4.53	1.19	0.79
				W48	17.73	17.73	0.00	1.00
				W49	25.02	25.02	0.00	1.00
Fifth	R1	Residential	Unknown	W1	4.73	1.14	3.59	0.24
				W2	4.44	1.75	2.69	0.39
				W3	18.64	7.59	11.05	0.41
	R2	Residential	Unknown	W4	21.87	7.49	14.38	0.34
				W5	15.99	8.44	7.55	0.53
				W6	17.02	9.24	7.78	0.54
	R3	Residential	Unknown	W7	19.23	10.88	8.35	0.57
				W8	15.59	7.85	7.74	0.50
				W9	15.31	7.02	8.29	0.46
				W10	15.98	6.95	9.03	0.43
				W11	31.09	17.54	13.55	0.56
	R4	Residential	Unknown	W12	37.25	24.22	13.03	0.65

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W13	9.17	8.96	0.21	0.98
	R6	Residential	Unknown	W14	37.02	25.85	11.17	0.70
				W15	30.76	21.57	9.19	0.70
				W16	29.68	21.79	7.89	0.73
				W17	13.03	13.03	0.00	1.00
	R7	Residential	Unknown	W18	15.69	15.69	0.00	1.00
	R8	Residential	Unknown	W19	13.91	13.91	0.00	1.00
	R9	Residential	Unknown	W20	18.55	18.55	0.00	1.00
	R10	Residential	Unknown	W21	24.59	23.85	0.74	0.97
	R11	Residential	Unknown	W22	22.39	19.50	2.89	0.87
				W23	24.23	20.84	3.39	0.86
	R12	Residential	Unknown	W24	29.12	24.53	4.59	0.84
	R13	Residential	Unknown	W25	26.50	21.16	5.34	0.80
				W26	22.60	17.74	4.86	0.78
	R14	Residential	Unknown	W27	18.79	18.79	0.00	1.00
				W28	25.30	22.25	3.05	0.88
	R15	Residential	Unknown	W29	29.37	26.00	3.37	0.89
	R16	Residential	Unknown	W30	29.48	25.44	4.04	0.86
	R17	Residential	Unknown	W31	24.05	20.55	3.50	0.85
				W32	22.55	19.31	3.24	0.86
	R18	Residential	Unknown	W33	14.68	14.68	0.00	1.00
				W34	20.56	19.56	1.00	0.95
	R19	Residential	Unknown	W35	25.77	23.64	2.13	0.92
	R20	Residential	Unknown	W36	25.81	23.25	2.56	0.90
	R21	Residential	Unknown	W37	24.37	22.00	2.37	0.90
	R22	Residential	Unknown	W38	15.75	13.62	2.13	0.86
	R23	Residential	Unknown	W39	11.97	7.88	4.09	0.66

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W40	20.45	18.55	1.90	0.91
	R24	Residential	Unknown	W41	16.96	15.40	1.56	0.91
	R25	Residential	Unknown	W42	14.21	12.68	1.53	0.89
	R26	Residential	Unknown	W43	12.70	11.27	1.43	0.89
	R27	Residential	Unknown	W44	7.38	6.11	1.27	0.83
				W45	6.49	5.25	1.24	0.81
				W46	6.58	5.39	1.19	0.82
				W47	19.24	19.24	0.00	1.00
				W48	26.64	26.64	0.00	1.00
Sixth	R1	Residential	Unknown	W1	5.20	1.59	3.61	0.31
				W2	4.93	2.27	2.66	0.46
				W3	19.34	8.41	10.93	0.43
	R2	Residential	Unknown	W4	22.44	8.22	14.22	0.37
				W5	16.75	9.25	7.50	0.55
				W6	17.80	10.08	7.72	0.57
	R3	Residential	Unknown	W7	20.04	11.75	8.29	0.59
				W8	16.40	8.65	7.75	0.53
				W9	16.03	7.73	8.30	0.48
				W10	16.69	7.65	9.04	0.46
				W11	31.31	17.77	13.54	0.57
	R4	Residential	Unknown	W12	37.47	24.58	12.89	0.66
	R5	Residential	Unknown	W13	9.17	8.97	0.20	0.98
	R6	Residential	Unknown	W14	37.26	26.22	11.04	0.70
				W15	31.04	21.89	9.15	0.71
				W16	29.97	22.12	7.85	0.74
				W17	30.14	22.69	7.45	0.75
				W18	13.80	13.80	0.00	1.00
	R7	Residential	Unknown	W19	16.47	16.47	0.00	1.00
	R8	Residential	Unknown	W20	14.53	14.53	0.00	1.00
	R9	Residential	Unknown	W21	18.85	18.85	0.00	1.00
	R10	Residential	Unknown	W22	24.89	24.15	0.74	0.97

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R11	Residential	Unknown	W23	22.66	19.84	2.82	0.88
				W24	24.52	21.17	3.35	0.86
	R12	Residential	Unknown	W25	29.36	24.83	4.53	0.85
	R13	Residential	Unknown	W26	26.80	21.55	5.25	0.80
				W27	22.64	17.83	4.81	0.79
	R14	Residential	Unknown	W28	19.15	19.15	0.00	1.00
				W29	25.69	22.67	3.02	0.88
	R15	Residential	Unknown	W30	29.76	26.47	3.29	0.89
	R16	Residential	Unknown	W31	29.81	25.86	3.95	0.87
	R17	Residential	Unknown	W32	24.45	20.98	3.47	0.86
				W33	22.69	19.48	3.21	0.86
	R18	Residential	Unknown	W34	14.98	14.98	0.00	1.00
				W35	21.03	20.05	0.98	0.95
	R19	Residential	Unknown	W36	26.27	24.20	2.07	0.92
	R20	Residential	Unknown	W37	26.33	23.84	2.49	0.91
	R21	Residential	Unknown	W38	24.88	22.58	2.30	0.91
	R22	Residential	Unknown	W39	15.79	13.72	2.07	0.87
	R23	Residential	Unknown	W40	12.10	8.12	3.98	0.67
				W41	20.95	19.10	1.85	0.91
	R24	Residential	Unknown	W42	17.52	16.01	1.51	0.91
	R25	Residential	Unknown	W43	14.90	13.42	1.48	0.90
	R26	Residential	Unknown	W44	13.51	12.13	1.38	0.90
	R27	Residential	Unknown	W45	8.19	6.96	1.23	0.85
				W46	7.34	6.14	1.20	0.84
				W47	7.51	6.35	1.16	0.85
				W48	20.80	20.80	0.00	1.00
				W49	28.29	28.29	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Seventh	R1	Residential	Unknown	W1	5.79	2.18	3.61	0.38
				W2	5.54	2.94	2.60	0.53
				W3	20.15	9.39	10.76	0.47
	R2	Residential	Unknown	W4	23.13	9.10	14.03	0.39
				W5	17.62	10.22	7.40	0.58
				W6	18.70	11.07	7.63	0.59
	R3	Residential	Unknown	W7	20.96	12.76	8.20	0.61
				W8	17.28	9.56	7.72	0.55
				W9	16.83	8.55	8.28	0.51
				W10	17.48	8.47	9.01	0.48
				W11	31.44	17.96	13.48	0.57
	R4	Residential	Unknown	W12	37.63	24.91	12.72	0.66
	R5	Residential	Unknown	W13	9.18	8.99	0.19	0.98
	R6	Residential	Unknown	W14	37.44	26.57	10.87	0.71
				W15	31.24	22.19	9.05	0.71
				W16	30.17	22.39	7.78	0.74
				W17	30.35	22.97	7.38	0.76
				W18	14.58	14.58	0.00	1.00
	R7	Residential	Unknown	W19	17.31	17.31	0.00	1.00
	R8	Residential	Unknown	W20	15.21	15.21	0.00	1.00
	R9	Residential	Unknown	W21	19.14	19.14	0.00	1.00
	R10	Residential	Unknown	W22	25.21	24.48	0.73	0.97
	R11	Residential	Unknown	W23	22.89	20.14	2.75	0.88
				W24	24.76	21.50	3.26	0.87
	R12	Residential	Unknown	W25	29.59	25.13	4.46	0.85
	R13	Residential	Unknown	W26	27.07	21.93	5.14	0.81
				W27	22.69	17.94	4.75	0.79
	R14	Residential	Unknown	W28	19.48	19.48	0.00	1.00
				W29	26.04	23.09	2.95	0.89
	R15	Residential	Unknown	W30	30.16	26.97	3.19	0.89

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R16	Residential	Unknown	W31	30.13	26.31	3.82	0.87
	R17	Residential	Unknown	W32	24.73	21.42	3.31	0.87
				W33	22.78	19.64	3.14	0.86
	R18	Residential	Unknown	W34	15.34	15.34	0.00	1.00
				W35	21.54	20.60	0.94	0.96
	R19	Residential	Unknown	W36	26.86	24.85	2.01	0.93
	R20	Residential	Unknown	W37	26.95	24.54	2.41	0.91
	R21	Residential	Unknown	W38	25.49	23.26	2.23	0.91
	R22	Residential	Unknown	W39	15.82	13.82	2.00	0.87
	R23	Residential	Unknown	W40	12.21	8.37	3.84	0.69
				W41	21.57	19.80	1.77	0.92
	R24	Residential	Unknown	W42	18.23	16.77	1.46	0.92
	R25	Residential	Unknown	W43	15.76	14.34	1.42	0.91
	R26	Residential	Unknown	W44	14.51	13.18	1.33	0.91
	R27	Residential	Unknown	W45	9.09	7.90	1.19	0.87
				W46	8.27	7.11	1.16	0.86
				W47	8.53	7.40	1.13	0.87
				W48	22.41	22.41	0.00	1.00
				W49	29.97	29.97	0.00	1.00
Eighth	R1	Residential	Unknown	W1	6.59	2.98	3.61	0.45
				W2	6.36	3.82	2.54	0.60
				W3	21.15	10.57	10.58	0.50
	R2	Residential	Unknown	W4	24.00	10.19	13.81	0.42
				W5	18.64	11.34	7.30	0.61
				W6	19.75	12.22	7.53	0.62
	R3	Residential	Unknown	W7	22.03	13.92	8.11	0.63
				W8	18.30	10.62	7.68	0.58
				W9	17.78	9.54	8.24	0.54
				W10	18.40	9.44	8.96	0.51
				W11	31.58	18.16	13.42	0.58

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R4	Residential	Unknown	W12	37.80	25.27	12.53	0.67
	R5	Residential	Unknown	W13	9.19	9.01	0.18	0.98
	R6	Residential	Unknown	W14	37.60	26.92	10.68	0.72
				W15	31.44	22.51	8.93	0.72
				W16	30.38	22.69	7.69	0.75
				W17	30.56	23.27	7.29	0.76
				W18	15.42	15.42	0.00	1.00
	R7	Residential	Unknown	W19	18.19	18.19	0.00	1.00
	R8	Residential	Unknown	W20	16.02	16.02	0.00	1.00
	R9	Residential	Unknown	W21	19.51	19.51	0.00	1.00
	R10	Residential	Unknown	W22	25.67	24.99	0.68	0.97
	R11	Residential	Unknown	W23	23.20	20.48	2.72	0.88
				W24	25.08	21.86	3.22	0.87
	R12	Residential	Unknown	W25	29.86	25.44	4.42	0.85
	R13	Residential	Unknown	W26	27.38	22.35	5.03	0.82
				W27	22.71	18.01	4.70	0.79
	R14	Residential	Unknown	W28	19.85	19.85	0.00	1.00
				W29	26.42	23.55	2.87	0.89
	R15	Residential	Unknown	W30	30.59	27.51	3.08	0.90
	R16	Residential	Unknown	W31	30.48	26.78	3.70	0.88
	R17	Residential	Unknown	W32	25.11	21.91	3.20	0.87
				W33	22.89	19.82	3.07	0.87
	R18	Residential	Unknown	W34	15.82	15.82	0.00	1.00
				W35	22.14	21.24	0.90	0.96
	R19	Residential	Unknown	W36	27.57	25.64	1.93	0.93
	R20	Residential	Unknown	W37	27.72	25.41	2.31	0.92
	R21	Residential	Unknown	W38	26.25	24.11	2.14	0.92

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R22	Residential	Unknown	W39	15.96	14.04	1.92	0.88
	R23	Residential	Unknown	W40	12.31	8.62	3.69	0.70
				W41	22.38	20.67	1.71	0.92
	R24	Residential	Unknown	W42	19.16	17.76	1.40	0.93
	R25	Residential	Unknown	W43	16.89	15.53	1.36	0.92
	R26	Residential	Unknown	W44	15.79	14.51	1.28	0.92
	R27	Residential	Unknown	W45	10.12	8.97	1.15	0.89
				W46	9.27	8.16	1.11	0.88
				W47	9.63	8.55	1.08	0.89
				W48	24.02	24.02	0.00	1.00
				W49	31.66	31.66	0.00	1.00
Ninth	R1	Residential	Unknown	W1	7.56	3.96	3.60	0.52
				W2	7.36	4.87	2.49	0.66
				W3	22.34	11.97	10.37	0.54
	R2	Residential	Unknown	W4	25.11	11.55	13.56	0.46
				W5	19.83	12.65	7.18	0.64
				W6	20.96	13.55	7.41	0.65
	R3	Residential	Unknown	W7	23.23	15.23	8.00	0.66
				W8	19.42	11.78	7.64	0.61
				W9	18.86	10.67	8.19	0.57
				W10	19.47	10.55	8.92	0.54
				W11	31.70	18.38	13.32	0.58
	R4	Residential	Unknown	W12	37.98	25.69	12.29	0.68
	R5	Residential	Unknown	W13	9.20	9.04	0.16	0.98
	R6	Residential	Unknown	W14	37.78	27.33	10.45	0.72
				W15	31.65	22.85	8.80	0.72
				W16	30.60	23.00	7.60	0.75
				W17	30.77	23.59	7.18	0.77
				W18	16.34	16.34	0.00	1.00
	R7	Residential	Unknown	W19	19.16	19.16	0.00	1.00
	R8	Residential	Unknown	W20	17.06	17.06	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R9	Residential	Unknown	W21	20.07	20.07	0.00	1.00
	R10	Residential	Unknown	W22	26.40	25.77	0.63	0.98
	R11	Residential	Unknown	W23	23.96	21.17	2.79	0.88
				W24	25.50	22.28	3.22	0.87
	R12	Residential	Unknown	W25	30.22	25.79	4.43	0.85
	R13	Residential	Unknown	W26	27.74	22.83	4.91	0.82
				W27	22.90	18.26	4.64	0.80
	R14	Residential	Unknown	W28	20.25	20.25	0.00	1.00
				W29	26.83	24.06	2.77	0.90
	R15	Residential	Unknown	W30	31.11	28.15	2.96	0.90
	R16	Residential	Unknown	W31	30.89	27.32	3.57	0.88
	R17	Residential	Unknown	W32	25.54	22.46	3.08	0.88
				W33	23.00	20.02	2.98	0.87
	R18	Residential	Unknown	W34	16.45	16.45	0.00	1.00
				W35	22.84	21.98	0.86	0.96
	R19	Residential	Unknown	W36	28.44	26.59	1.85	0.93
	R20	Residential	Unknown	W37	28.69	26.47	2.22	0.92
	R21	Residential	Unknown	W38	27.22	25.16	2.06	0.92
	R22	Residential	Unknown	W39	16.27	14.43	1.84	0.89
	R23	Residential	Unknown	W40	12.51	8.97	3.54	0.72
				W41	23.44	21.81	1.63	0.93
	R24	Residential	Unknown	W42	20.42	19.08	1.34	0.93
	R25	Residential	Unknown	W43	18.41	17.10	1.31	0.93
	R26	Residential	Unknown	W44	17.49	16.27	1.22	0.93
	R27	Residential	Unknown	W45	11.78	10.69	1.09	0.91
				W46	10.95	9.89	1.06	0.90
				W47	11.40	10.37	1.03	0.91

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W48	25.64	25.64	0.00	1.00
				W49	33.22	33.22	0.00	1.00
Tenth	R1	Residential	Unknown	W1	8.73	5.15	3.58	0.59
				W2	8.68	6.26	2.42	0.72
				W3	23.76	13.63	10.13	0.57
	R2	Residential	Unknown	W4	26.46	13.17	13.29	0.50
				W5	21.21	14.14	7.07	0.67
				W6	22.36	15.06	7.30	0.67
	R3	Residential	Unknown	W7	24.64	16.77	7.87	0.68
				W8	20.66	13.07	7.59	0.63
				W9	20.07	11.93	8.14	0.59
				W10	20.65	11.80	8.85	0.57
				W11	31.83	18.65	13.18	0.59
	R4	Residential	Unknown	W12	38.21	26.19	12.02	0.69
	R5	Residential	Unknown	W13	9.24	9.09	0.15	0.98
	R6	Residential	Unknown	W14	38.03	27.83	10.20	0.73
				W15	31.86	23.23	8.63	0.73
				W16	30.81	23.34	7.47	0.76
				W17	30.99	23.93	7.06	0.77
				W18	17.29	17.29	0.00	1.00
	R7	Residential	Unknown	W19	20.23	20.23	0.00	1.00
	R8	Residential	Unknown	W20	18.15	18.15	0.00	1.00
	R9	Residential	Unknown	W21	20.99	20.99	0.00	1.00
	R10	Residential	Unknown	W22	27.52	26.85	0.67	0.98
	R11	Residential	Unknown	W23	25.04	21.96	3.08	0.88
				W24	26.13	22.76	3.37	0.87
	R12	Residential	Unknown	W25	30.60	26.08	4.52	0.85
	R13	Residential	Unknown	W26	28.16	23.36	4.80	0.83
				W27	23.12	18.55	4.57	0.80
	R14	Residential	Unknown	W28	20.67	20.67	0.00	1.00
				W29	27.27	24.60	2.67	0.90

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R15	Residential	Unknown	W30	31.54	28.68	2.86	0.91
	R16	Residential	Unknown	W31	31.20	27.78	3.42	0.89
	R17	Residential	Unknown	W32	26.01	23.06	2.95	0.89
				W33	23.12	20.23	2.89	0.88
	R18	Residential	Unknown	W34	17.22	17.22	0.00	1.00
				W35	23.63	22.81	0.82	0.97
	R19	Residential	Unknown	W36	29.50	27.74	1.76	0.94
	R20	Residential	Unknown	W37	29.88	27.76	2.12	0.93
	R21	Residential	Unknown	W38	28.44	26.48	1.96	0.93
	R22	Residential	Unknown	W39	16.86	15.10	1.76	0.90
	R23	Residential	Unknown	W40	12.83	9.44	3.39	0.74
				W41	24.85	23.29	1.56	0.94
	R24	Residential	Unknown	W42	22.14	20.86	1.28	0.94
	R25	Residential	Unknown	W43	20.45	19.21	1.24	0.94
	R26	Residential	Unknown	W44	19.79	18.63	1.16	0.94
	R27	Residential	Unknown	W45	14.14	13.10	1.04	0.93
				W46	13.37	12.36	1.01	0.92
				W47	13.87	12.89	0.98	0.93
				W48	26.71	26.71	0.00	1.00
				W49	34.39	34.39	0.00	1.00
Eleventh	R1	Residential	Unknown	W1	10.11	6.56	3.55	0.65
				W2	10.30	7.95	2.35	0.77
				W3	25.42	15.57	9.85	0.61
	R2	Residential	Unknown	W4	28.10	15.11	12.99	0.54
				W5	22.80	15.86	6.94	0.70
				W6	23.96	16.77	7.19	0.70
	R3	Residential	Unknown	W7	26.44	18.50	7.94	0.70
				W8	22.06	14.54	7.52	0.66
				W9	21.43	13.37	8.06	0.62

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W10	21.97	13.19	8.78	0.60
				W11	31.96	19.00	12.96	0.59
	R4	Residential	Unknown	W12	38.54	26.82	11.72	0.70
	R5	Residential	Unknown	W13	9.36	9.23	0.13	0.99
	R6	Residential	Unknown	W14	38.37	28.45	9.92	0.74
				W15	32.08	23.69	8.39	0.74
				W16	31.03	23.71	7.32	0.76
				W17	31.22	24.29	6.93	0.78
				W18	18.48	18.48	0.00	1.00
	R7	Residential	Unknown	W19	21.69	21.69	0.00	1.00
	R8	Residential	Unknown	W20	19.36	19.36	0.00	1.00
	R9	Residential	Unknown	W21	21.94	21.94	0.00	1.00
	R10	Residential	Unknown	W22	28.09	26.74	1.35	0.95
	R11	Residential	Unknown	W23	26.41	22.74	3.67	0.86
				W24	27.09	23.20	3.89	0.86
	R12	Residential	Unknown	W25	27.48	22.83	4.65	0.83
	R13	Residential	Unknown	W26	34.26	29.59	4.67	0.86
				W27	28.52	23.97	4.55	0.84
	R14	Residential	Unknown	W28	26.30	26.30	0.00	1.00
				W29	33.36	30.82	2.54	0.92
	R15	Residential	Unknown	W30	27.14	24.82	2.32	0.91
	R16	Residential	Unknown	W31	26.90	23.64	3.26	0.88
	R17	Residential	Unknown	W32	32.16	29.34	2.82	0.91
				W33	28.45	25.70	2.75	0.90
	R18	Residential	Unknown	W34	23.26	23.26	0.00	1.00
				W35	30.16	29.38	0.78	0.97
	R19	Residential	Unknown	W36	30.78	29.03	1.75	0.94
	R20	Residential	Unknown	W37	31.21	29.17	2.04	0.93

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R21	Residential	Unknown	W38	30.04	28.17	1.87	0.94
	R22	Residential	Unknown	W39	18.23	16.57	1.66	0.91
	R23	Residential	Unknown	W40	13.14	9.92	3.22	0.75
				W41	26.81	25.33	1.48	0.94
	R24	Residential	Unknown	W42	24.70	23.48	1.22	0.95
	R25	Residential	Unknown	W43	23.47	22.29	1.18	0.95
	R26	Residential	Unknown	W44	23.08	21.97	1.11	0.95
	R27	Residential	Unknown	W45	23.50	22.51	0.99	0.96
				W46	23.98	23.02	0.96	0.96
				W47	24.43	23.50	0.93	0.96
				W48	35.14	35.14	0.00	1.00
				W49	35.42	35.42	0.00	1.00
Twelfth	R1	Residential	Unknown	W1	12.36	8.73	3.63	0.71
				W2	12.86	10.60	2.26	0.82
				W3	27.32	17.78	9.54	0.65
	R2	Residential	Unknown	W4	30.26	17.65	12.61	0.58
				W5	24.67	17.88	6.79	0.72
				W6	25.83	18.80	7.03	0.73
	R3	Residential	Unknown	W7	28.54	20.36	8.18	0.71
				W8	29.65	20.41	9.24	0.69
				W9	30.05	20.46	9.59	0.68
				W10	30.36	20.51	9.85	0.68
				W11	38.96	25.03	13.93	0.64
	R4	Residential	Unknown	W12	38.83	27.44	11.39	0.71
	R5	Residential	Unknown	W13	10.12	10.01	0.11	0.99
	R6	Residential	Unknown	W14	38.48	30.37	8.11	0.79
				W15	38.67	29.08	9.59	0.75
				W16	38.43	30.63	7.80	0.80
				W17	38.40	30.80	7.60	0.80
				W18	26.30	26.30	0.00	1.00
	R7	Residential	Unknown	W19	23.52	23.52	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R8	Residential	Unknown	W20	20.42	20.42	0.00	1.00
	R9	Residential	Unknown	W21	23.69	23.69	0.00	1.00
	R10	Residential	Unknown	W22	35.54	30.83	4.71	0.87
				W24	35.96	31.10	4.86	0.86
	R11	Residential	Unknown	W23	33.58	29.96	3.62	0.89
	R12	Residential	Unknown	W25	36.86	32.02	4.84	0.87
	R13	Residential	Unknown	W26	25.95	23.17	2.78	0.89
				W27	25.86	23.12	2.74	0.89
	R14	Residential	Unknown	W28	25.99	23.36	2.63	0.90
				W29	26.24	23.68	2.56	0.90
	R15	Residential	Unknown	W30	36.24	32.82	3.42	0.91
	R16	Residential	Unknown	W31	35.84	32.72	3.12	0.91
	R17	Residential	Unknown	W32	25.66	23.92	1.74	0.93
				W33	25.44	23.74	1.70	0.93
	R18	Residential	Unknown	W34	25.40	23.75	1.65	0.94
				W35	25.55	23.95	1.60	0.94
	R19	Residential	Unknown	W36	33.57	31.48	2.09	0.94
	R20	Residential	Unknown	W37	32.93	31.02	1.91	0.94
	R21	Residential	Unknown	W38	32.11	30.37	1.74	0.95
	R22	Residential	Unknown	W39	29.14	27.57	1.57	0.95
	R23	Residential	Unknown	W40	19.51	16.47	3.04	0.84
				W41	29.45	28.05	1.40	0.95
	R24	Residential	Unknown	W42	28.45	27.30	1.15	0.96
	R25	Residential	Unknown	W43	27.84	27.84	0.00	1.00
				W44	32.04	32.04	0.00	1.00
				W45	34.66	34.66	0.00	1.00
				W46	34.55	34.55	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Thirteenth	R1	Residential	Unknown	W1	13.64	10.18	3.46	0.75
				W2	14.45	12.28	2.17	0.85
	R2	Residential	Unknown	W3	29.53	20.35	9.18	0.69
				W4	31.65	20.80	10.85	0.66
	R3	Residential	Unknown	W5	34.26	28.60	5.66	0.83
	R4	Residential	Unknown	W6	33.79	28.76	5.03	0.85
	R5	Residential	Unknown	W7	29.74	24.16	5.58	0.81
				W8	28.91	23.50	5.41	0.81
	R6	Residential	Unknown	W9	37.59	32.70	4.89	0.87
	R7	Residential	Unknown	W10	36.37	32.06	4.31	0.88
				W11	36.18	32.02	4.16	0.89
	R8	Residential	Unknown	W12	36.15	32.17	3.98	0.89
				W13	36.24	32.38	3.86	0.89
	R9	Residential	Unknown	W14	36.87	33.64	3.23	0.91
	R10	Residential	Unknown	W15	36.58	33.62	2.96	0.92
	R11	Residential	Unknown	W16	34.94	32.39	2.55	0.93
				W17	34.68	32.21	2.47	0.93
	R12	Residential	Unknown	W18	34.47	32.10	2.37	0.93
				W19	34.47	32.20	2.27	0.93
	R13	Residential	Unknown	W20	34.91	32.95	1.96	0.94
	R14	Residential	Unknown	W21	34.52	32.72	1.80	0.95
	R15	Residential	Unknown	W22	30.21	30.14	0.07	1.00
	R16	Residential	Unknown	W23	31.92	30.42	1.50	0.95
	R17	Residential	Unknown	W24	24.67	23.24	1.43	0.94
				W25	22.55	21.16	1.39	0.94
	R18	Residential	Unknown	W26	31.28	30.15	1.13	0.96

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R19	Residential	Unknown	W27	30.66	30.66	0.00	1.00
				W28	34.09	34.09	0.00	1.00
				W29	28.97	28.97	0.00	1.00
Fourteenth	R1	Residential	Unknown	W1	19.60	16.09	3.51	0.82
				W2	20.98	18.91	2.07	0.90
	R2	Residential	Unknown	W3	31.68	22.90	8.78	0.72
				W4	33.47	23.09	10.38	0.69
	R3	Residential	Unknown	W5	37.66	24.45	13.21	0.65
				W6	38.83	25.93	12.90	0.67
	R4	Residential	Unknown	W7	10.71	9.76	0.95	0.91
	R5	Residential	Unknown	W8	23.53	19.77	3.76	0.84
				W9	35.99	29.39	6.60	0.82
	R6	Residential	Unknown	W10	34.42	29.36	5.06	0.85
	R7	Residential	Unknown	W11	31.75	26.39	5.36	0.83
				W12	32.01	26.82	5.19	0.84
	R8	Residential	Unknown	W13	37.48	32.87	4.61	0.88
	R9	Residential	Unknown	W14	31.30	27.23	4.07	0.87
				W15	30.20	26.26	3.94	0.87
	R10	Residential	Unknown	W16	30.19	26.46	3.73	0.88
				W17	31.13	27.50	3.63	0.88
	R11	Residential	Unknown	W18	37.53	34.51	3.02	0.92
	R12	Residential	Unknown	W19	37.28	34.53	2.75	0.93
	R13	Residential	Unknown	W20	30.14	27.75	2.39	0.92
				W21	29.06	26.77	2.29	0.92
	R14	Residential	Unknown	W22	28.92	26.71	2.21	0.92
				W23	29.81	27.67	2.14	0.93
	R15	Residential	Unknown	W24	36.10	34.26	1.84	0.95
	R16	Residential	Unknown	W25	35.90	34.23	1.67	0.95

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R17	Residential	Unknown	W26	35.37	33.80	1.57	0.96
	R18	Residential	Unknown	W27	34.56	33.13	1.43	0.96
				W28	33.25	31.91	1.34	0.96
				W29	31.66	30.36	1.30	0.96
	R19	Residential	Unknown	W30	33.66	32.60	1.06	0.97
	R20	Residential	Unknown	W31	32.83	32.83	0.00	1.00
				W32	35.83	35.83	0.00	1.00
				W33	37.56	37.56	0.00	1.00
				W34	37.51	37.51	0.00	1.00
Fifteenth	R1	Residential	Unknown	W1	25.20	22.12	3.08	0.88
				W2	27.17	21.78	5.39	0.80
				W3	28.22	21.82	6.40	0.77
				W28	24.99	21.89	3.10	0.88
	R2	Residential	Unknown	W4	28.93	22.12	6.81	0.76
	R3	Residential	Unknown	W5	28.79	22.10	6.69	0.77
	R4	Residential	Unknown	W6	16.21	10.59	5.62	0.65
	R5	Residential	Unknown	W7	23.67	20.01	3.66	0.85
				W8	36.15	29.98	6.17	0.83
	R6	Residential	Unknown	W9	34.86	30.13	4.73	0.86
	R7	Residential	Unknown	W10	32.09	27.07	5.02	0.84
				W11	32.35	27.50	4.85	0.85
	R8	Residential	Unknown	W12	38.20	33.88	4.32	0.89
	R9	Residential	Unknown	W13	38.36	34.57	3.79	0.90
				W14	38.34	34.67	3.67	0.90
	R10	Residential	Unknown	W15	38.31	34.84	3.47	0.91
				W16	38.28	34.90	3.38	0.91
	R11	Residential	Unknown	W17	38.10	35.27	2.83	0.93
	R12	Residential	Unknown	W18	37.96	35.38	2.58	0.93
	R13	Residential	Unknown	W19	37.64	35.42	2.22	0.94

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W20	37.58	35.45	2.13	0.94
	R14	Residential	Unknown	W21	37.48	35.43	2.05	0.95
				W22	37.39	35.41	1.98	0.95
	R15	Residential	Unknown	W23	37.09	35.38	1.71	0.95
	R16	Residential	Unknown	W24	36.88	35.32	1.56	0.96
	R17	Residential	Unknown	W25	36.58	35.13	1.45	0.96
	R18	Residential	Unknown	W26	36.09	34.79	1.30	0.96
	R19	Residential	Unknown	W27	35.35	34.38	0.97	0.97
Sixteenth	R1	Residential	Unknown	W1	24.64	20.75	3.89	0.84
				W2	34.42	26.69	7.73	0.78
				W3	36.94	26.83	10.11	0.73
				W19	23.36	19.83	3.53	0.85
	R2	Residential	Unknown	W4	38.28	26.92	11.36	0.70
	R3	Residential	Unknown	W5	38.72	27.36	11.36	0.71
	R4	Residential	Unknown	W6	17.64	11.16	6.48	0.63
	R5	Residential	Unknown	W7	24.04	20.42	3.62	0.85
				W9	36.60	30.88	5.72	0.84
	R6	Residential	Unknown	W8	35.50	31.11	4.39	0.88
	R7	Residential	Unknown	W10	38.38	33.73	4.65	0.88
				W11	38.48	33.98	4.50	0.88
	R8	Residential	Unknown	W12	38.68	34.69	3.99	0.90
	R9	Residential	Unknown	W13	38.72	35.27	3.45	0.91
	R10	Residential	Unknown	W14	38.51	36.91	1.60	0.96
				W15	38.14	38.02	0.12	1.00
				W17	38.07	38.07	0.00	1.00
				W18	38.07	38.07	0.00	1.00
	R11	Residential	Unknown	W16	36.92	36.03	0.89	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Seventeenth	R1	Residential	Unknown	W1	26.96	23.64	3.32	0.88
				W2	35.62	28.42	7.20	0.80
				W3	37.55	28.12	9.43	0.75
				W9	26.01	22.61	3.40	0.87
	R2	Residential	Unknown	W4	38.43	27.83	10.60	0.72
	R3	Residential	Unknown	W5	37.97	27.36	10.61	0.72
	R4	Residential	Unknown	W6	15.00	9.90	5.10	0.66
	R5	Residential	Unknown	W7	32.88	32.88	0.00	1.00
				W8	32.03	32.03	0.00	1.00
Eighteenth	R1	Residential	Unknown	W1	33.85	30.78	3.07	0.91
				W2	35.75	29.10	6.65	0.81
				W3	36.92	28.22	8.70	0.76
				W12	33.91	30.76	3.15	0.91
	R2	Residential	Unknown	W4	37.40	27.60	9.80	0.74
	R3	Residential	Unknown	W5	37.51	27.71	9.80	0.74
				W6	35.45	27.06	8.39	0.76
	R4	Residential	Unknown	W7	37.81	31.46	6.35	0.83
	R5	Residential	Unknown	W8	37.47	33.69	3.78	0.90
	R6	Residential	Unknown	W9	37.33	35.49	1.84	0.95
	R7	Residential	Unknown	W10	35.76	35.76	0.00	1.00
				W11	35.08	35.08	0.00	1.00
The Hallmark								
Ground	R1	Residential	Unknown	W1	6.23	6.23	0.00	1.00
				W2	17.01	17.01	0.00	1.00
				W3	10.02	10.02	0.00	1.00
				W4	11.21	11.21	0.00	1.00
				W5	1.49	1.49	0.00	1.00
				W6	28.65	24.86	3.79	0.87
First	R1	Residential	Unknown	W1	37.40	37.37	0.03	1.00
				W2	3.57	3.57	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Unknown	W3	10.04	10.04	0.00	1.00
				W4	9.75	9.75	0.00	1.00
	R3	Residential	Unknown	W5	29.82	24.79	5.03	0.83
	R4	Residential	Unknown	W6	6.22	6.11	0.11	0.98
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	9.82	7.40	2.42	0.75
	R7	Residential	Unknown	W10	16.61	12.11	4.50	0.73
	R8	Residential	Unknown	W11	21.22	16.80	4.42	0.79
	R9	Residential	Unknown	W12	22.80	18.46	4.34	0.81
	R10	Residential	Unknown	W13	7.99	3.81	4.18	0.48
				W14	6.52	5.43	1.09	0.83
Second	R1	Residential	Unknown	W1	38.48	38.46	0.02	1.00
				W2	3.50	3.50	0.00	1.00
	R2	Residential	Unknown	W3	10.02	10.02	0.00	1.00
				W4	9.78	9.78	0.00	1.00
	R3	Residential	Unknown	W5	31.36	26.09	5.27	0.83
	R4	Residential	Unknown	W6	6.93	6.85	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	10.21	7.83	2.38	0.77
	R7	Residential	Unknown	W10	18.01	13.52	4.49	0.75
	R8	Residential	Unknown	W11	21.82	17.38	4.44	0.80
	R9	Residential	Unknown	W12	23.79	19.44	4.35	0.82
	R10	Residential	Unknown	W13	7.06	2.97	4.09	0.42
				W14	6.49	5.38	1.11	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Third	R1	Residential	Unknown	W1	39.19	39.16	0.03	1.00
				W2	3.45	3.45	0.00	1.00
	R2	Residential	Unknown	W3	10.02	10.02	0.00	1.00
				W4	9.86	9.86	0.00	1.00
	R3	Residential	Unknown	W5	32.15	26.93	5.22	0.84
	R4	Residential	Unknown	W6	7.81	7.73	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	10.62	8.28	2.34	0.78
	R7	Residential	Unknown	W10	18.74	14.29	4.45	0.76
	R8	Residential	Unknown	W11	22.61	18.22	4.39	0.81
	R9	Residential	Unknown	W12	24.58	20.29	4.29	0.83
	R10	Residential	Unknown	W13	7.28	3.23	4.05	0.44
				W14	6.83	5.74	1.09	0.84
Fourth	R1	Residential	Unknown	W1	39.55	39.53	0.02	1.00
				W2	5.75	5.75	0.00	1.00
	R2	Residential	Unknown	W3	10.63	10.63	0.00	1.00
				W4	7.56	7.56	0.00	1.00
	R3	Residential	Unknown	W5	32.85	27.71	5.14	0.84
	R4	Residential	Unknown	W6	9.00	8.92	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.40	0.40	0.00	1.00
	R6	Residential	Unknown	W9	11.02	8.74	2.28	0.79
	R7	Residential	Unknown	W10	19.43	15.10	4.33	0.78
	R8	Residential	Unknown	W11	23.33	19.06	4.27	0.82
	R9	Residential	Unknown	W12	25.30	21.12	4.18	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R10	Residential	Unknown	W13	7.44	3.50	3.94	0.47
				W14	7.15	6.10	1.05	0.85
Fifth	R1	Residential	Unknown	W1	39.61	39.58	0.03	1.00
				W2	5.79	5.79	0.00	1.00
	R2	Residential	Unknown	W3	10.78	10.78	0.00	1.00
				W4	7.67	7.67	0.00	1.00
	R3	Residential	Unknown	W5	33.42	28.42	5.00	0.85
	R4	Residential	Unknown	W6	10.26	10.16	0.10	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	1.06	1.06	0.00	1.00
	R6	Residential	Unknown	W9	11.43	9.20	2.23	0.80
	R7	Residential	Unknown	W10	19.48	15.24	4.24	0.78
	R8	Residential	Unknown	W11	24.40	20.27	4.13	0.83
	R9	Residential	Unknown	W12	25.99	21.95	4.04	0.84
	R10	Residential	Unknown	W13	8.71	4.81	3.90	0.55
				W14	7.61	6.61	1.00	0.87
Sixth	R1	Residential	Unknown	W1	39.61	39.59	0.02	1.00
				W2	5.75	5.75	0.00	1.00
	R2	Residential	Unknown	W3	10.70	10.70	0.00	1.00
				W4	7.62	7.62	0.00	1.00
	R3	Residential	Unknown	W5	34.01	29.16	4.85	0.86
	R4	Residential	Unknown	W6	11.68	11.58	0.10	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	1.81	1.81	0.00	1.00
	R6	Residential	Unknown	W9	11.83	9.66	2.17	0.82
	R7	Residential	Unknown	W10	20.23	16.13	4.10	0.80
	R8	Residential	Unknown	W11	25.20	21.20	4.00	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R9	Residential	Unknown	W12	26.82	22.91	3.91	0.85
	R10	Residential	Unknown	W13	8.86	5.08	3.78	0.57
				W14	7.92	6.95	0.97	0.88
Seventh	R1	Residential	Unknown	W1	39.62	39.59	0.03	1.00
				W2	3.53	3.53	0.00	1.00
	R2	Residential	Unknown	W3	10.48	10.48	0.00	1.00
				W4	10.34	10.34	0.00	1.00
	R3	Residential	Unknown	W5	34.54	29.91	4.63	0.87
	R4	Residential	Unknown	W6	12.99	12.89	0.10	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	2.66	2.66	0.00	1.00
	R6	Residential	Unknown	W9	12.20	10.13	2.07	0.83
	R7	Residential	Unknown	W10	21.00	17.07	3.93	0.81
	R8	Residential	Unknown	W11	26.03	22.20	3.83	0.85
	R9	Residential	Unknown	W12	27.69	23.94	3.75	0.86
	R10	Residential	Unknown	W13	8.96	5.34	3.62	0.60
				W14	8.19	7.27	0.92	0.89
Eighth	R1	Residential	Unknown	W1	39.62	39.59	0.03	1.00
				W2	3.54	3.54	0.00	1.00
	R2	Residential	Unknown	W3	10.50	10.50	0.00	1.00
				W4	10.37	10.37	0.00	1.00
	R3	Residential	Unknown	W5	35.14	30.72	4.42	0.87
	R4	Residential	Unknown	W6	14.78	14.72	0.06	1.00
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	3.60	3.60	0.00	1.00
	R6	Residential	Unknown	W9	12.56	10.60	1.96	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R7	Residential	Unknown	W10	22.49	18.77	3.72	0.83
	R8	Residential	Unknown	W11	26.58	22.91	3.67	0.86
	R9	Residential	Unknown	W12	28.72	25.13	3.59	0.88
	R10	Residential	Unknown	W13	8.02	4.64	3.38	0.58
				W14	8.73	7.82	0.91	0.90
Ninth	R1	Residential	Unknown	W1	39.62	39.59	0.03	1.00
				W2	3.55	3.55	0.00	1.00
	R2	Residential	Unknown	W3	10.55	10.55	0.00	1.00
				W4	10.40	10.40	0.00	1.00
	R3	Residential	Unknown	W5	35.76	31.56	4.20	0.88
	R4	Residential	Unknown	W6	17.04	16.98	0.06	1.00
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	4.63	4.63	0.00	1.00
	R6	Residential	Unknown	W9	12.93	11.08	1.85	0.86
	R7	Residential	Unknown	W10	23.37	19.84	3.53	0.85
	R8	Residential	Unknown	W11	27.55	24.07	3.48	0.87
	R9	Residential	Unknown	W12	29.80	26.39	3.41	0.89
	R10	Residential	Unknown	W13	8.30	5.09	3.21	0.61
				W14	9.13	8.28	0.85	0.91
Tenth	R1	Residential	Unknown	W1	39.62	39.59	0.03	1.00
				W2	6.30	6.30	0.00	1.00
	R2	Residential	Unknown	W3	12.05	12.05	0.00	1.00
				W4	8.54	8.54	0.00	1.00
	R3	Residential	Unknown	W5	36.42	32.43	3.99	0.89
	R4	Residential	Unknown	W6	20.55	20.50	0.05	1.00
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	5.72	5.72	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6	Residential	Unknown	W9	13.31	11.58	1.73	0.87
	R7	Residential	Unknown	W10	24.29	20.97	3.32	0.86
	R8	Residential	Unknown	W11	28.59	25.31	3.28	0.89
	R9	Residential	Unknown	W12	30.99	27.78	3.21	0.90
	R10	Residential	Unknown	W13	9.82	6.79	3.03	0.69
				W14	10.79	9.99	0.80	0.93
Eleventh	R1	Residential	Unknown	W1	39.62	39.60	0.02	1.00
				W2	6.34	6.34	0.00	1.00
	R2	Residential	Unknown	W3	12.14	12.14	0.00	1.00
				W4	8.60	8.60	0.00	1.00
	R3	Residential	Unknown	W5	37.09	33.37	3.72	0.90
	R4	Residential	Unknown	W6	25.10	25.03	0.07	1.00
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	6.97	6.97	0.00	1.00
	R6	Residential	Unknown	W9	13.72	12.13	1.59	0.88
	R7	Residential	Unknown	W10	24.60	21.49	3.11	0.87
	R8	Residential	Unknown	W11	30.15	27.12	3.03	0.90
	R9	Residential	Unknown	W12	32.27	29.29	2.98	0.91
	R10	Residential	Unknown	W13	10.01	7.12	2.89	0.71
				W14	9.25	8.54	0.71	0.92
Twelfth	R1	Residential	Unknown	W1	39.62	39.60	0.02	1.00
				W2	5.72	5.72	0.00	1.00
	R2	Residential	Unknown	W3	10.63	10.63	0.00	1.00
				W4	7.57	7.57	0.00	1.00
				W5	37.78	34.34	3.44	0.91
	R3	Residential	Unknown	W6	31.45	31.39	0.06	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R4	Residential	Unknown	W7	26.95	26.89	0.06	1.00
Thirteenth	R1	Residential	Unknown	W1	39.62	39.60	0.02	1.00
				W2	3.55	3.55	0.00	1.00
	R2	Residential	Unknown	W3	10.54	10.54	0.00	1.00
				W4	10.40	10.40	0.00	1.00
				W5	38.33	35.17	3.16	0.92
	R3	Residential	Unknown	W6	37.00	36.95	0.05	1.00
	R4	Residential	Unknown	W7	37.13	37.08	0.05	1.00
Fourteenth	R1	Residential	Unknown	W1	39.62	39.60	0.02	1.00
				W2	3.97	3.97	0.00	1.00
	R2	Residential	Unknown	W3	11.94	11.94	0.00	1.00
				W4	11.67	11.67	0.00	1.00
				W5	38.79	35.92	2.87	0.93
	R3	Residential	Unknown	W6	38.43	38.39	0.04	1.00
	R4	Residential	Unknown	W7	38.49	38.44	0.05	1.00
Fifteenth	R1	Residential	Unknown	W1	39.62	39.60	0.02	1.00
				W2	5.33	5.33	0.00	1.00
	R2	Residential	Unknown	W3	12.30	12.30	0.00	1.00
				W4	12.00	12.00	0.00	1.00
	R3	Residential	Unknown	W5	39.14	39.10	0.04	1.00
	R4	Residential	Unknown	W6	39.15	39.11	0.04	1.00
Barton Place								
First	R1	Residential	Unknown	W1	4.55	4.39	0.16	0.96
				W2	7.24	6.53	0.71	0.90
				W3	5.96	1.73	4.23	0.29
	R2	Residential	Unknown	W4	9.46	6.06	3.40	0.64
	R3	Residential	Unknown	W5	9.18	6.36	2.82	0.69
	R4	Residential	Unknown	W6	5.75	4.68	1.07	0.81

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W7	7.55	5.97	1.58	0.79
	R6	Residential	Unknown	W8	2.20	1.17	1.03	0.53
	R7	Residential	Unknown	W9	7.70	7.20	0.50	0.94
	R8	Residential	Unknown	W10	6.42	6.25	0.17	0.97
Second	R1	Residential	Unknown	W1	14.22	13.33	0.89	0.94
				W2	8.17	7.26	0.91	0.89
				W3	6.50	2.19	4.31	0.34
	R2	Residential	Unknown	W4	10.10	6.64	3.46	0.66
	R3	Residential	Unknown	W5	9.83	6.96	2.87	0.71
	R4	Residential	Unknown	W6	6.21	5.13	1.08	0.83
	R5	Residential	Unknown	W7	8.14	6.55	1.59	0.80
	R6	Residential	Unknown	W8	2.85	1.82	1.03	0.64
	R7	Residential	Unknown	W9	8.40	7.90	0.50	0.94
	R8	Residential	Unknown	W10	7.11	6.94	0.17	0.98
Third	R1	Residential	Unknown	W1	15.70	14.79	0.91	0.94
				W2	9.14	8.18	0.96	0.89
				W3	7.00	2.61	4.39	0.37
	R2	Residential	Unknown	W4	10.81	7.30	3.51	0.68
	R3	Residential	Unknown	W5	10.55	7.65	2.90	0.73
	R4	Residential	Unknown	W6	6.73	5.64	1.09	0.84
	R5	Residential	Unknown	W7	8.85	7.26	1.59	0.82
	R6	Residential	Unknown	W8	3.45	2.42	1.03	0.70
	R7	Residential	Unknown	W9	9.21	8.70	0.51	0.94
	R8	Residential	Unknown	W10	7.90	7.73	0.17	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Fourth	R1	Residential	Unknown	W1	17.47	16.54	0.93	0.95
				W2	10.26	9.25	1.01	0.90
				W3	7.58	3.13	4.45	0.41
	R2	Residential	Unknown	W4	11.58	8.03	3.55	0.69
	R3	Residential	Unknown	W5	11.34	8.41	2.93	0.74
	R4	Residential	Unknown	W6	7.32	6.23	1.09	0.85
	R5	Residential	Unknown	W7	9.64	8.05	1.59	0.84
	R6	Residential	Unknown	W8	4.15	3.12	1.03	0.75
	R7	Residential	Unknown	W9	10.12	9.61	0.51	0.95
	R8	Residential	Unknown	W10	8.81	8.64	0.17	0.98
Fifth	R1	Residential	Unknown	W1	19.73	18.80	0.93	0.95
				W2	11.66	10.59	1.07	0.91
				W3	8.21	3.72	4.49	0.45
	R2	Residential	Unknown	W4	12.43	8.86	3.57	0.71
	R3	Residential	Unknown	W5	12.21	9.27	2.94	0.76
	R4	Residential	Unknown	W6	7.98	6.90	1.08	0.86
	R5	Residential	Unknown	W7	10.55	8.96	1.59	0.85
	R6	Residential	Unknown	W8	4.93	3.91	1.02	0.79
	R7	Residential	Unknown	W9	11.15	10.65	0.50	0.96
	R8	Residential	Unknown	W10	9.85	9.68	0.17	0.98
Sixth	R1	Residential	Unknown	W1	22.49	21.55	0.94	0.96
				W2	13.36	12.24	1.12	0.92
				W3	8.86	4.38	4.48	0.49
	R2	Residential	Unknown	W4	13.35	9.79	3.56	0.73
	R3	Residential	Unknown	W5	13.17	10.24	2.93	0.78
	R4	Residential	Unknown	W6	8.70	7.63	1.07	0.88

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W7	11.54	9.97	1.57	0.86
	R6	Residential	Unknown	W8	5.89	4.87	1.02	0.83
	R7	Residential	Unknown	W9	12.33	11.83	0.50	0.96
	R8	Residential	Unknown	W10	11.04	10.88	0.16	0.99
Seventh	R1	Residential	Unknown	W1	25.65	24.72	0.93	0.96
				W2	15.32	14.17	1.15	0.92
				W3	9.54	5.13	4.41	0.54
	R2	Residential	Unknown	W4	14.32	10.82	3.50	0.76
	R3	Residential	Unknown	W5	14.19	11.31	2.88	0.80
	R4	Residential	Unknown	W6	9.51	8.47	1.04	0.89
	R5	Residential	Unknown	W7	12.66	11.12	1.54	0.88
	R6	Residential	Unknown	W8	7.02	6.02	1.00	0.86
	R7	Residential	Unknown	W9	13.71	13.23	0.48	0.96
	R8	Residential	Unknown	W10	12.48	12.32	0.16	0.99
Eighth	R1	Residential	Unknown	W1	28.73	27.82	0.91	0.97
				W2	17.43	16.26	1.17	0.93
				W3	10.45	6.13	4.32	0.59
	R2	Residential	Unknown	W4	15.44	12.01	3.43	0.78
	R3	Residential	Unknown	W5	15.36	12.56	2.80	0.82
	R4	Residential	Unknown	W6	10.32	9.30	1.02	0.90
	R5	Residential	Unknown	W7	13.84	12.34	1.50	0.89
	R6	Residential	Unknown	W8	9.30	8.34	0.96	0.90
	R7	Residential	Unknown	W9	15.44	15.02	0.42	0.97
	R8	Residential	Unknown	W10	16.06	15.93	0.13	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Ninth	R1	Residential	Unknown	W1	30.93	30.04	0.89	0.97
				W2	18.70	17.55	1.15	0.94
				W3	11.15	6.93	4.22	0.62
	R2	Residential	Unknown	W4	16.82	13.47	3.35	0.80
	R3	Residential	Unknown	W5	16.65	13.92	2.73	0.84
	R4	Residential	Unknown	W6	10.83	9.83	1.00	0.91
	R5	Residential	Unknown	W7	14.87	13.42	1.45	0.90
	R6	Residential	Unknown	W8	10.35	9.40	0.95	0.91
	R7	Residential	Unknown	W9	17.24	16.83	0.41	0.98
	R8	Residential	Unknown	W10	17.90	17.76	0.14	0.99
Tenth	R1	Residential	Unknown	W1	24.73	23.61	1.12	0.95
				W2	18.70	14.58	4.12	0.78
	R2	Residential	Unknown	W3	17.97	14.70	3.27	0.82
	R3	Residential	Unknown	W4	17.49	14.83	2.66	0.85
	R4	Residential	Unknown	W5	9.35	8.37	0.98	0.90
	R5	Residential	Unknown	W6	13.04	11.61	1.43	0.89
	R6	Residential	Unknown	W7	15.36	14.43	0.93	0.94
Masson Place								
First	R1	Residential	Unknown	W1	2.20	1.40	0.80	0.64
				W2	3.85	3.55	0.30	0.92
				W3	3.32	3.23	0.09	0.97
Second	R1	Residential	Unknown	W1	2.69	1.87	0.82	0.70
				W2	3.14	2.76	0.38	0.88
				W3	12.53	12.21	0.32	0.97
Third	R1	Residential	Unknown	W1	3.14	2.32	0.82	0.74
				W2	4.33	3.95	0.38	0.91
				W3	13.87	13.54	0.33	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Fourth	R1	Residential	Unknown	W1	3.89	3.05	0.84	0.78
				W2	6.11	5.72	0.39	0.94
				W3	15.51	15.18	0.33	0.98
Fifth	R1	Residential	Unknown	W1	4.84	3.99	0.85	0.82
				W2	8.28	7.88	0.40	0.95
				W3	17.53	17.20	0.33	0.98
Sixth	R1	Residential	Unknown	W1	5.90	5.05	0.85	0.86
				W2	10.88	10.48	0.40	0.96
				W3	19.96	19.62	0.34	0.98
Seventh	R1	Residential	Unknown	W1	7.10	6.24	0.86	0.88
				W2	13.89	13.49	0.40	0.97
				W3	22.84	22.51	0.33	0.99
Eighth	R1	Residential	Unknown	W1	9.13	8.27	0.86	0.91
				W2	17.30	16.91	0.39	0.98
				W3	26.13	25.80	0.33	0.99
Ninth	R1	Residential	Unknown	W1	11.44	10.60	0.84	0.93
				W2	20.23	19.85	0.38	0.98
				W3	29.71	29.38	0.33	0.99
Tenth	R1	Residential	Unknown	W1	21.78	20.95	0.83	0.96
				W2	28.47	28.10	0.37	0.99
				W3	33.23	32.91	0.32	0.99
Melia House								
First	R1	Residential	Unknown	W1	7.86	7.86	0.00	1.00
	R2	Residential	Unknown	W2	11.67	11.68	-0.01	1.00
	R3	Residential	Unknown	W3	12.48	11.11	1.37	0.89
				W4	11.17	8.79	2.38	0.79
	R4	Residential	Unknown	W5	5.37	1.58	3.79	0.29
				W6	6.44	6.24	0.20	0.97
	R5	Residential	Unknown	W7	1.67	1.67	0.00	1.00
	R6	Residential	Unknown	W8	5.96	5.96	0.00	1.00
	R7	Residential	Unknown	W9	4.31	3.84	0.47	0.89

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W10	10.09	10.02	0.07	0.99
Second	R1	Residential	Unknown	W1	8.51	8.51	0.00	1.00
	R2	Residential	Unknown	W2	12.45	12.46	-0.01	1.00
	R3	Residential	Unknown	W3	13.19	11.81	1.38	0.90
				W4	11.71	9.31	2.40	0.80
	R4	Residential	Unknown	W5	5.68	1.76	3.92	0.31
				W6	7.35	7.14	0.21	0.97
	R5	Residential	Unknown	W7	2.12	2.12	0.00	1.00
	R6	Residential	Unknown	W8	7.14	7.14	0.00	1.00
	R7	Residential	Unknown	W9	5.33	4.86	0.47	0.91
				W10	11.11	11.04	0.07	0.99
Third	R1	Residential	Unknown	W1	9.03	9.03	0.00	1.00
	R2	Residential	Unknown	W2	13.16	13.15	0.01	1.00
	R3	Residential	Unknown	W3	13.86	12.47	1.39	0.90
				W4	12.21	9.78	2.43	0.80
	R4	Residential	Unknown	W5	5.99	2.02	3.97	0.34
				W6	8.45	8.24	0.21	0.98
	R5	Residential	Unknown	W7	2.69	2.69	0.00	1.00
	R6	Residential	Unknown	W8	8.58	8.58	0.00	1.00
	R7	Residential	Unknown	W9	6.65	6.19	0.46	0.93
				W10	12.41	12.34	0.07	0.99
Fourth	R1	Residential	Unknown	W1	9.52	9.52	0.00	1.00
	R2	Residential	Unknown	W2	13.79	13.78	0.01	1.00
	R3	Residential	Unknown	W3	14.48	13.08	1.40	0.90
				W4	12.65	10.20	2.45	0.81
	R4	Residential	Unknown	W5	6.29	2.28	4.01	0.36
				W6	9.81	9.60	0.21	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W7	3.37	3.37	0.00	1.00
	R6	Residential	Unknown	W8	10.41	10.41	0.00	1.00
	R7	Residential	Unknown	W9	8.43	7.98	0.45	0.95
				W10	14.11	14.04	0.07	1.00
Fifth	R1	Residential	Unknown	W1	10.05	10.05	0.00	1.00
	R2	Residential	Unknown	W2	14.40	14.38	0.02	1.00
	R3	Residential	Unknown	W3	15.10	13.71	1.39	0.91
				W4	13.03	10.58	2.45	0.81
	R4	Residential	Unknown	W5	6.56	2.53	4.03	0.39
				W6	11.53	11.32	0.21	0.98
	R5	Residential	Unknown	W7	4.05	3.81	0.24	0.94
	R6	Residential	Unknown	W8	12.63	12.40	0.23	0.98
	R7	Residential	Unknown	W9	10.66	10.04	0.62	0.94
				W10	16.30	16.23	0.07	1.00
Sixth	R1	Residential	Unknown	W1	13.27	13.27	0.00	1.00
	R2	Residential	Unknown	W2	15.06	15.04	0.02	1.00
	R3	Residential	Unknown	W3	15.51	14.20	1.31	0.92
				W4	13.16	10.83	2.33	0.82
	R4	Residential	Unknown	W5	8.79	4.92	3.87	0.56
				W6	13.69	13.50	0.19	0.99
	R5	Residential	Unknown	W7	4.70	4.18	0.52	0.89
	R6	Residential	Unknown	W8	13.43	12.80	0.63	0.95
	R7	Residential	Unknown	W9	18.10	17.10	1.00	0.94
				W10	19.08	19.01	0.07	1.00
Seventh	R1	Residential	Unknown	W1	2.09	2.09	0.00	1.00
	R2	Residential	Unknown	W2	6.45	6.29	0.16	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R3	Residential	Unknown	W3	6.91	5.61	1.30	0.81
				W4	4.57	3.02	1.55	0.66
	R4	Residential	Unknown	W5	17.04	13.57	3.47	0.80
				W6	17.04	13.05	3.99	0.77
	R5	Residential	Unknown	W7	5.81	4.89	0.92	0.84
	R6	Residential	Unknown	W8	9.36	8.18	1.18	0.87
	R7	Residential	Unknown	W9	17.01	15.57	1.44	0.92
Eighth	R1	Residential	Unknown	W1	6.57	5.44	1.13	0.83
	R2	Residential	Unknown	W2	13.04	11.62	1.42	0.89
	R3	Residential	Unknown	W3	20.75	19.11	1.64	0.92
Ninth	R1	Residential	Unknown	W1	6.77	5.64	1.13	0.83
	R2	Residential	Unknown	W2	14.97	13.58	1.39	0.91
	R3	Residential	Unknown	W3	20.83	19.22	1.61	0.92

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
St Chads Church											
Ground	R1	Pastoral	12.83	138.13	11.85	127.51	0.92	11.74	0.10	1.11	0.99
	R2	Pastoral	18.67	200.96	17.19	185.03	0.92	16.91	0.28	3.03	0.98
	R3	Pastoral	34.04	366.42	33.95	365.49	1.00	33.95	0.01	0.07	1.00
First	R1	Pastoral	23.49	252.88	23.49	252.87	1.00	23.49	0.00	0.00	1.00
	R2	Pastoral	12.83	138.13	12.83	138.13	1.00	12.83	0.00	0.00	1.00
	R3	Pastoral	18.67	200.96	18.31	197.09	0.98	18.31	0.00	0.00	1.00
Britton House											
Ground	R1	LKD	26.05	280.41	26.04	280.32	1.00	25.70	0.34	3.67	0.99
	R2	Bedroom	11.06	119.04	10.82	116.49	0.98	7.56	3.26	35.11	0.70
	R3	Bedroom	10.79	116.16	9.73	104.72	0.90	2.78	6.95	74.80	0.29
	R4	LKD	24.53	264.00	24.17	260.14	0.99	18.63	5.53	59.56	0.77
	R5	Bedroom	9.18	98.79	1.93	20.74	0.21	1.93	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.14	55.38	0.47	4.76	0.38	4.12	0.93
	R7	LKD	12.92	139.04	5.15	55.47	0.40	4.54	0.61	6.57	0.88
	R8	Bedroom	10.61	114.25	4.65	50.10	0.44	4.62	0.03	0.37	0.99
	R9	LKD	22.89	246.35	14.44	155.44	0.63	14.44	0.00	0.00	1.00
	R10	LKD	25.28	272.07	12.22	131.49	0.48	11.86	0.35	3.81	0.97
	R11	Bedroom	9.41	101.34	7.22	77.75	0.77	7.22	0.00	0.00	1.00
	R12	LKD	16.40	176.49	8.76	94.33	0.53	8.76	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.08	54.69	0.85	5.08	0.00	0.00	1.00
First	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.15	0.75	8.02	0.97
	R2	Bedroom	11.23	120.87	11.01	118.50	0.98	7.67	3.34	35.97	0.70
	R3	Bedroom	10.98	118.17	9.97	107.32	0.91	2.48	7.49	80.64	0.25
	R4	LKD	24.53	264.00	24.21	260.59	0.99	21.21	2.99	32.23	0.88
	R5	Bedroom	9.18	98.79	2.06	22.14	0.22	2.06	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.24	56.43	0.48	4.86	0.38	4.12	0.93
	R7	LKD	13.34	143.54	4.33	46.60	0.32	4.33	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.43	47.73	0.43	4.40	0.03	0.35	0.99
	R9	LKD	22.89	246.35	14.27	153.60	0.62	14.27	0.00	0.00	1.00
	R10	LKD	25.28	272.07	13.06	140.59	0.52	12.71	0.35	3.79	0.97
	R11	Bedroom	9.41	101.34	7.24	77.88	0.77	7.24	0.00	0.00	1.00
	R12	LKD	16.40	176.49	9.54	102.68	0.58	9.54	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.10	54.87	0.85	5.10	0.00	0.00	1.00
Second	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.15	0.74	8.01	0.97
	R2	Bedroom	11.24	120.94	11.02	118.65	0.98	7.67	3.35	36.05	0.70
	R3	Bedroom	10.98	118.17	9.97	107.35	0.91	2.27	7.70	82.89	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	21.24	2.99	32.20	0.88
	R5	Bedroom	9.18	98.79	2.16	23.28	0.24	2.16	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.35	57.60	0.49	4.97	0.38	4.05	0.93
	R7	LKD	13.34	143.54	4.52	48.62	0.34	4.52	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.50	48.47	0.44	4.47	0.03	0.34	0.99
	R9	LKD	22.89	246.35	14.41	155.13	0.63	14.41	0.00	0.00	1.00
	R10	LKD	25.28	272.07	14.45	155.49	0.57	14.10	0.35	3.73	0.98
	R11	Bedroom	9.41	101.34	7.29	78.48	0.77	7.29	0.00	0.00	1.00
	R12	LKD	16.40	176.49	10.42	112.19	0.64	10.42	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.13	55.19	0.86	5.13	0.00	0.00	1.00
Third	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.20	0.70	7.56	0.97
	R2	Bedroom	11.23	120.87	11.02	118.59	0.98	7.68	3.33	35.89	0.70
	R3	Bedroom	10.98	118.17	9.97	107.37	0.91	2.27	7.70	82.89	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	21.24	2.99	32.13	0.88
	R5	Bedroom	9.18	98.79	2.27	24.46	0.25	2.27	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.44	58.50	0.50	5.06	0.37	4.03	0.93
	R7	LKD	13.34	143.54	4.58	49.26	0.34	4.58	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.52	48.63	0.44	4.49	0.03	0.33	0.99
	R9	LKD	22.89	246.35	14.55	156.64	0.64	14.55	0.00	0.00	1.00
	R10	LKD	25.28	272.07	16.58	178.48	0.66	16.28	0.30	3.24	0.98
	R11	Bedroom	9.41	101.34	7.35	79.15	0.78	7.35	0.00	0.00	1.00
	R12	LKD	16.40	176.49	10.76	115.82	0.66	10.76	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.14	55.35	0.86	5.14	0.00	0.00	1.00
Fourth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.20	0.70	7.53	0.97

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R2	Bedroom	11.23	120.87	11.01	118.53	0.98	7.67	3.34	35.92	0.70
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.82	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	21.25	2.98	32.05	0.88
	R5	Bedroom	9.18	98.79	2.43	26.20	0.27	2.43	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.68	61.17	0.52	5.31	0.37	3.96	0.94
	R7	LKD	13.34	143.54	4.66	50.21	0.35	4.66	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.60	49.52	0.45	4.58	0.03	0.28	0.99
	R9	LKD	22.89	246.35	14.65	157.70	0.64	14.65	0.00	0.00	1.00
	R10	LKD	25.28	272.07	19.43	209.11	0.77	19.20	0.22	2.41	0.99
	R11	Bedroom	9.41	101.34	7.52	80.91	0.80	7.52	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.07	119.20	0.68	11.07	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.19	55.91	0.87	5.19	0.00	0.00	1.00
Fifth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.26	0.63	6.83	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.70	3.32	35.77	0.70
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.80	0.23
	R4	LKD	24.53	264.00	24.23	260.85	0.99	21.49	2.74	29.54	0.89
	R5	Bedroom	9.18	98.79	2.59	27.92	0.28	2.59	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.89	63.38	0.54	5.53	0.36	3.89	0.94
	R7	LKD	13.34	143.54	4.77	51.30	0.36	4.77	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.71	50.74	0.46	4.69	0.02	0.25	1.00
	R9	LKD	22.89	246.35	14.69	158.07	0.64	14.69	0.00	0.00	1.00
	R10	LKD	25.28	272.07	21.51	231.48	0.85	21.36	0.15	1.60	0.99
	R11	Bedroom	9.41	101.34	7.68	82.70	0.82	7.68	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.42	122.95	0.70	11.42	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.20	55.98	0.87	5.20	0.00	0.00	1.00
Sixth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.29	0.61	6.56	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.73	3.28	35.33	0.70
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.79	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	22.04	2.18	23.52	0.91
	R5	Bedroom	9.18	98.79	2.75	29.56	0.30	2.75	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	6.19	66.66	0.57	5.85	0.35	3.73	0.94
	R7	LKD	13.34	143.54	4.95	53.29	0.37	4.95	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	4.90	52.71	0.48	4.87	0.02	0.24	1.00
	R9	LKD	22.89	246.35	14.74	158.70	0.64	14.74	0.00	0.00	1.00
	R10	LKD	25.28	272.07	23.05	248.16	0.91	22.92	0.14	1.48	0.99
	R11	Bedroom	9.41	101.34	7.87	84.68	0.84	7.87	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.53	124.13	0.70	11.53	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.20	56.02	0.87	5.20	0.00	0.00	1.00
Seventh	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.29	0.60	6.50	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.79	3.23	34.80	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.70	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	23.40	0.83	8.94	0.97
	R5	Bedroom	9.18	98.79	3.05	32.79	0.33	3.05	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	6.69	72.02	0.62	6.36	0.33	3.59	0.95
	R7	LKD	13.34	143.54	5.23	56.28	0.39	5.23	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	5.18	55.74	0.50	5.16	0.02	0.24	1.00
	R9	LKD	22.89	246.35	14.76	158.89	0.64	14.76	0.00	0.00	1.00
	R10	LKD	25.28	272.07	23.55	253.52	0.93	23.42	0.13	1.39	0.99
	R11	Bedroom	9.41	101.34	8.07	86.81	0.86	8.07	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.56	124.48	0.71	11.56	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.21	56.11	0.87	5.21	0.00	0.00	1.00
Eighth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.42	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.81	3.20	34.47	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.68	0.23
	R4	LKD	24.53	264.00	24.23	260.80	0.99	24.22	0.01	0.12	1.00
	R5	Bedroom	9.18	98.79	3.60	38.79	0.39	3.60	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	7.46	80.34	0.69	7.17	0.30	3.19	0.96
	R7	LKD	13.34	143.54	5.68	61.12	0.43	5.68	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	5.71	61.44	0.55	5.69	0.02	0.24	1.00
	R9	LKD	22.89	246.35	15.06	162.11	0.66	15.06	0.00	0.00	1.00
	R10	LKD	25.28	272.07	23.65	254.56	0.94	23.52	0.13	1.35	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R11	Bedroom	9.41	101.34	8.16	87.82	0.87	8.16	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.60	124.86	0.71	11.60	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.22	56.15	0.87	5.22	0.00	0.00	1.00
Ninth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.42	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.81	3.20	34.43	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.68	0.23
	R4	LKD	24.53	264.00	24.24	260.88	0.99	24.24	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.17	44.93	0.45	4.17	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.50	91.48	0.78	8.24	0.25	2.74	0.97
	R7	LKD	13.34	143.54	6.35	68.35	0.48	6.35	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	6.52	70.18	0.63	6.50	0.02	0.24	1.00
	R9	LKD	22.89	246.35	16.43	176.90	0.72	16.43	0.00	0.00	1.00
	R10	LKD	25.28	272.07	23.72	255.30	0.94	23.60	0.12	1.32	0.99
	R11	Bedroom	9.41	101.34	8.25	88.85	0.88	8.25	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.64	125.29	0.71	11.64	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.22	56.16	0.87	5.22	0.00	0.00	1.00
Tenth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.59	6.40	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.83	3.19	34.36	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.31	7.67	82.55	0.23
	R4	LKD	24.53	264.00	24.39	262.53	0.99	24.39	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.60	49.54	0.50	4.60	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.71	93.75	0.80	8.53	0.18	1.90	0.98
	R7	LKD	13.34	143.54	7.14	76.84	0.54	7.14	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	6.81	73.33	0.66	6.79	0.02	0.23	1.00
	R9	LKD	22.89	246.35	19.65	211.54	0.86	19.65	0.00	0.00	1.00
	R10	LKD	25.28	272.07	23.99	258.19	0.95	23.87	0.12	1.31	0.99
	R11	Bedroom	9.41	101.34	8.36	90.04	0.89	8.36	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.65	125.42	0.71	11.65	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.22	56.17	0.87	5.22	0.00	0.00	1.00
Eleventh	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.31	0.59	6.38	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.82	3.19	34.37	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.31	7.66	82.49	0.23
	R4	LKD	24.53	264.00	24.51	263.82	1.00	24.51	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.54	48.92	0.50	4.54	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.71	93.75	0.80	8.52	0.19	2.01	0.98
	R7	LKD	13.34	143.54	7.39	79.59	0.55	7.39	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	6.95	74.77	0.68	6.93	0.02	0.20	1.00
	R9	LKD	22.89	246.35	21.22	228.41	0.93	21.22	0.00	0.00	1.00
	R10	LKD	25.28	272.07	24.15	259.97	0.96	24.03	0.12	1.30	0.99
	R11	Bedroom	9.41	101.34	8.40	90.39	0.89	8.40	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.66	125.56	0.71	11.66	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.23	56.30	0.87	5.23	0.00	0.00	1.00
Twelfth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.31	0.59	6.30	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.81	3.21	34.52	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.34	7.64	82.24	0.23
	R4	LKD	24.53	264.00	24.53	264.00	1.00	24.53	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.72	50.76	0.51	4.72	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.77	94.37	0.81	8.58	0.18	1.98	0.98
	R7	LKD	13.34	143.54	7.63	82.09	0.57	7.63	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	7.03	75.68	0.68	7.01	0.02	0.19	1.00
	R9	LKD	22.89	246.35	21.47	231.11	0.94	21.47	0.00	0.00	1.00
	R10	LKD	25.28	272.07	24.50	263.67	0.97	24.45	0.05	0.49	1.00
	R11	Bedroom	9.41	101.34	8.41	90.48	0.89	8.41	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.71	126.05	0.71	11.71	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.26	56.61	0.88	5.26	0.00	0.00	1.00
Thirteenth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.47	0.43	4.58	0.98
	R2	Bedroom	11.23	120.87	11.03	118.69	0.98	7.85	3.18	34.19	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.36	7.62	82.03	0.24
	R4	LKD	24.53	264.00	24.53	264.00	1.00	24.53	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	5.02	54.00	0.55	5.02	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.91	95.87	0.82	8.73	0.17	1.86	0.98

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R7	LKD	13.34	143.54	7.81	84.07	0.59	7.81	0.00	0.00	1.00
	R8	Bedroom	10.29	110.73	7.11	76.57	0.69	7.10	0.02	0.19	1.00
	R9	LKD	22.89	246.35	21.64	232.97	0.95	21.64	0.00	0.00	1.00
	R10	LKD	25.28	272.07	24.54	264.19	0.97	24.49	0.05	0.55	1.00
	R11	Bedroom	9.41	101.34	8.40	90.39	0.89	8.40	0.00	0.00	1.00
	R12	LKD	16.40	176.49	11.81	127.12	0.72	11.81	0.00	0.00	1.00
	R13	Bedroom	5.98	64.39	5.33	57.38	0.89	5.33	0.00	0.00	1.00
Fourteenth	R1	Unknown	19.59	210.85	19.59	210.85	1.00	19.21	0.37	4.02	0.98
	R2	LKD	24.14	259.88	23.59	253.93	0.98	23.20	0.39	4.19	0.98
	R3	Bedroom	8.18	88.03	8.09	87.06	0.99	7.89	0.20	2.11	0.98
	R4	LKD	10.55	113.59	9.89	106.48	0.94	9.89	0.00	0.01	1.00
	R5	Bedroom	9.71	104.52	9.16	98.61	0.94	9.15	0.01	0.14	1.00
	R6	LKD	20.82	224.06	18.16	195.49	0.87	18.16	0.00	0.00	1.00
	R7	LKD	12.93	139.21	10.73	115.50	0.83	10.72	0.01	0.07	1.00
	R8	Bedroom	8.08	87.00	7.83	84.26	0.97	7.79	0.03	0.37	1.00
Fifteenth	R1	Bedroom	8.08	87.00	7.86	84.60	0.97	7.81	0.04	0.48	0.99
Sixteenth	R1	Bedroom	8.08	87.00	7.86	84.60	0.97	7.82	0.04	0.48	0.99
Jefferson Pl											
Lower Ground	R1	Unknown	29.56	318.18	18.79	202.27	0.64	18.79	0.00	0.00	1.00
Ground	R1	Unknown	53.15	572.08	52.38	563.80	0.99	52.38	0.00	0.00	1.00
First	R1	Unknown	29.65	319.14	17.19	185.06	0.58	11.03	6.16	66.31	0.64
	R2	Unknown	28.95	311.65	22.40	241.06	0.77	17.30	5.09	54.84	0.77
	R3	Unknown	11.36	122.29	8.68	93.39	0.76	7.92	0.75	8.12	0.91
	R4	Unknown	5.50	59.18	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	R5	Unknown	39.67	426.97	39.64	426.66	1.00	39.54	0.09	1.01	1.00
	R6	Unknown	13.33	143.51	9.96	107.23	0.75	10.30	-0.34	-3.62	1.03
	R7	Unknown	8.13	87.51	7.16	77.12	0.88	6.86	0.31	3.30	0.96
	R8	Unknown	25.99	279.79	24.86	267.62	0.96	23.98	0.89	9.55	0.96
	R9	Unknown	11.67	125.61	9.81	105.64	0.84	9.60	0.22	2.34	0.98
	R10	Unknown	25.25	271.78	21.30	229.31	0.84	21.30	0.00	0.01	1.00
	R11	Unknown	27.56	296.70	24.25	261.00	0.88	23.55	0.70	7.56	0.97
	R12	Unknown	10.50	112.97	8.69	93.58	0.83	8.62	0.07	0.80	0.99
	R13	Unknown	10.08	108.52	9.40	101.22	0.93	8.78	0.62	6.70	0.93
	R14	Unknown	24.75	266.45	21.02	226.24	0.85	21.02	0.00	0.00	1.00
	R15	Unknown	26.36	283.70	23.57	253.73	0.89	23.31	0.26	2.78	0.99
	R16	Unknown	7.96	85.64	5.17	55.68	0.65	5.17	0.00	0.01	1.00
	R17	Unknown	12.80	137.75	10.15	109.29	0.79	9.89	0.26	2.81	0.97
	R18	Unknown	11.30	121.66	11.15	120.00	0.99	10.96	0.19	2.05	0.98
	R19	Unknown	7.90	85.02	5.63	60.59	0.71	5.48	0.15	1.58	0.97
	R20	Unknown	25.11	270.25	18.90	203.48	0.75	18.90	0.00	0.00	1.00
	R21	Unknown	12.36	133.02	3.69	39.72	0.30	3.58	0.11	1.13	0.97
	R22	Unknown	8.40	90.45	3.13	33.71	0.37	2.88	0.25	2.70	0.92
	R23	Unknown	25.06	269.76	17.96	193.36	0.72	17.96	0.00	0.00	1.00
Second	R1	Unknown	29.65	319.14	17.29	186.10	0.58	11.16	6.13	65.99	0.65
	R2	Unknown	28.39	305.58	22.50	242.16	0.79	17.16	5.33	57.41	0.76
	R3	Unknown	22.02	237.05	21.81	234.78	0.99	19.32	2.49	26.84	0.89
	R4	Unknown	11.03	118.78	9.72	104.66	0.88	8.42	1.31	14.05	0.87
	R5	Unknown	5.62	60.50	5.11	54.98	0.91	5.03	0.08	0.88	0.98
	R6	Unknown	20.46	220.27	20.28	218.28	0.99	20.25	0.03	0.30	1.00
	R7	Unknown	8.99	96.75	5.63	60.63	0.63	5.63	0.00	0.00	1.00
	R8	Unknown	10.69	115.09	7.02	75.58	0.66	7.02	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	9.97	107.29	0.75	9.99	-0.02	-0.20	1.00
	R10	Unknown	8.13	87.51	7.17	77.15	0.88	6.86	0.31	3.30	0.96
	R11	Unknown	25.99	279.79	24.86	267.58	0.96	23.98	0.88	9.50	0.96
	R12	Unknown	11.67	125.61	9.83	105.78	0.84	9.62	0.21	2.28	0.98
	R13	Unknown	25.27	271.96	23.48	252.77	0.93	23.47	0.01	0.09	1.00
	R14	Unknown	27.56	296.70	26.18	281.79	0.95	25.49	0.69	7.46	0.97
	R15	Unknown	10.50	112.97	8.74	94.07	0.83	8.67	0.07	0.71	0.99
	R16	Unknown	10.08	108.52	9.44	101.58	0.94	8.83	0.61	6.57	0.94
	R17	Unknown	24.75	266.45	21.41	230.49	0.87	21.41	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.76	266.53	0.94	24.51	0.25	2.70	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R19	Unknown	7.96	85.64	5.14	55.34	0.65	5.14	0.00	0.02	1.00
	R20	Unknown	12.80	137.75	10.28	110.68	0.80	10.03	0.25	2.72	0.98
	R21	Unknown	11.30	121.66	11.10	119.52	0.98	10.92	0.18	1.99	0.98
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	5.48	0.14	1.56	0.97
	R23	Unknown	25.11	270.25	18.86	203.04	0.75	18.86	0.00	0.00	1.00
	R24	Unknown	19.79	213.00	14.65	157.67	0.74	14.65	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	3.64	39.17	0.29	3.54	0.10	1.03	0.97
	R26	Unknown	8.40	90.45	3.28	35.32	0.39	3.06	0.23	2.43	0.93
	R27	Unknown	25.06	269.76	19.97	214.96	0.80	19.97	0.00	0.00	1.00
Third	R1	Unknown	29.65	319.14	17.35	186.77	0.59	11.28	6.07	65.34	0.65
	R2	Unknown	28.39	305.58	22.57	242.93	0.79	17.17	5.40	58.07	0.76
	R3	Unknown	22.02	237.05	21.92	235.90	1.00	19.41	2.51	27.02	0.89
	R4	Unknown	11.03	118.78	9.75	104.95	0.88	8.45	1.30	13.98	0.87
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.03	0.08	0.87	0.98
	R6	Unknown	20.46	220.27	20.29	218.42	0.99	20.26	0.03	0.31	1.00
	R7	Unknown	8.99	96.75	5.74	61.75	0.64	5.74	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.10	76.48	0.66	7.10	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.01	107.78	0.75	10.02	0.00	-0.05	1.00
	R10	Unknown	8.13	87.51	7.16	77.07	0.88	6.86	0.30	3.26	0.96
	R11	Unknown	25.99	279.79	24.78	266.78	0.95	23.91	0.88	9.45	0.96
	R12	Unknown	11.67	125.61	9.88	106.37	0.85	9.70	0.18	1.97	0.98
	R13	Unknown	25.73	276.94	24.12	259.63	0.94	24.10	0.02	0.25	1.00
	R14	Unknown	27.56	296.70	26.20	281.97	0.95	25.50	0.70	7.51	0.97
	R15	Unknown	10.50	112.97	8.73	94.01	0.83	8.68	0.05	0.54	0.99
	R16	Unknown	10.08	108.52	9.40	101.23	0.93	8.83	0.57	6.17	0.94
	R17	Unknown	24.75	266.45	21.59	232.41	0.87	21.59	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.80	266.96	0.94	24.55	0.25	2.66	0.99
	R19	Unknown	7.96	85.64	5.23	56.33	0.66	5.23	0.00	0.01	1.00
	R20	Unknown	12.80	137.75	10.20	109.78	0.80	9.97	0.23	2.49	0.98
	R21	Unknown	11.30	121.66	11.15	120.05	0.99	10.98	0.18	1.90	0.98
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	5.45	0.15	1.56	0.97
	R23	Unknown	25.11	270.25	18.76	201.92	0.75	18.76	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.81	159.44	0.74	14.81	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	3.76	40.47	0.30	3.69	0.07	0.80	0.98
	R26	Unknown	8.40	90.45	3.18	34.26	0.38	2.95	0.23	2.49	0.93
	R27	Unknown	25.06	269.76	21.28	229.07	0.85	21.28	0.00	0.00	1.00
Fourth	R1	Unknown	29.65	319.14	17.38	187.04	0.59	11.37	6.00	64.61	0.65
	R2	Unknown	28.39	305.58	22.95	247.06	0.81	17.59	5.37	57.77	0.77
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.42	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	9.79	105.42	0.89	8.51	1.29	13.83	0.87
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.03	0.08	0.84	0.98
	R6	Unknown	20.46	220.27	20.30	218.52	0.99	20.27	0.03	0.28	1.00
	R7	Unknown	8.99	96.75	5.87	63.18	0.65	5.87	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.20	77.49	0.67	7.20	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.02	107.85	0.75	10.02	0.00	-0.01	1.00
	R10	Unknown	8.13	87.51	7.16	77.08	0.88	6.88	0.28	3.05	0.96
	R11	Unknown	25.99	279.79	24.83	267.30	0.96	23.95	0.88	9.48	0.96
	R12	Unknown	11.67	125.61	9.90	106.52	0.85	9.73	0.17	1.81	0.98
	R13	Unknown	25.27	271.96	23.69	255.04	0.94	23.68	0.02	0.17	1.00
	R14	Unknown	27.56	296.70	26.20	281.99	0.95	25.50	0.70	7.49	0.97
	R15	Unknown	10.50	112.97	8.78	94.52	0.84	8.75	0.03	0.38	1.00
	R16	Unknown	10.08	108.52	9.42	101.43	0.93	8.87	0.55	5.93	0.94
	R17	Unknown	24.75	266.45	21.59	232.44	0.87	21.59	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.80	266.99	0.94	24.57	0.24	2.55	0.99
	R19	Unknown	7.96	85.64	5.26	56.59	0.66	5.26	0.00	0.01	1.00
	R20	Unknown	12.80	137.75	10.22	110.05	0.80	10.02	0.20	2.20	0.98
	R21	Unknown	11.30	121.66	11.16	120.10	0.99	10.99	0.17	1.84	0.98
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	5.48	0.12	1.25	0.98
	R23	Unknown	25.11	270.25	18.77	202.09	0.75	18.77	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.85	159.87	0.75	14.85	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	3.80	40.88	0.31	3.75	0.05	0.54	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R26	Unknown	8.40	90.45	3.20	34.47	0.38	2.99	0.21	2.24	0.93
	R27	Unknown	25.06	269.76	22.68	244.11	0.90	22.68	0.00	0.00	1.00
Fifth	R1	Unknown	29.65	319.14	17.42	187.56	0.59	11.45	5.97	64.28	0.66
	R2	Unknown	28.39	305.58	23.26	250.35	0.82	18.01	5.24	56.45	0.77
	R3	Unknown	22.02	237.05	21.84	235.10	0.99	19.32	2.52	27.17	0.88
	R4	Unknown	11.03	118.78	9.84	105.96	0.89	8.57	1.28	13.75	0.87
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.04	0.07	0.75	0.99
	R6	Unknown	20.46	220.27	20.33	218.81	0.99	20.31	0.01	0.15	1.00
	R7	Unknown	8.99	96.75	6.03	64.89	0.67	6.03	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.35	79.09	0.69	7.35	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.02	107.88	0.75	10.02	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.16	77.08	0.88	6.90	0.27	2.86	0.96
	R11	Unknown	25.99	279.79	24.95	268.55	0.96	24.08	0.87	9.33	0.97
	R12	Unknown	11.67	125.61	9.92	106.78	0.85	9.76	0.16	1.68	0.98
	R13	Unknown	25.27	271.96	23.71	255.18	0.94	23.69	0.02	0.17	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.51	0.69	7.42	0.97
	R15	Unknown	10.50	112.97	8.90	95.80	0.85	8.88	0.02	0.26	1.00
	R16	Unknown	10.08	108.52	9.51	102.41	0.94	8.99	0.53	5.67	0.94
	R17	Unknown	24.75	266.45	21.43	230.66	0.87	21.43	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.81	267.05	0.94	24.58	0.23	2.46	0.99
	R19	Unknown	7.96	85.64	5.27	56.70	0.66	5.27	0.00	0.02	1.00
	R20	Unknown	12.80	137.75	10.48	112.77	0.82	10.29	0.18	1.99	0.98
	R21	Unknown	11.30	121.66	11.12	119.71	0.98	10.97	0.15	1.58	0.99
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	5.50	0.09	1.01	0.98
	R23	Unknown	25.11	270.25	18.86	203.01	0.75	18.86	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.86	159.97	0.75	14.86	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	3.82	41.10	0.31	3.79	0.02	0.25	0.99
	R26	Unknown	8.40	90.45	3.33	35.80	0.40	3.16	0.17	1.79	0.95
	R27	Unknown	25.06	269.76	23.13	248.92	0.92	23.13	0.00	0.00	1.00
Sixth	R1	Unknown	29.65	319.14	17.57	189.16	0.59	11.68	5.89	63.44	0.66
	R2	Unknown	28.39	305.58	23.35	251.33	0.82	18.09	5.26	56.66	0.77
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	9.97	107.27	0.90	8.71	1.26	13.54	0.87
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.05	0.06	0.61	0.99
	R6	Unknown	20.46	220.27	20.38	219.37	1.00	20.37	0.01	0.06	1.00
	R7	Unknown	8.99	96.75	6.13	65.97	0.68	6.13	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.42	79.88	0.69	7.42	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	9.99	107.54	0.75	9.99	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.17	77.20	0.88	6.94	0.23	2.52	0.97
	R11	Unknown	25.99	279.79	25.06	269.78	0.96	24.22	0.85	9.13	0.97
	R12	Unknown	11.67	125.61	9.91	106.68	0.85	9.75	0.16	1.69	0.98
	R13	Unknown	25.27	271.96	23.53	253.32	0.93	23.53	0.00	0.04	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.53	0.68	7.28	0.97
	R15	Unknown	10.50	112.97	9.08	97.79	0.87	9.06	0.03	0.29	1.00
	R16	Unknown	10.08	108.52	9.58	103.14	0.95	9.13	0.45	4.83	0.95
	R17	Unknown	24.75	266.45	21.46	231.00	0.87	21.46	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.83	267.30	0.94	24.62	0.21	2.31	0.99
	R19	Unknown	7.96	85.64	5.51	59.36	0.69	5.51	0.00	0.01	1.00
	R20	Unknown	12.80	137.75	10.40	111.92	0.81	10.24	0.15	1.67	0.99
	R21	Unknown	11.30	121.66	11.17	120.24	0.99	11.04	0.13	1.45	0.99
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	5.59	0.04	0.41	0.99
	R23	Unknown	25.11	270.25	18.78	202.13	0.75	18.78	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.87	160.04	0.75	14.87	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	3.96	42.64	0.32	3.94	0.02	0.22	0.99
	R26	Unknown	8.40	90.45	3.21	34.57	0.38	3.04	0.17	1.81	0.95
	R27	Unknown	25.06	269.76	23.41	252.03	0.93	23.41	0.00	0.00	1.00
Seventh	R1	Unknown	29.65	319.14	17.64	189.90	0.60	11.87	5.77	62.09	0.67
	R2	Unknown	28.39	305.58	23.47	252.61	0.83	18.26	5.21	56.04	0.78
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.06	108.28	0.91	8.82	1.24	13.36	0.88
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.06	0.05	0.54	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R6	Unknown	20.46	220.27	20.38	219.38	1.00	20.38	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	6.42	69.07	0.71	6.42	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.67	82.55	0.72	7.67	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	9.99	107.55	0.75	9.99	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.18	77.27	0.88	6.95	0.23	2.51	0.97
	R11	Unknown	25.99	279.79	25.06	269.80	0.96	24.23	0.84	9.02	0.97
	R12	Unknown	11.67	125.61	9.96	107.23	0.85	9.82	0.14	1.52	0.99
	R13	Unknown	25.27	271.96	23.55	253.49	0.93	23.54	0.01	0.09	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.54	0.66	7.11	0.97
	R15	Unknown	10.50	112.97	9.21	99.12	0.88	9.20	0.01	0.14	1.00
	R16	Unknown	10.08	108.52	9.62	103.53	0.95	9.24	0.38	4.10	0.96
	R17	Unknown	24.75	266.45	21.45	230.91	0.87	21.45	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.85	267.49	0.94	24.64	0.21	2.25	0.99
	R19	Unknown	7.96	85.64	5.61	60.43	0.71	5.61	0.00	0.01	1.00
	R20	Unknown	12.80	137.75	10.51	113.12	0.82	10.39	0.12	1.31	0.99
	R21	Unknown	11.30	121.66	11.17	120.26	0.99	11.07	0.10	1.10	0.99
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	5.62	0.01	0.13	1.00
	R23	Unknown	25.11	270.25	18.78	202.13	0.75	18.78	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.86	159.95	0.75	14.86	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	4.06	43.67	0.33	4.04	0.01	0.15	1.00
	R26	Unknown	8.40	90.45	3.22	34.67	0.38	3.08	0.14	1.46	0.96
	R27	Unknown	25.06	269.76	23.58	253.82	0.94	23.58	0.00	0.00	1.00
Eighth	R1	Unknown	29.65	319.14	17.78	191.34	0.60	12.15	5.62	60.51	0.68
	R2	Unknown	28.39	305.58	23.62	254.29	0.83	18.52	5.10	54.95	0.78
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.15	109.25	0.92	8.94	1.21	13.05	0.88
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.06	0.05	0.51	0.99
	R6	Unknown	20.46	220.27	20.44	219.97	1.00	20.44	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	6.84	73.58	0.76	6.84	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	7.83	84.30	0.73	7.83	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.00	107.59	0.75	10.00	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.21	77.61	0.89	7.00	0.21	2.25	0.97
	R11	Unknown	25.99	279.79	25.07	269.82	0.96	24.26	0.80	8.65	0.97
	R12	Unknown	11.67	125.61	10.02	107.90	0.86	9.91	0.11	1.22	0.99
	R13	Unknown	25.27	271.96	23.58	253.80	0.93	23.58	0.00	0.01	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.56	0.64	6.88	0.98
	R15	Unknown	10.50	112.97	9.43	101.55	0.90	9.43	0.01	0.08	1.00
	R16	Unknown	10.08	108.52	9.63	103.69	0.96	9.27	0.36	3.91	0.96
	R17	Unknown	24.75	266.45	21.49	231.27	0.87	21.49	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.85	267.49	0.94	24.65	0.20	2.16	0.99
	R19	Unknown	7.96	85.64	5.80	62.47	0.73	5.80	0.00	0.01	1.00
	R20	Unknown	12.80	137.75	10.73	115.46	0.84	10.62	0.11	1.17	0.99
	R21	Unknown	11.30	121.66	11.17	120.27	0.99	11.08	0.09	0.99	0.99
	R22	Unknown	7.90	85.02	5.64	60.70	0.71	5.63	0.01	0.08	1.00
	R23	Unknown	25.11	270.25	18.80	202.40	0.75	18.80	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.87	160.02	0.75	14.87	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	4.13	44.44	0.33	4.12	0.01	0.10	1.00
	R26	Unknown	8.40	90.45	3.28	35.26	0.39	3.17	0.11	1.19	0.97
	R27	Unknown	25.06	269.76	23.75	255.69	0.95	23.75	0.00	0.00	1.00
Ninth	R1	Unknown	29.65	319.14	17.93	193.03	0.60	12.56	5.38	57.87	0.70
	R2	Unknown	28.39	305.58	23.84	256.57	0.84	18.95	4.88	52.54	0.80
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.20	109.74	0.92	9.02	1.17	12.64	0.88
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.06	0.05	0.49	0.99
	R6	Unknown	20.46	220.27	20.46	220.22	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.30	78.56	0.81	7.30	0.00	0.00	1.00
	R8	Unknown	10.70	115.13	8.07	86.85	0.75	8.07	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.01	107.75	0.75	10.01	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.24	77.95	0.89	7.11	0.13	1.43	0.98
	R11	Unknown	25.99	279.79	25.07	269.83	0.96	24.31	0.76	8.19	0.97
	R12	Unknown	11.67	125.61	10.12	108.95	0.87	10.02	0.10	1.08	0.99

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R13	Unknown	25.27	271.96	23.65	254.57	0.94	23.65	0.00	0.00	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.58	0.62	6.67	0.98
	R15	Unknown	10.50	112.97	9.62	103.50	0.92	9.61	0.00	0.04	1.00
	R16	Unknown	10.08	108.52	9.63	103.70	0.96	9.30	0.33	3.58	0.97
	R17	Unknown	24.75	266.45	21.54	231.81	0.87	21.54	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.85	267.44	0.94	24.65	0.20	2.12	0.99
	R19	Unknown	7.96	85.64	6.06	65.28	0.76	6.06	0.00	0.00	1.00
	R20	Unknown	12.80	137.75	10.91	117.42	0.85	10.84	0.07	0.71	0.99
	R21	Unknown	11.30	121.66	11.17	120.27	0.99	11.10	0.07	0.77	0.99
	R22	Unknown	7.90	85.02	5.67	61.08	0.72	5.67	0.01	0.06	1.00
	R23	Unknown	25.11	270.25	18.78	202.16	0.75	18.78	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.86	160.00	0.75	14.86	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	4.28	46.07	0.35	4.27	0.01	0.07	1.00
	R26	Unknown	8.40	90.45	3.38	36.35	0.40	3.30	0.07	0.80	0.98
	R27	Unknown	25.06	269.76	23.84	256.65	0.95	23.84	0.00	0.00	1.00
Tenth	R1	Unknown	29.65	319.14	18.29	196.85	0.62	13.37	4.92	52.92	0.73
	R2	Unknown	28.39	305.58	24.16	260.10	0.85	19.67	4.50	48.39	0.81
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.41	2.51	27.01	0.89
	R4	Unknown	11.03	118.78	10.21	109.89	0.93	9.08	1.13	12.14	0.89
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	5.06	0.05	0.49	0.99
	R6	Unknown	20.46	220.27	20.46	220.24	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.62	82.03	0.85	7.62	0.00	0.00	1.00
	R8	Unknown	10.69	115.09	8.33	89.68	0.78	8.33	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.03	108.01	0.75	10.03	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.34	78.96	0.90	7.21	0.12	1.32	0.98
	R11	Unknown	25.99	279.79	25.09	270.03	0.97	24.37	0.72	7.70	0.97
	R12	Unknown	11.67	125.61	10.18	109.54	0.87	10.11	0.07	0.72	0.99
	R13	Unknown	25.27	271.96	23.73	255.40	0.94	23.73	0.00	0.00	1.00
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	25.60	0.60	6.51	0.98
	R15	Unknown	10.50	112.97	9.77	105.13	0.93	9.76	0.00	0.02	1.00
	R16	Unknown	10.08	108.52	9.64	103.72	0.96	9.33	0.30	3.24	0.97
	R17	Unknown	24.75	266.45	21.69	233.42	0.88	21.69	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	24.84	267.33	0.94	24.63	0.20	2.16	0.99
	R19	Unknown	7.96	85.64	6.37	68.61	0.80	6.37	0.00	0.00	1.00
	R20	Unknown	12.80	137.75	11.10	119.44	0.87	11.06	0.04	0.38	1.00
	R21	Unknown	11.30	121.66	11.17	120.28	0.99	11.13	0.05	0.51	1.00
	R22	Unknown	7.90	85.02	5.78	62.23	0.73	5.78	0.00	0.05	1.00
	R23	Unknown	25.11	270.25	18.81	202.42	0.75	18.81	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	14.93	160.73	0.75	14.93	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	4.59	49.41	0.37	4.59	0.01	0.05	1.00
	R26	Unknown	8.40	90.45	3.68	39.64	0.44	3.63	0.05	0.51	0.99
	R27	Unknown	25.06	269.76	24.02	258.50	0.96	24.02	0.00	0.00	1.00
Eleventh	R1	Unknown	29.65	319.14	18.78	202.16	0.63	14.60	4.18	45.00	0.78
	R2	Unknown	28.39	305.58	24.73	266.19	0.87	20.93	3.80	40.86	0.85
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.97	1.95	21.00	0.91
	R4	Unknown	11.03	118.78	10.21	109.92	0.93	9.15	1.06	11.40	0.90
	R5	Unknown	5.62	60.50	5.11	55.01	0.91	5.07	0.04	0.46	0.99
	R6	Unknown	20.46	220.27	20.46	220.25	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.96	85.63	0.89	7.96	0.00	0.00	1.00
	R8	Unknown	10.69	115.09	8.54	91.95	0.80	8.54	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	10.14	109.13	0.76	10.14	0.00	0.00	1.00
	R10	Unknown	8.13	87.51	7.27	78.27	0.89	6.92	0.35	3.80	0.95
	R11	Unknown	25.99	279.79	25.23	271.60	0.97	24.45	0.78	8.43	0.97
	R12	Unknown	11.67	125.61	11.11	119.56	0.95	10.95	0.16	1.72	0.99
	R13	Unknown	25.27	271.96	24.01	258.42	0.95	24.01	0.00	0.00	1.00
	R14	Unknown	27.56	296.70	26.36	283.72	0.96	25.83	0.53	5.71	0.98
	R15	Unknown	10.50	112.97	10.27	110.58	0.98	10.15	0.12	1.29	0.99
	R16	Unknown	10.08	108.52	9.82	105.71	0.97	9.81	0.01	0.14	1.00
	R17	Unknown	24.75	266.45	22.27	239.77	0.90	22.27	0.00	0.00	1.00
	R18	Unknown	26.36	283.70	25.02	269.33	0.95	24.87	0.15	1.61	0.99
	R19	Unknown	7.96	85.64	6.66	71.69	0.84	6.66	0.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R20	Unknown	12.80	137.75	11.30	121.60	0.88	11.28	0.02	0.22	1.00
	R21	Unknown	11.30	121.66	11.17	120.28	0.99	11.15	0.03	0.28	1.00
	R22	Unknown	7.90	85.02	6.15	66.18	0.78	6.14	0.00	0.04	1.00
	R23	Unknown	25.11	270.25	18.77	202.06	0.75	18.77	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	15.10	162.49	0.76	15.10	0.00	0.00	1.00
	R25	Unknown	12.36	133.02	5.38	57.88	0.44	5.37	0.00	0.04	1.00
	R26	Unknown	8.40	90.45	4.28	46.07	0.51	4.26	0.02	0.26	0.99
	R27	Unknown	25.06	269.76	24.44	263.06	0.98	24.44	0.00	0.00	1.00
Twelfth	R1	Unknown	29.65	319.14	19.90	214.21	0.67	17.02	2.88	31.02	0.86
	R2	Unknown	28.39	305.58	25.86	278.36	0.91	22.98	2.88	31.03	0.89
	R3	Unknown	22.02	237.05	21.85	235.14	0.99	20.88	0.96	10.35	0.96
	R4	Unknown	11.03	118.78	10.21	109.94	0.93	9.26	0.95	10.25	0.91
	R5	Unknown	5.62	60.50	5.21	56.10	0.93	5.18	0.03	0.33	0.99
	R6	Unknown	20.46	220.27	20.44	219.97	1.00	20.44	0.00	0.01	1.00
	R7	Unknown	8.99	96.75	8.33	89.68	0.93	8.33	0.00	0.00	1.00
	R8	Unknown	10.69	115.09	8.75	94.16	0.82	8.75	0.00	0.00	1.00
	R9	Unknown	13.33	143.51	11.34	122.06	0.85	11.11	0.23	2.43	0.98
	R10	Unknown	27.10	291.65	26.86	289.12	0.99	26.49	0.37	3.96	0.99
	R11	Unknown	8.91	95.96	8.63	92.91	0.97	8.18	0.45	4.84	0.95
	R12	Unknown	13.70	147.44	13.15	141.58	0.96	13.15	0.00	0.00	1.00
	R13	Unknown	22.45	241.61	21.83	234.92	0.97	21.83	0.00	0.00	1.00
	R14	Unknown	24.70	265.89	24.15	259.94	0.98	22.60	1.55	16.67	0.94
	R15	Unknown	12.30	132.40	11.86	127.69	0.96	11.86	0.00	0.02	1.00
	R16	Unknown	11.83	127.36	11.40	122.67	0.96	11.11	0.29	3.13	0.97
	R17	Unknown	21.97	236.46	20.41	219.66	0.93	20.41	0.00	0.00	1.00
	R18	Unknown	23.60	254.00	22.61	243.35	0.96	22.26	0.35	3.76	0.98
	R19	Unknown	7.96	85.64	6.86	73.82	0.86	6.86	0.00	0.00	1.00
	R20	Unknown	12.80	137.75	11.19	120.44	0.87	11.19	0.00	0.04	1.00
	R21	Unknown	11.30	121.66	10.53	113.36	0.93	10.51	0.02	0.23	1.00
	R22	Unknown	7.90	85.02	6.95	74.85	0.88	6.95	0.00	0.04	1.00
	R23	Unknown	25.11	270.25	19.69	211.95	0.78	19.69	0.00	0.00	1.00
	R24	Unknown	19.90	214.20	15.40	165.73	0.77	15.40	0.00	0.00	1.00
	R25	Unknown	21.49	231.34	21.41	230.41	1.00	21.41	0.00	0.00	1.00
Thirteenth	R1	Unknown	15.36	165.35	5.22	56.20	0.34	5.20	0.02	0.18	1.00
	R2	Unknown	15.71	169.15	13.95	150.19	0.89	13.95	0.00	0.03	1.00
	R3	Unknown	13.00	139.88	12.66	136.24	0.97	11.82	0.84	9.01	0.93
	R4	Unknown	5.50	59.23	4.97	53.46	0.90	4.32	0.64	6.93	0.87
	R5	Unknown	22.20	238.94	21.62	232.68	0.97	21.61	0.00	0.03	1.00
	R6	Unknown	11.33	122.00	10.99	118.27	0.97	10.97	0.02	0.18	1.00
	R7	Unknown	20.60	221.74	19.93	214.53	0.97	19.93	0.00	0.00	1.00
	R8	Unknown	22.87	246.18	22.17	238.67	0.97	20.87	1.30	14.03	0.94
	R9	Unknown	10.50	112.97	10.05	108.20	0.96	10.05	0.00	0.03	1.00
	R10	Unknown	10.08	108.52	9.64	103.72	0.96	9.22	0.41	4.44	0.96
	R11	Unknown	20.15	216.92	19.20	206.63	0.95	19.20	0.00	0.00	1.00
	R12	Unknown	21.47	231.15	20.59	221.59	0.96	20.23	0.35	3.81	0.98
	R13	Unknown	6.48	69.78	5.99	64.43	0.92	5.99	0.00	0.00	1.00
	R14	Unknown	11.07	119.11	10.17	109.51	0.92	10.17	0.00	0.05	1.00
	R15	Unknown	7.70	82.91	7.13	76.74	0.93	7.13	0.00	0.00	1.00
	R16	Unknown	4.36	46.96	4.27	45.98	0.98	4.27	0.01	0.07	1.00
	R17	Unknown	17.27	185.94	16.56	178.25	0.96	16.25	0.31	3.38	0.98
	R18	Unknown	19.90	214.20	15.80	170.04	0.79	15.80	0.00	0.00	1.00
	R19	Unknown	21.49	231.34	21.35	229.81	0.99	21.35	0.00	0.00	1.00
Fourteenth	R1	Unknown	15.36	165.35	6.70	72.07	0.44	6.70	0.00	0.01	1.00
	R2	Unknown	15.71	169.15	14.32	154.14	0.91	14.32	0.00	0.00	1.00
	R3	Unknown	26.73	287.73	25.84	278.10	0.97	25.84	0.00	0.00	1.00
	R4	Unknown	6.54	70.42	6.45	69.41	0.99	6.45	0.00	0.02	1.00
	R5	Unknown	16.73	180.12	13.12	141.19	0.78	12.96	0.16	1.71	0.99
	R6	Unknown	5.56	59.87	5.01	53.92	0.90	4.65	0.36	3.84	0.93
	R7	Unknown	17.44	187.78	17.08	183.86	0.98	17.00	0.08	0.83	1.00
	R8	Unknown	8.08	86.94	7.75	83.43	0.96	7.75	0.00	0.00	1.00
	R9	Unknown	18.85	202.95	18.43	198.42	0.98	18.43	0.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R10	Unknown	16.19	174.24	15.84	170.53	0.98	15.00	0.84	9.08	0.95
	R11	Unknown	9.48	102.06	8.79	94.59	0.93	8.79	0.00	0.00	1.00
	R12	Unknown	9.31	100.22	8.89	95.69	0.95	8.89	0.00	0.01	1.00
	R13	Unknown	18.39	197.90	17.97	193.46	0.98	17.97	0.00	0.00	1.00
	R14	Unknown	17.91	192.75	17.73	190.87	0.99	17.55	0.18	1.93	0.99
	R15	Unknown	5.08	54.69	4.63	49.89	0.91	4.63	0.00	0.00	1.00
	R16	Unknown	8.93	96.12	8.59	92.48	0.96	8.59	0.00	0.00	1.00
	R17	Unknown	10.55	113.58	9.93	106.87	0.94	9.86	0.07	0.74	0.99
	R18	Unknown	22.22	239.21	21.92	236.00	0.99	21.92	0.00	0.00	1.00
	R19	Unknown	19.78	212.93	16.59	178.54	0.84	16.59	0.00	0.00	1.00
	R20	Unknown	21.49	231.34	21.38	230.18	0.99	21.38	0.00	0.00	1.00
Fifteenth	R1	Unknown	21.54	231.89	21.51	231.48	1.00	21.48	0.03	0.31	1.00
	R2	Unknown	7.96	85.71	7.61	81.96	0.96	4.92	2.69	28.96	0.65
	R3	Unknown	14.51	156.21	13.73	147.81	0.95	10.26	3.47	37.35	0.75
	R4	Unknown	6.54	70.42	6.54	70.42	1.00	6.54	0.00	0.00	1.00
	R5	Unknown	16.73	180.12	13.12	141.20	0.78	13.10	0.02	0.23	1.00
	R6	Unknown	5.56	59.87	5.05	54.38	0.91	4.87	0.18	1.96	0.96
	R7	Unknown	17.44	187.78	16.99	182.84	0.97	16.90	0.09	0.95	0.99
	R8	Unknown	8.08	86.94	7.73	83.20	0.96	7.73	0.00	0.00	1.00
	R9	Unknown	18.85	202.95	18.40	198.04	0.98	18.40	0.00	0.00	1.00
	R10	Unknown	16.19	174.24	15.92	171.41	0.98	15.27	0.65	7.01	0.96
	R11	Unknown	9.48	102.06	8.82	94.89	0.93	8.82	0.00	0.00	1.00
	R12	Unknown	9.31	100.22	8.85	95.31	0.95	8.84	0.01	0.11	1.00
	R13	Unknown	18.37	197.71	17.89	192.58	0.97	17.89	0.00	0.00	1.00
	R14	Unknown	17.91	192.75	17.70	190.56	0.99	17.66	0.05	0.48	1.00
	R15	Unknown	5.08	54.69	4.58	49.34	0.90	4.58	0.00	0.00	1.00
	R16	Unknown	8.93	96.12	8.52	91.74	0.95	8.52	0.00	0.01	1.00
	R17	Unknown	10.55	113.58	9.92	106.81	0.94	9.89	0.03	0.33	1.00
	R18	Unknown	19.98	215.11	19.40	208.86	0.97	17.68	1.72	18.56	0.91
	R19	Unknown	15.97	171.92	15.90	171.13	1.00	15.90	0.00	0.00	1.00
Sixteenth	R1	Unknown	21.54	231.89	21.41	230.40	0.99	21.37	0.04	0.43	1.00
	R2	Unknown	7.96	85.71	7.55	81.30	0.95	4.88	2.67	28.77	0.65
	R3	Unknown	14.51	156.21	13.79	148.42	0.95	10.40	3.39	36.47	0.75
	R4	Unknown	6.54	70.42	6.45	69.45	0.99	6.45	0.00	0.02	1.00
	R5	Unknown	16.73	180.12	13.13	141.30	0.78	13.10	0.03	0.32	1.00
	R6	Unknown	5.56	59.87	5.06	54.45	0.91	4.95	0.10	1.13	0.98
	R7	Unknown	17.44	187.78	16.99	182.93	0.97	16.98	0.01	0.15	1.00
	R8	Unknown	10.70	115.22	10.19	109.70	0.95	10.19	0.00	0.04	1.00
	R9	Unknown	8.17	87.95	7.87	84.70	0.96	7.87	0.00	0.00	1.00
	R10	Unknown	27.80	299.20	27.76	298.85	1.00	27.76	0.00	0.01	1.00
	R11	Unknown	15.97	171.92	15.92	171.40	1.00	15.92	0.00	0.00	1.00
Seventeenth	R1	Unknown	21.54	231.89	21.39	230.21	0.99	21.38	0.01	0.11	1.00
	R2	Unknown	7.96	85.71	7.55	81.31	0.95	5.01	2.55	27.43	0.66
	R3	Unknown	14.51	156.21	13.79	148.44	0.95	10.49	3.30	35.52	0.76
	R4	Unknown	6.54	70.42	6.44	69.35	0.98	6.44	0.00	0.01	1.00
	R5	Unknown	13.57	146.08	13.06	140.55	0.96	13.06	0.00	0.00	1.00
Eighteenth	R1	Unknown	21.54	231.89	21.47	231.12	1.00	21.47	0.00	0.00	1.00
	R2	Unknown	7.98	85.94	7.63	82.13	0.96	5.27	2.36	25.38	0.69
	R3	Unknown	13.83	148.82	13.53	145.64	0.98	13.52	0.01	0.15	1.00
	R4	Unknown	10.46	112.59	10.27	110.53	0.98	10.27	0.00	0.00	1.00
	R5	Unknown	10.68	114.94	10.28	110.61	0.96	9.26	1.01	10.89	0.90
	R6	Unknown	13.21	142.15	11.53	124.10	0.87	8.99	2.54	27.37	0.78
	R7	Unknown	13.57	146.08	13.06	140.62	0.96	13.06	0.00	0.00	1.00
The Hallmark											
Ground	R1	Unknown	71.71	771.91	66.89	720.00	0.93	66.89	0.00	0.00	1.00
First	R1	Unknown	8.23	88.63	8.07	86.87	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.19	217.30	0.98	20.19	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	6.88	74.04	0.74	6.40	0.48	5.13	0.93
	R4	Unknown	24.63	265.08	2.47	26.55	0.10	2.47	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.20	2.15	0.02	0.20	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	5.98	64.36	0.62	5.02	0.96	10.32	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R7	Unknown	19.80	213.16	18.04	194.19	0.91	15.31	2.73	29.36	0.85
	R8	Unknown	11.26	121.21	10.45	112.48	0.93	9.69	0.76	8.21	0.93
	R9	Unknown	9.58	103.09	8.94	96.18	0.93	8.68	0.26	2.77	0.97
	R10	Unknown	19.05	205.00	18.60	200.18	0.98	17.76	0.84	9.05	0.95
Second	R1	Unknown	8.23	88.63	8.07	86.87	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	20.19	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	7.23	77.79	0.77	6.75	0.48	5.12	0.93
	R4	Unknown	24.63	265.08	2.50	26.89	0.10	2.50	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.34	3.68	0.03	0.34	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	5.98	64.42	0.62	5.00	0.99	10.64	0.83
	R7	Unknown	19.80	213.16	18.48	198.95	0.93	15.72	2.76	29.74	0.85
	R8	Unknown	11.26	121.21	10.08	108.53	0.90	9.34	0.74	8.01	0.93
	R9	Unknown	9.58	103.09	8.86	95.39	0.93	8.63	0.23	2.45	0.97
	R10	Unknown	19.05	205.00	18.58	199.98	0.98	17.44	1.14	12.29	0.94
Third	R1	Unknown	8.23	88.63	8.07	86.87	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.26	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	7.55	81.28	0.81	7.07	0.48	5.16	0.94
	R4	Unknown	24.63	265.08	2.89	31.13	0.12	2.89	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.50	5.40	0.04	0.50	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.24	67.21	0.65	5.28	0.96	10.35	0.85
	R7	Unknown	19.80	213.16	18.56	199.74	0.94	15.80	2.76	29.67	0.85
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.34	0.74	8.01	0.93
	R9	Unknown	9.58	103.09	8.96	96.49	0.94	8.74	0.23	2.45	0.97
	R10	Unknown	19.05	205.00	18.58	199.99	0.98	17.44	1.14	12.22	0.94
Fourth	R1	Unknown	8.23	88.63	8.01	86.17	0.97	8.01	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.24	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.62	92.75	0.92	8.16	0.46	4.97	0.95
	R4	Unknown	24.63	265.08	3.77	40.58	0.15	3.77	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.76	8.21	0.06	0.76	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.53	70.27	0.68	5.65	0.88	9.46	0.87
	R7	Unknown	19.80	213.16	18.61	200.34	0.94	15.86	2.75	29.65	0.85
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.35	0.73	7.90	0.93
	R9	Unknown	9.58	103.09	9.04	97.29	0.94	8.81	0.23	2.45	0.97
	R10	Unknown	19.05	205.00	18.58	200.00	0.98	17.45	1.13	12.13	0.94
Fifth	R1	Unknown	8.23	88.63	8.02	86.29	0.97	8.02	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.25	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.77	94.42	0.94	8.34	0.43	4.65	0.95
	R4	Unknown	24.63	265.08	4.44	47.84	0.18	4.44	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	1.19	12.78	0.10	1.19	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.77	72.88	0.70	5.97	0.80	8.62	0.88
	R7	Unknown	19.80	213.16	18.08	194.64	0.91	15.33	2.75	29.62	0.85
	R8	Unknown	11.26	121.21	10.46	112.62	0.93	9.73	0.73	7.87	0.93
	R9	Unknown	9.58	103.09	8.93	96.09	0.93	8.75	0.18	1.89	0.98
	R10	Unknown	19.05	205.00	18.60	200.20	0.98	17.74	0.86	9.28	0.95
Sixth	R1	Unknown	8.23	88.63	8.02	86.28	0.97	8.02	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.24	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.90	95.79	0.95	8.49	0.41	4.39	0.95
	R4	Unknown	24.63	265.08	5.35	57.62	0.22	5.35	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	1.75	18.88	0.14	1.75	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.95	74.78	0.72	6.19	0.76	8.17	0.89
	R7	Unknown	19.80	213.16	18.11	194.89	0.91	15.36	2.75	29.60	0.85
	R8	Unknown	11.26	121.21	10.47	112.70	0.93	9.77	0.70	7.56	0.93
	R9	Unknown	9.58	103.09	8.94	96.22	0.93	8.77	0.17	1.87	0.98
	R10	Unknown	19.05	205.00	18.61	200.29	0.98	17.75	0.86	9.26	0.95
Seventh	R1	Unknown	8.23	88.63	8.07	86.87	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.27	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.63	92.90	0.92	8.31	0.32	3.50	0.96
	R4	Unknown	24.63	265.08	5.90	63.50	0.24	5.90	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	2.58	27.72	0.21	2.58	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	7.18	77.29	0.74	6.50	0.68	7.27	0.91
	R7	Unknown	19.80	213.16	18.13	195.11	0.92	15.38	2.74	29.53	0.85

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R8	Unknown	11.26	121.21	10.47	112.65	0.93	9.82	0.65	6.95	0.94
	R9	Unknown	9.58	103.09	8.93	96.11	0.93	8.76	0.17	1.82	0.98
	R10	Unknown	19.05	205.00	18.64	200.62	0.98	17.78	0.86	9.26	0.95
Eighth	R1	Unknown	8.23	88.63	8.07	86.87	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.27	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.77	94.44	0.94	8.50	0.27	2.92	0.97
	R4	Unknown	24.63	265.08	7.41	79.74	0.30	7.41	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	3.64	39.18	0.29	3.64	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	7.45	80.14	0.77	6.78	0.66	7.12	0.91
	R7	Unknown	19.80	213.16	18.78	202.19	0.95	16.08	2.71	29.16	0.86
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.46	0.63	6.74	0.94
	R9	Unknown	9.58	103.09	9.11	98.09	0.95	8.94	0.17	1.83	0.98
	R10	Unknown	19.05	205.00	18.64	200.64	0.98	17.51	1.13	12.16	0.94
Ninth	R1	Unknown	8.23	88.63	8.07	86.92	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	20.19	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	8.84	95.10	0.94	8.60	0.23	2.49	0.97
	R4	Unknown	24.63	265.08	9.91	106.66	0.40	9.91	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	5.63	60.55	0.45	5.63	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	7.74	83.33	0.80	7.14	0.61	6.52	0.92
	R7	Unknown	19.80	213.16	18.79	202.29	0.95	16.19	2.60	28.03	0.86
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.55	0.54	5.76	0.95
	R9	Unknown	9.58	103.09	9.11	98.07	0.95	8.97	0.14	1.48	0.98
	R10	Unknown	19.05	205.00	18.67	201.01	0.98	17.54	1.13	12.17	0.94
Tenth	R1	Unknown	8.23	88.63	8.02	86.32	0.97	8.02	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.18	217.21	0.98	20.18	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	9.00	96.88	0.96	8.74	0.26	2.83	0.97
	R4	Unknown	24.63	265.08	15.27	164.42	0.62	15.27	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	9.28	99.85	0.74	9.28	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	8.02	86.38	0.83	7.49	0.53	5.73	0.93
	R7	Unknown	19.80	213.16	18.81	202.42	0.95	16.40	2.40	25.88	0.87
	R8	Unknown	11.26	121.21	10.08	108.55	0.90	9.61	0.47	5.06	0.95
	R9	Unknown	9.58	103.09	9.12	98.18	0.95	9.02	0.10	1.10	0.99
	R10	Unknown	19.05	205.00	18.69	201.14	0.98	17.57	1.11	11.99	0.94
Eleventh	R1	Unknown	8.23	88.63	8.02	86.28	0.97	8.02	0.00	0.00	1.00
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	20.19	0.00	0.00	1.00
	R3	Unknown	9.36	100.73	9.00	96.91	0.96	8.75	0.25	2.73	0.97
	R4	Unknown	24.63	265.08	23.80	256.13	0.97	23.80	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	11.93	128.39	0.96	11.93	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	8.22	88.47	0.85	7.79	0.43	4.58	0.95
	R7	Unknown	19.80	213.16	18.13	195.18	0.92	15.82	2.32	24.92	0.87
	R8	Unknown	11.26	121.21	10.47	112.70	0.93	9.99	0.48	5.14	0.95
	R9	Unknown	9.58	103.09	8.93	96.15	0.93	8.81	0.12	1.27	0.99
	R10	Unknown	19.05	205.00	18.70	201.29	0.98	17.87	0.83	8.95	0.96
Twelfth	R1	Unknown	8.99	96.75	8.63	92.94	0.96	8.63	0.00	0.00	1.00
	R2	Unknown	28.91	311.15	28.62	308.04	0.99	28.62	0.00	0.02	1.00
	R3	Unknown	9.54	102.73	9.37	100.87	0.98	9.37	0.00	0.00	1.00
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Thirteenth	R1	Unknown	8.23	88.63	8.02	86.38	0.97	8.02	0.00	0.00	1.00
	R2	Unknown	28.91	311.15	28.74	309.36	0.99	28.74	0.00	0.00	1.00
	R3	Unknown	9.54	102.73	9.22	99.27	0.97	9.22	0.00	0.00	1.00
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Fourteenth	R1	Unknown	8.23	88.63	8.07	86.82	0.98	8.07	0.00	0.00	1.00
	R2	Unknown	28.91	311.15	28.77	309.71	1.00	28.77	0.00	0.00	1.00
	R3	Unknown	9.54	102.73	9.23	99.31	0.97	9.23	0.00	0.00	1.00
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Fifteenth	R1	Unknown	11.32	121.89	10.96	117.98	0.97	10.96	0.00	0.00	1.00
	R2	Unknown	12.33	132.74	12.19	131.19	0.99	12.19	0.00	0.00	1.00
	R3	Unknown	9.54	102.73	9.23	99.33	0.97	9.23	0.00	0.00	1.00
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Barton Place											
First	R1	Unknown	20.56	221.34	19.53	210.26	0.95	12.35	7.18	77.28	0.63

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R2	Unknown	11.14	119.96	5.05	54.39	0.45	1.76	3.29	35.42	0.35
	R3	Unknown	14.85	159.82	6.22	66.98	0.42	1.73	4.50	48.39	0.28
	R4	Unknown	11.29	121.48	3.22	34.71	0.29	1.60	1.62	17.45	0.50
	R5	Unknown	9.12	98.20	2.35	25.31	0.26	1.78	0.57	6.18	0.76
	R6	Unknown	24.62	264.97	6.41	68.98	0.26	1.90	4.51	48.52	0.30
	R7	Unknown	9.13	98.32	1.97	21.22	0.22	1.75	0.22	2.34	0.89
	R8	Unknown	9.13	98.32	1.67	18.03	0.18	1.62	0.06	0.62	0.97
Second	R1	Unknown	25.18	271.02	22.37	240.80	0.89	13.58	8.79	94.58	0.61
	R2	Unknown	11.14	119.96	5.17	55.60	0.46	1.99	3.18	34.23	0.38
	R3	Unknown	14.85	159.82	6.33	68.10	0.43	1.92	4.40	47.40	0.30
	R4	Unknown	11.29	121.48	3.32	35.73	0.29	1.74	1.58	17.03	0.52
	R5	Unknown	9.12	98.20	2.43	26.20	0.27	1.89	0.54	5.83	0.78
	R6	Unknown	24.62	264.97	6.61	71.17	0.27	2.48	4.13	44.48	0.38
	R7	Unknown	9.13	98.32	2.05	22.12	0.22	1.87	0.18	1.94	0.91
	R8	Unknown	9.13	98.32	1.78	19.15	0.19	1.73	0.05	0.52	0.97
Third	R1	Unknown	25.18	271.02	22.71	244.40	0.90	14.13	8.57	92.26	0.62
	R2	Unknown	11.14	119.96	5.28	56.88	0.47	2.17	3.11	33.47	0.41
	R3	Unknown	14.85	159.82	6.45	69.44	0.43	2.22	4.24	45.59	0.34
	R4	Unknown	11.29	121.48	3.44	37.05	0.30	1.91	1.53	16.48	0.56
	R5	Unknown	9.12	98.20	2.54	27.30	0.28	2.04	0.50	5.39	0.80
	R6	Unknown	24.62	264.97	6.79	73.06	0.28	3.01	3.78	40.71	0.44
	R7	Unknown	9.13	98.32	2.17	23.35	0.24	2.01	0.16	1.70	0.93
	R8	Unknown	9.13	98.32	1.91	20.53	0.21	1.86	0.04	0.47	0.98
Fourth	R1	Unknown	25.18	271.02	23.02	247.75	0.91	14.85	8.17	87.92	0.65
	R2	Unknown	11.14	119.96	5.43	58.46	0.49	2.46	2.97	31.95	0.45
	R3	Unknown	14.85	159.82	6.61	71.20	0.45	2.48	4.13	44.47	0.38
	R4	Unknown	11.29	121.48	3.56	38.32	0.32	2.09	1.47	15.81	0.59
	R5	Unknown	9.12	98.20	2.64	28.42	0.29	2.17	0.47	5.11	0.82
	R6	Unknown	24.62	264.97	6.92	74.47	0.28	3.51	3.41	36.70	0.51
	R7	Unknown	9.13	98.32	2.29	24.60	0.25	2.14	0.15	1.58	0.94
	R8	Unknown	9.13	98.32	2.04	21.96	0.22	2.00	0.04	0.43	0.98
Fifth	R1	Unknown	25.18	271.02	23.19	249.62	0.92	16.24	6.95	74.85	0.70
	R2	Unknown	11.14	119.96	5.57	59.94	0.50	2.73	2.84	30.55	0.49
	R3	Unknown	14.85	159.82	6.79	73.05	0.46	2.80	3.98	42.87	0.41
	R4	Unknown	11.29	121.48	3.77	40.54	0.33	2.35	1.41	15.19	0.63
	R5	Unknown	9.12	98.20	2.82	30.32	0.31	2.37	0.45	4.81	0.84
	R6	Unknown	24.62	264.97	7.20	77.46	0.29	4.22	2.98	32.08	0.59
	R7	Unknown	9.13	98.32	2.44	26.26	0.27	2.30	0.14	1.47	0.94
	R8	Unknown	9.13	98.32	2.22	23.92	0.24	2.19	0.04	0.39	0.98
Sixth	R1	Unknown	25.18	271.02	23.31	250.88	0.93	19.06	4.24	45.67	0.82
	R2	Unknown	11.14	119.96	5.73	61.65	0.51	3.04	2.69	28.93	0.53
	R3	Unknown	14.85	159.82	7.01	75.45	0.47	3.18	3.83	41.25	0.45
	R4	Unknown	11.29	121.48	3.94	42.40	0.35	2.62	1.32	14.23	0.66
	R5	Unknown	9.12	98.20	2.98	32.05	0.33	2.57	0.41	4.41	0.86
	R6	Unknown	24.62	264.97	7.51	80.87	0.31	4.93	2.59	27.86	0.66
	R7	Unknown	9.13	98.32	2.64	28.42	0.29	2.52	0.13	1.35	0.95
	R8	Unknown	9.13	98.32	2.48	26.69	0.27	2.45	0.03	0.32	0.99
Seventh	R1	Unknown	25.18	271.02	23.35	251.30	0.93	23.29	0.06	0.61	1.00
	R2	Unknown	11.14	119.96	5.89	63.43	0.53	3.31	2.58	27.79	0.56
	R3	Unknown	14.85	159.82	7.29	78.52	0.49	3.68	3.61	38.89	0.50
	R4	Unknown	11.29	121.48	4.17	44.92	0.37	2.93	1.24	13.37	0.70
	R5	Unknown	9.12	98.20	3.19	34.36	0.35	2.82	0.37	3.97	0.88
	R6	Unknown	24.62	264.97	7.91	85.18	0.32	5.72	2.20	23.64	0.72
	R7	Unknown	9.13	98.32	2.90	31.22	0.32	2.79	0.11	1.23	0.96
	R8	Unknown	9.13	98.32	2.75	29.62	0.30	2.73	0.02	0.20	0.99
Eighth	R1	Unknown	25.18	271.02	23.37	251.60	0.93	23.35	0.02	0.26	1.00
	R2	Unknown	11.14	119.96	6.12	65.83	0.55	3.64	2.48	26.68	0.59
	R3	Unknown	14.85	159.82	7.67	82.60	0.52	4.29	3.38	36.41	0.56
	R4	Unknown	11.29	121.48	4.47	48.15	0.40	3.30	1.17	12.61	0.74
	R5	Unknown	9.12	98.20	3.49	37.53	0.38	3.15	0.33	3.59	0.90
	R6	Unknown	24.62	264.97	8.61	92.62	0.35	6.78	1.82	19.60	0.79

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R7	Unknown	13.53	145.62	4.54	48.86	0.34	4.53	0.01	0.09	1.00
	R8	Unknown	9.13	98.32	3.19	34.31	0.35	3.18	0.01	0.09	1.00
Ninth	R1	Unknown	25.18	271.02	23.40	251.91	0.93	23.38	0.03	0.30	1.00
	R2	Unknown	11.14	119.96	6.37	68.59	0.57	3.97	2.40	25.88	0.62
	R3	Unknown	14.85	159.82	8.18	88.03	0.55	5.09	3.09	33.27	0.62
	R4	Unknown	11.29	121.48	4.82	51.92	0.43	3.74	1.08	11.67	0.78
	R5	Unknown	9.12	98.20	3.80	40.90	0.42	3.51	0.29	3.10	0.92
	R6	Unknown	24.62	264.97	9.03	97.15	0.37	7.37	1.66	17.87	0.82
	R7	Unknown	13.53	145.62	5.29	56.94	0.39	5.28	0.01	0.15	1.00
	R8	Unknown	9.13	98.32	3.64	39.22	0.40	3.64	0.01	0.09	1.00
Tenth	R1	Unknown	25.18	271.02	18.92	203.68	0.75	8.16	10.76	115.81	0.43
	R2	Unknown	11.14	119.96	6.70	72.15	0.60	4.37	2.33	25.09	0.65
	R3	Unknown	14.85	159.82	8.76	94.32	0.59	6.04	2.72	29.31	0.69
	R4	Unknown	11.29	121.48	5.27	56.71	0.47	4.21	1.06	11.44	0.80
	R5	Unknown	9.12	98.20	4.18	45.02	0.46	3.92	0.26	2.82	0.94
	R6	Unknown	24.62	264.97	10.36	111.49	0.42	8.95	1.41	15.18	0.86
Masson Place											
First	R1	Unknown	20.56	221.34	18.80	202.41	0.91	10.29	8.52	91.66	0.55
Second	R1	Unknown	25.18	271.02	21.42	230.55	0.85	12.70	8.72	93.83	0.59
Third	R1	Unknown	25.18	271.02	22.01	236.92	0.87	13.19	8.82	94.95	0.60
Fourth	R1	Unknown	25.18	271.02	22.27	239.74	0.88	13.73	8.54	91.92	0.62
Fifth	R1	Unknown	25.18	271.02	22.48	242.02	0.89	14.78	7.71	82.98	0.66
Sixth	R1	Unknown	25.18	271.02	23.09	248.51	0.92	16.53	6.55	70.55	0.72
Seventh	R1	Unknown	25.18	271.02	23.59	253.91	0.94	19.08	4.51	48.54	0.81
Eighth	R1	Unknown	25.18	271.02	23.60	253.99	0.94	20.99	2.61	28.08	0.89
Ninth	R1	Unknown	25.18	271.02	23.60	253.99	0.94	22.89	0.71	7.61	0.97
Tenth	R1	Unknown	25.18	271.02	23.68	254.93	0.94	23.68	0.00	0.00	1.00
Melia House											
First	R1	Unknown	17.61	189.55	8.47	91.12	0.48	8.47	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	5.88	63.33	0.50	5.73	0.15	1.64	0.97
	R3	Unknown	14.45	155.59	12.85	138.30	0.89	9.54	3.31	35.58	0.74
	R4	Unknown	38.36	412.91	21.54	231.84	0.56	15.47	6.07	65.36	0.72
	R5	Unknown	11.74	126.32	1.34	14.41	0.11	1.34	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.03	21.87	0.17	2.03	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	14.49	156.00	0.66	12.94	1.55	16.67	0.89
Second	R1	Unknown	17.61	189.55	8.81	94.81	0.50	8.81	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	5.96	64.14	0.51	5.81	0.15	1.63	0.97
	R3	Unknown	14.45	155.59	12.94	139.28	0.90	9.66	3.28	35.29	0.75
	R4	Unknown	38.36	412.91	22.35	240.63	0.58	16.37	5.98	64.39	0.73
	R5	Unknown	11.74	126.32	1.66	17.91	0.14	1.66	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.35	25.26	0.20	2.35	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	15.25	164.18	0.70	13.70	1.55	16.68	0.90
Third	R1	Unknown	17.61	189.55	9.02	97.10	0.51	9.02	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	5.99	64.51	0.51	5.83	0.16	1.74	0.97
	R3	Unknown	14.45	155.59	13.07	140.71	0.90	9.84	3.23	34.82	0.75
	R4	Unknown	38.36	412.91	23.22	249.95	0.61	17.27	5.95	64.00	0.74
	R5	Unknown	11.74	126.32	2.22	23.91	0.19	2.22	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.94	31.64	0.25	2.94	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	16.18	174.18	0.74	14.77	1.41	15.18	0.91
Fourth	R1	Unknown	17.61	189.55	9.14	98.42	0.52	9.14	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	6.01	64.71	0.51	5.85	0.16	1.70	0.97
	R3	Unknown	14.45	155.59	13.17	141.71	0.91	10.05	3.12	33.56	0.76
	R4	Unknown	38.36	412.91	23.98	258.16	0.63	18.09	5.89	63.44	0.75
	R5	Unknown	11.74	126.32	3.01	32.41	0.26	2.93	0.08	0.85	0.97
	R6	Unknown	11.74	126.32	3.80	40.95	0.32	3.80	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	16.78	180.64	0.77	15.47	1.32	14.17	0.92
Fifth	R1	Unknown	17.61	189.55	9.30	100.08	0.53	9.30	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	6.01	64.66	0.51	5.85	0.15	1.66	0.97
	R3	Unknown	14.45	155.59	13.25	142.58	0.92	10.35	2.90	31.17	0.78
	R4	Unknown	38.36	412.91	25.37	273.04	0.66	19.40	5.97	64.24	0.76
	R5	Unknown	11.74	126.32	4.50	48.44	0.38	4.14	0.36	3.87	0.92

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
	R6	Unknown	11.74	126.32	5.72	61.54	0.49	5.40	0.31	3.37	0.95
	R7	Unknown	21.80	234.68	17.65	189.95	0.81	16.45	1.20	12.93	0.93
Sixth	R1	Unknown	17.61	189.55	9.35	100.67	0.53	9.35	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	6.04	64.98	0.51	5.90	0.14	1.48	0.98
	R3	Unknown	14.45	155.59	13.27	142.88	0.92	10.64	2.64	28.39	0.80
	R4	Unknown	38.36	412.91	26.70	287.39	0.70	21.11	5.59	60.19	0.79
	R5	Unknown	11.74	126.32	6.27	67.46	0.53	5.26	1.01	10.87	0.84
	R6	Unknown	11.74	126.32	8.95	96.38	0.76	7.99	0.97	10.43	0.89
	R7	Unknown	21.80	234.68	18.71	201.44	0.86	17.14	1.58	16.98	0.92
Seventh	R1	Unknown	17.61	189.55	6.95	74.82	0.39	6.95	0.00	0.00	1.00
	R2	Unknown	11.74	126.32	6.09	65.59	0.52	5.82	0.27	2.90	0.96
	R3	Unknown	14.45	155.59	12.12	130.42	0.84	8.01	4.11	44.19	0.66
	R4	Unknown	50.02	538.41	50.00	538.18	1.00	45.63	4.37	47.01	0.91
	R5	Unknown	11.74	126.32	6.79	73.03	0.58	5.88	0.91	9.76	0.87
	R6	Unknown	11.74	126.32	9.47	101.96	0.81	8.56	0.92	9.87	0.90
	R7	Unknown	21.80	234.68	18.77	201.99	0.86	16.54	2.23	24.00	0.88
Eighth	R1	Unknown	11.74	126.32	7.24	77.91	0.62	6.45	0.78	8.44	0.89
	R2	Unknown	11.74	126.32	10.29	110.74	0.88	9.48	0.81	8.67	0.92
	R3	Unknown	21.80	234.68	19.72	212.22	0.90	17.58	2.13	22.96	0.89
Ninth	R1	Unknown	11.74	126.32	7.45	80.22	0.64	6.59	0.86	9.30	0.88
	R2	Unknown	11.74	126.32	10.26	110.47	0.87	9.52	0.74	8.01	0.93
	R3	Unknown	21.80	234.68	20.37	219.24	0.93	18.39	1.98	21.34	0.90

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-07	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

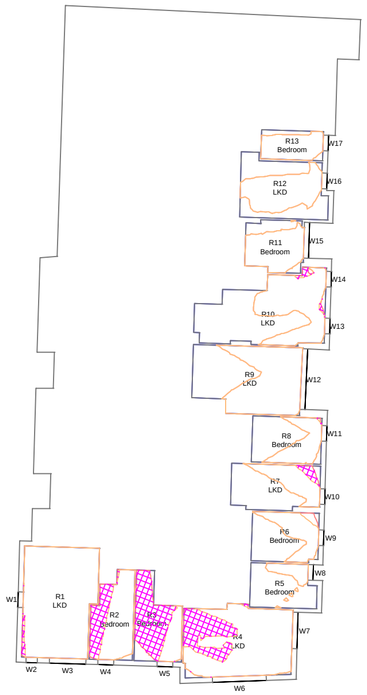
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

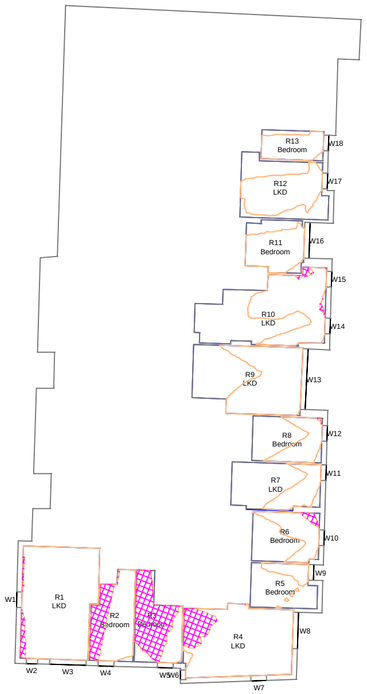
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Ground Floor



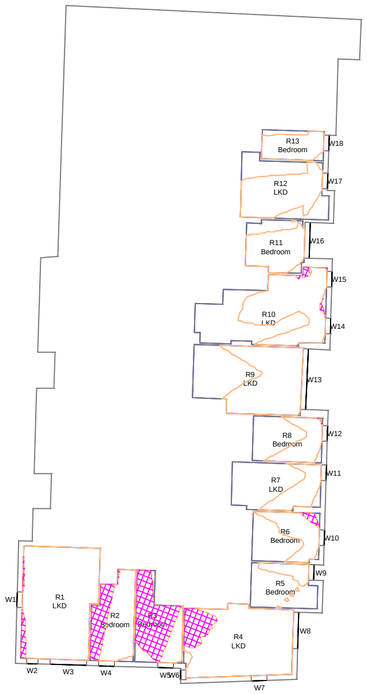
1:250

Britton House
First Floor



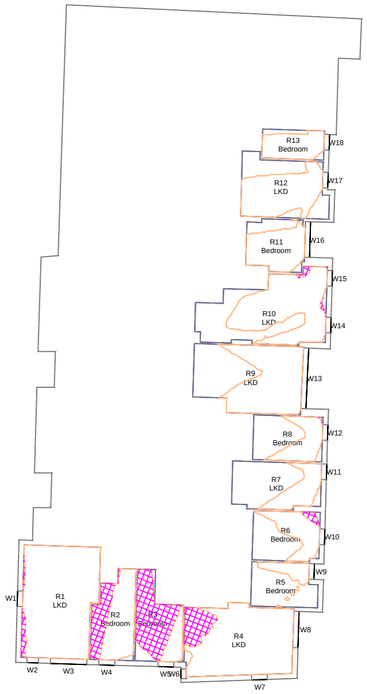
1:250

Britton House
Second Floor



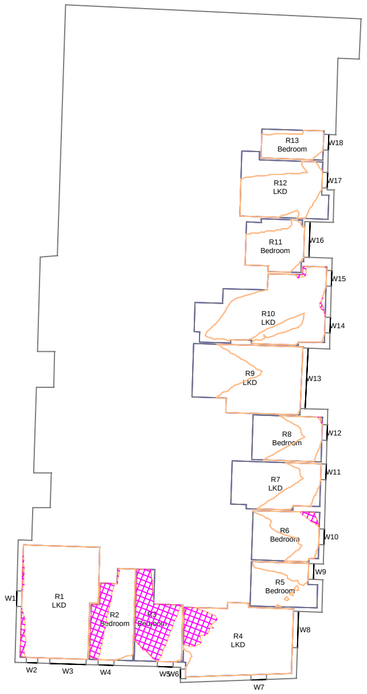
1:250

Britton House
Third Floor



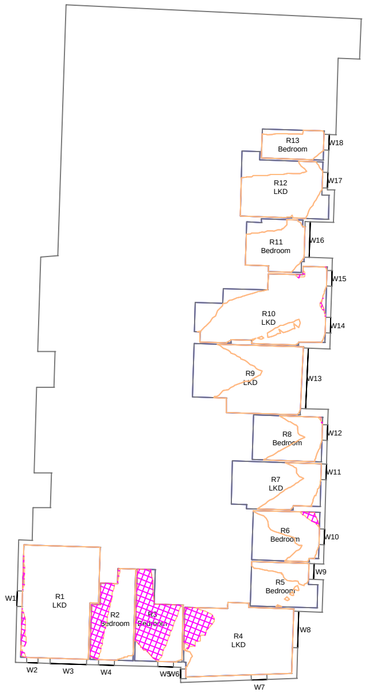
1:250

Britton House
Fourth Floor



1:250

Britton House
Fifth Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-08	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

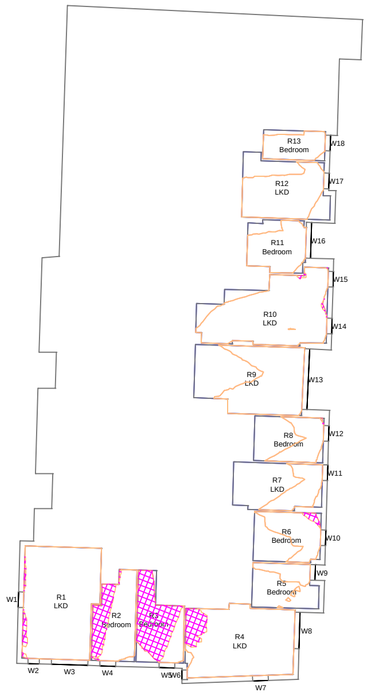
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

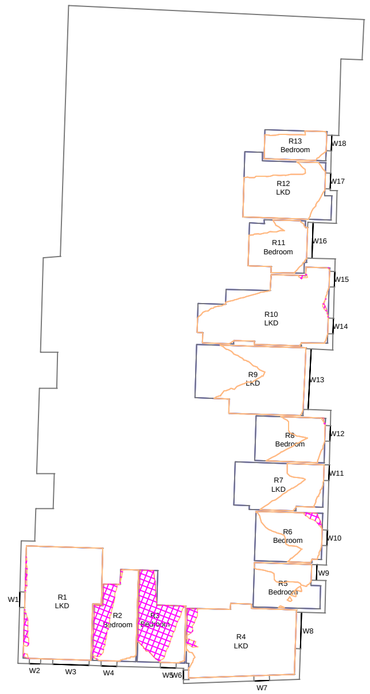
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Sixth Floor



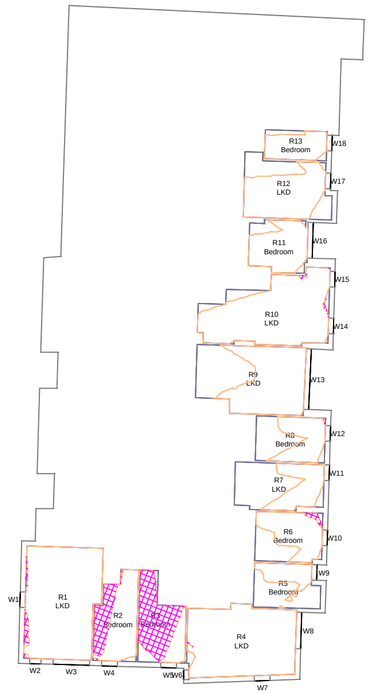
1:250

Britton House
Seventh Floor



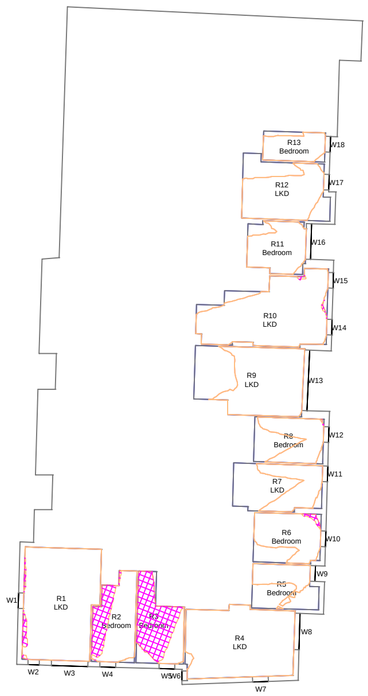
1:250

Britton House
Eighth Floor



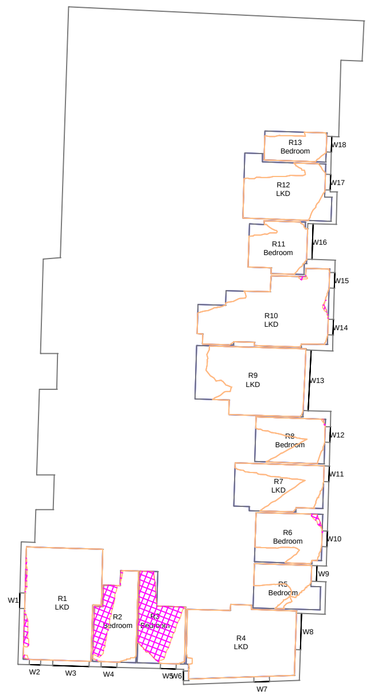
1:250

Britton House
Ninth Floor



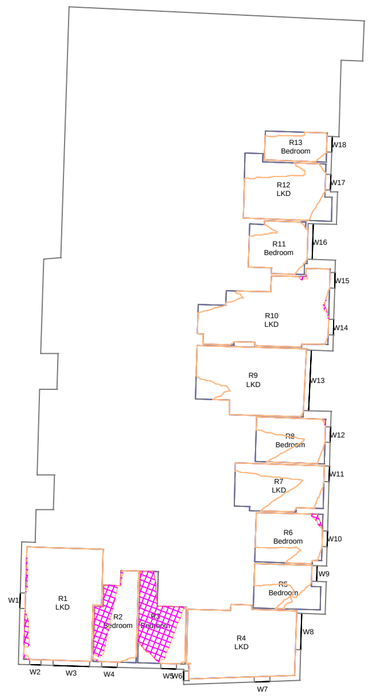
1:250

Britton House
Tenth Floor



1:250

Britton House
Eleventh Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200/250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-09	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

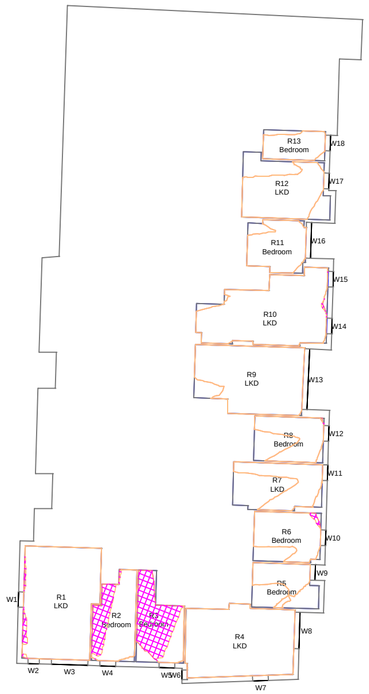
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

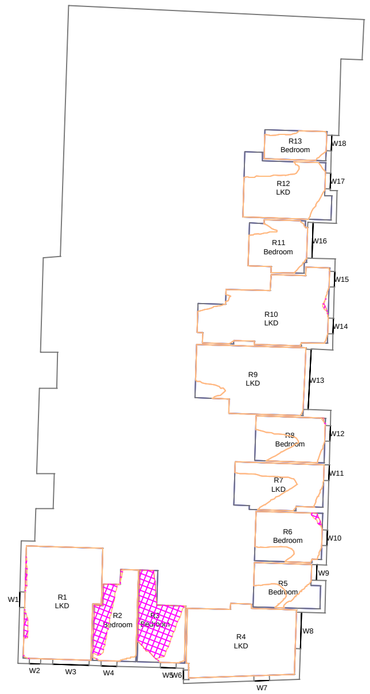
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Twelfth Floor



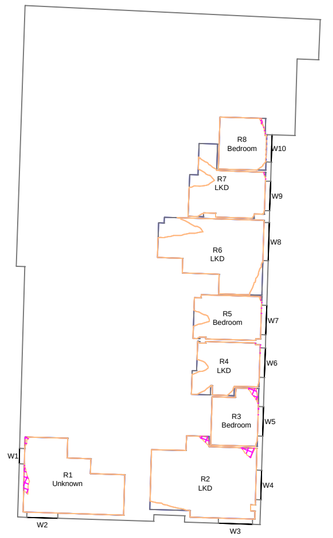
1:250

Britton House
Thirteenth Floor



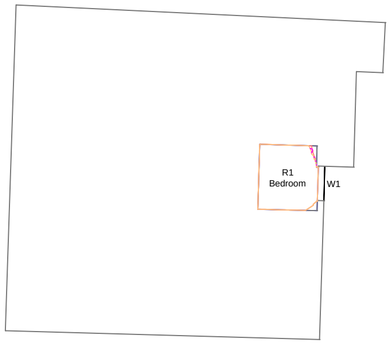
1:250

Britton House
Fourteenth Floor



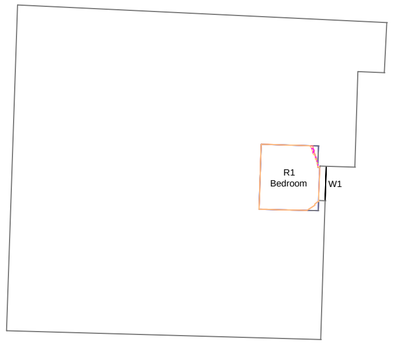
1:250

Britton House
Fifteenth Floor



1:200

Britton House
Sixteenth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-10	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

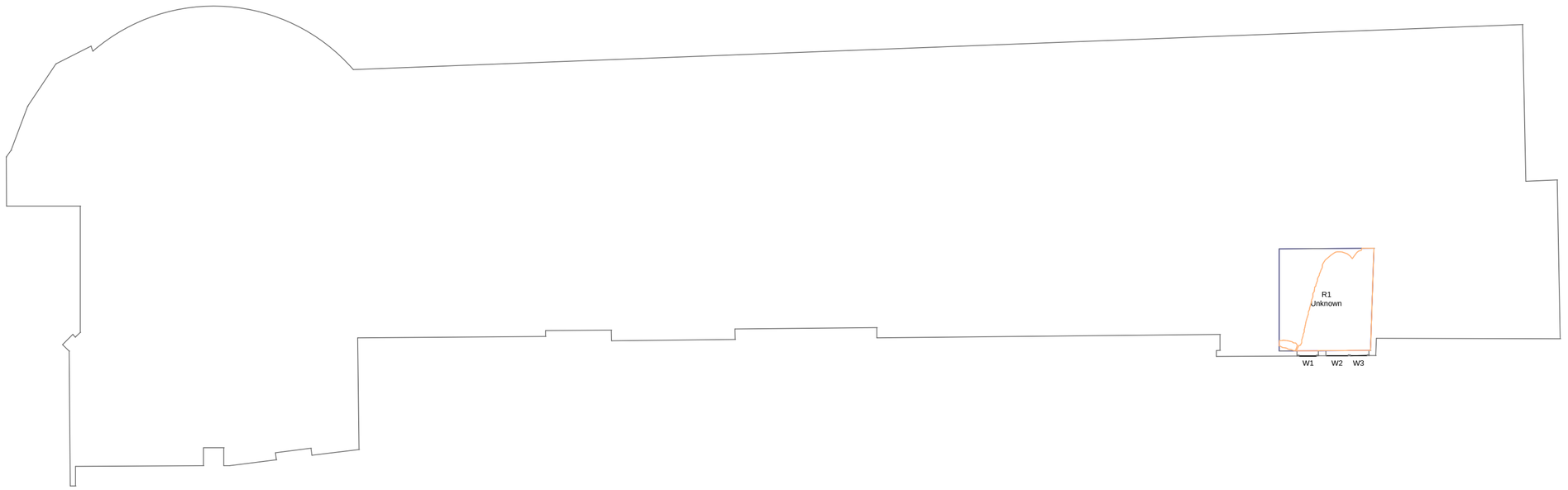
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

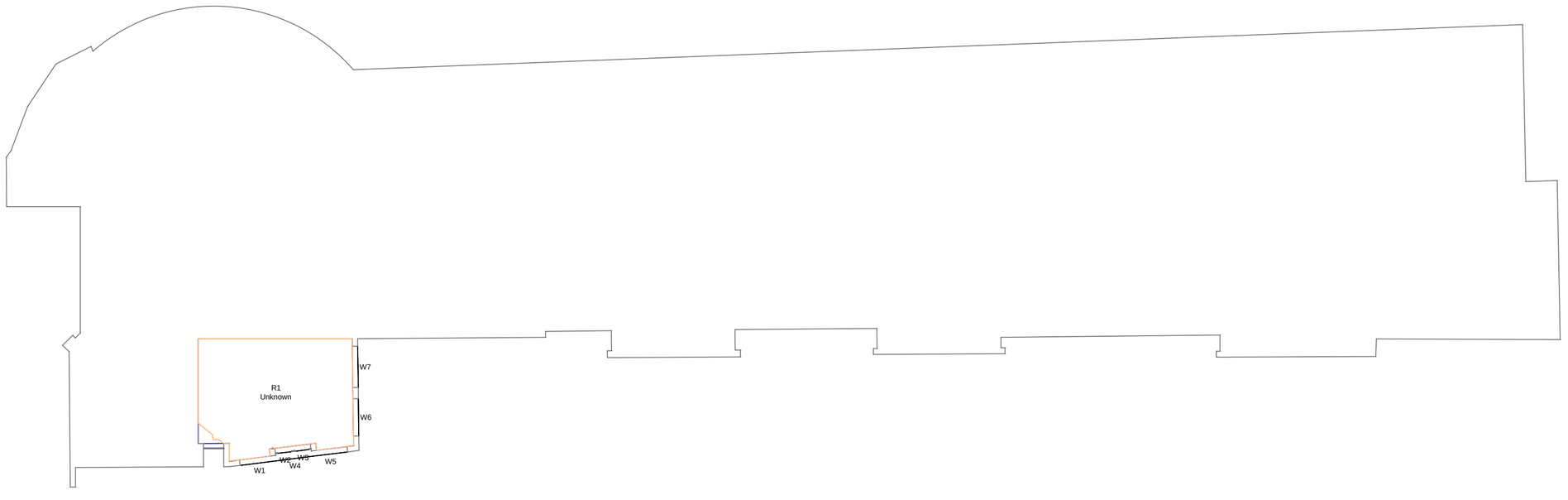
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Lower Ground Floor



1:200

Jefferson Place
Ground Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-11	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

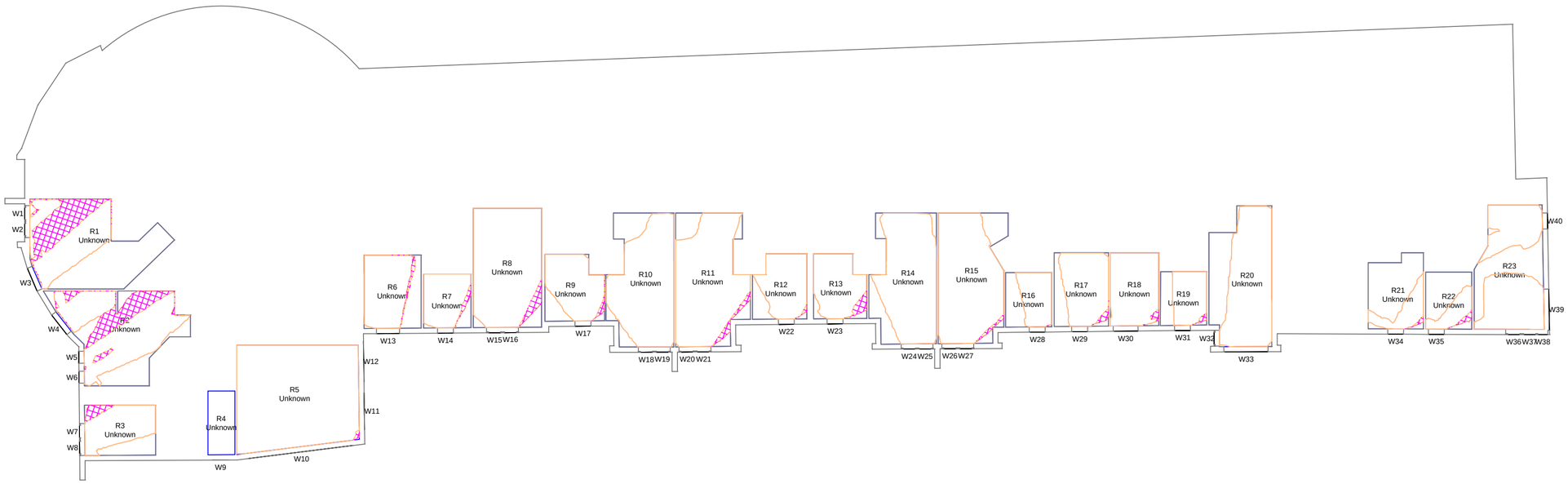
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

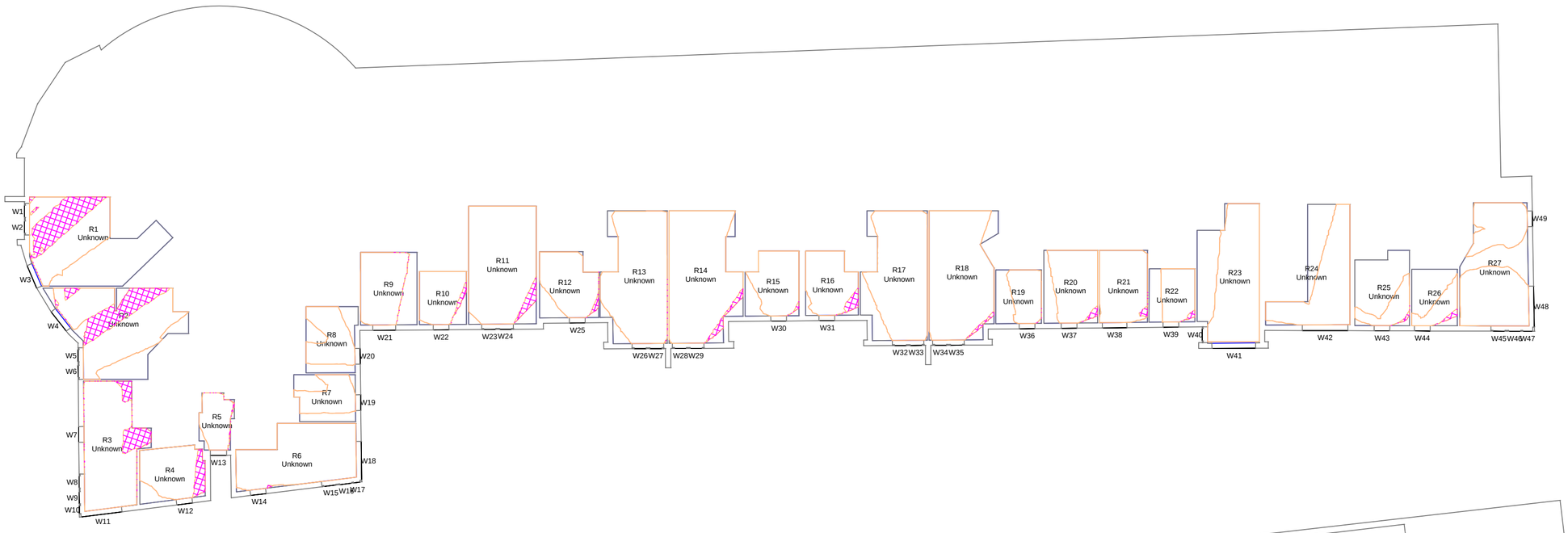
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
First Floor



1:200

Jefferson Place
Second Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-12	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

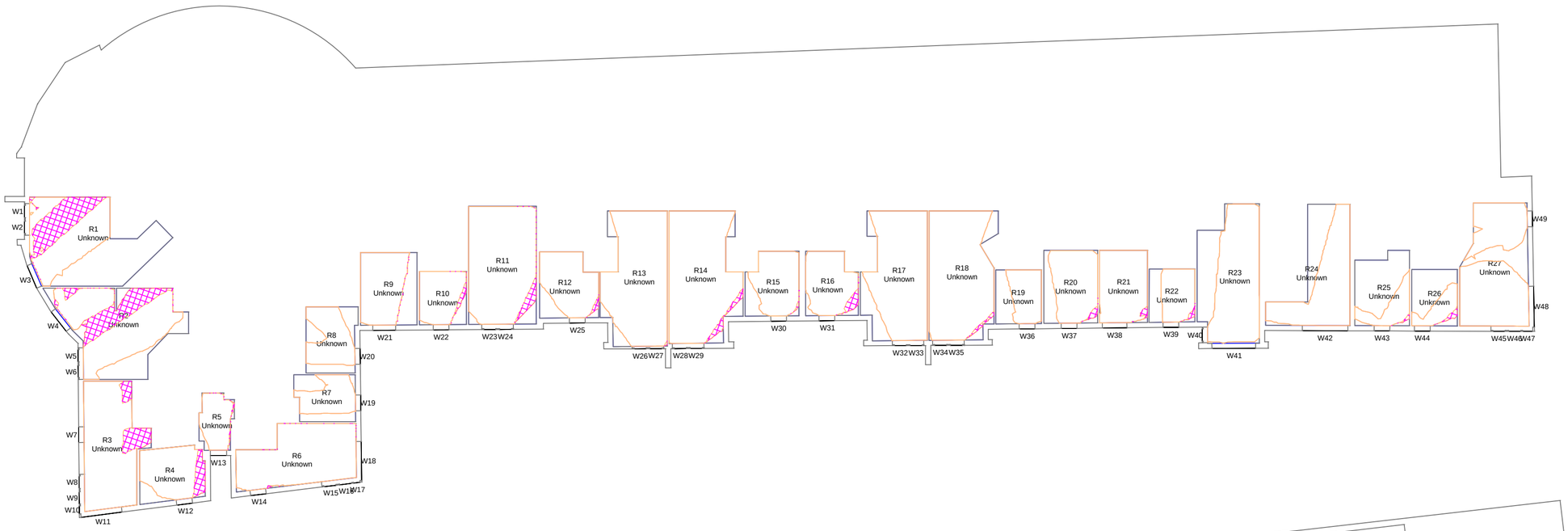
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

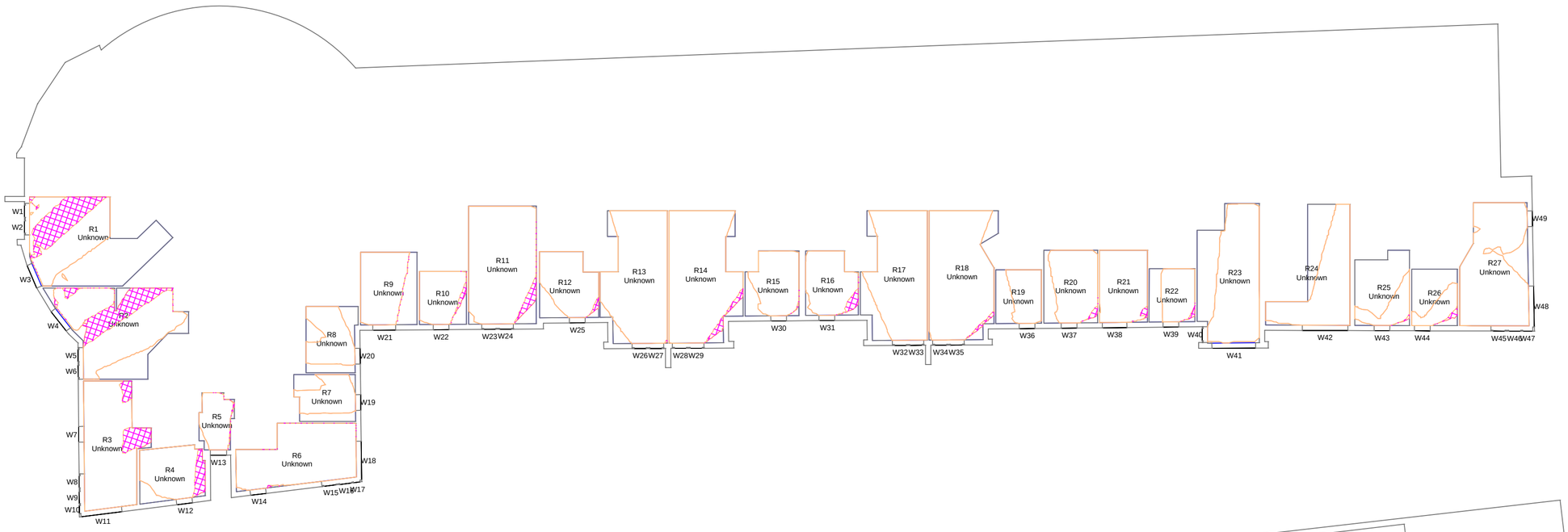
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Third Floor



1:200

Jefferson Place
Fourth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-13	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

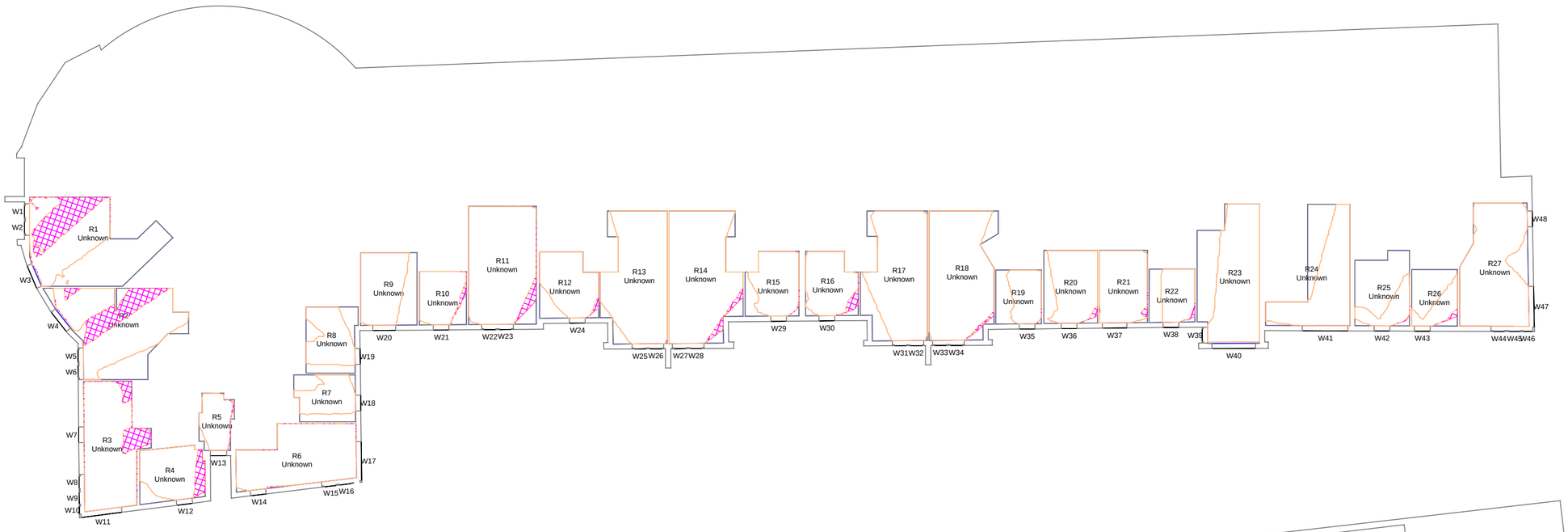
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

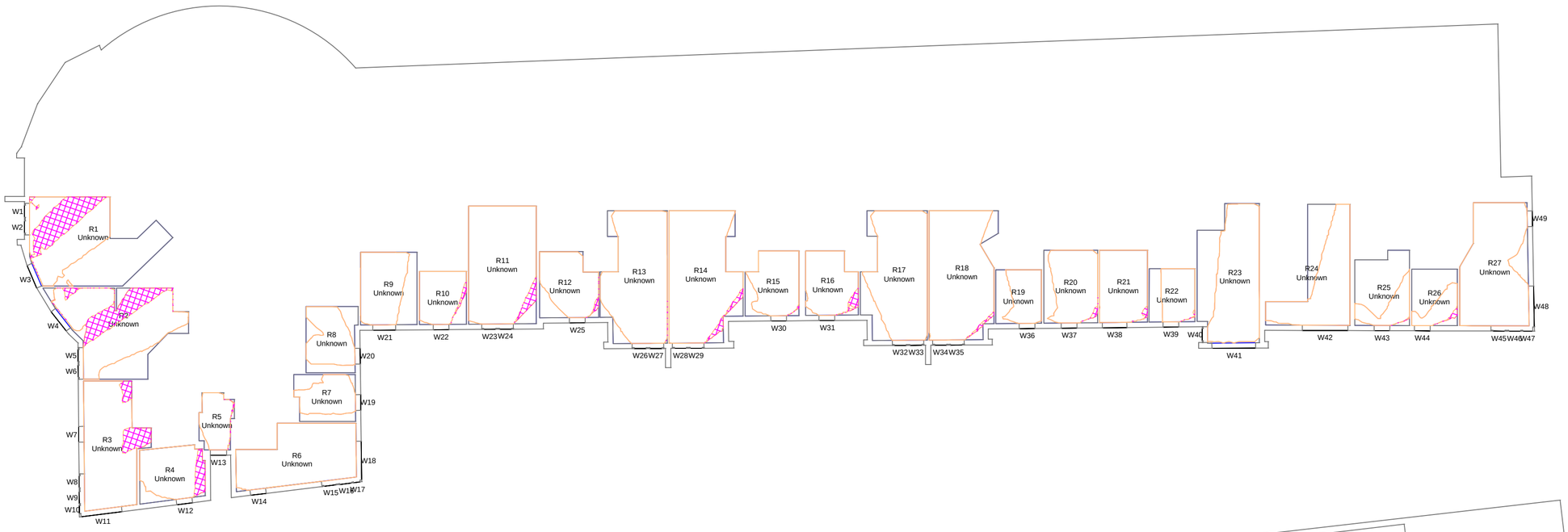
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Fifth Floor



1:200

Jefferson Place
Sixth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-14	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

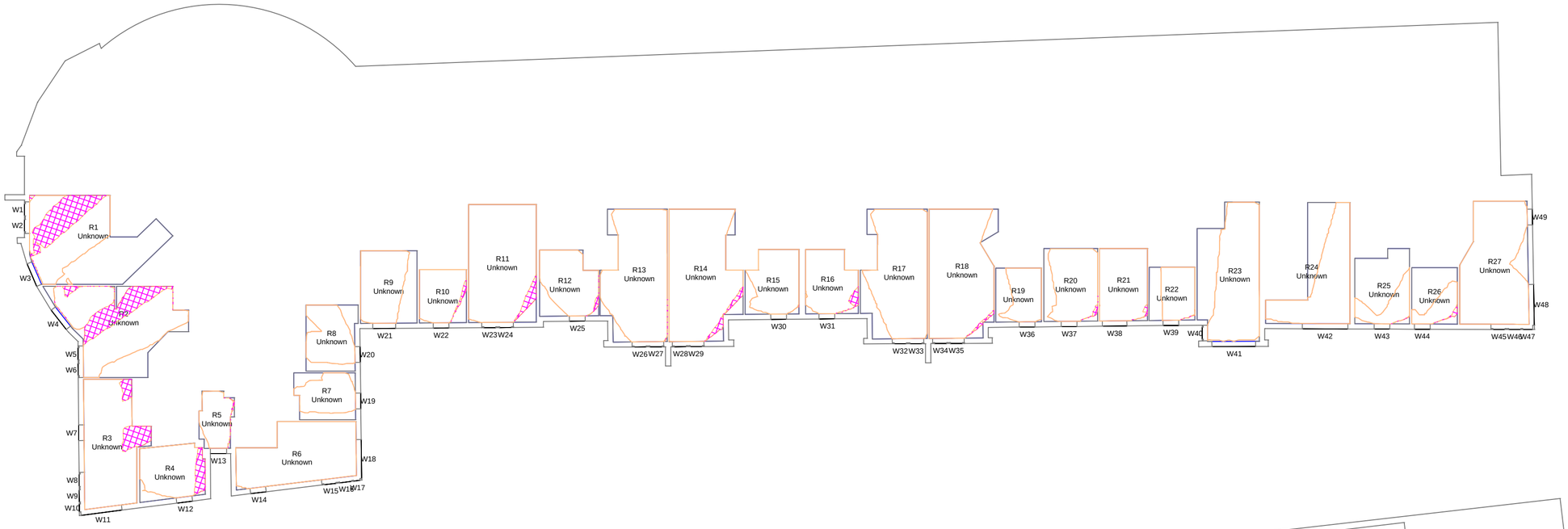
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

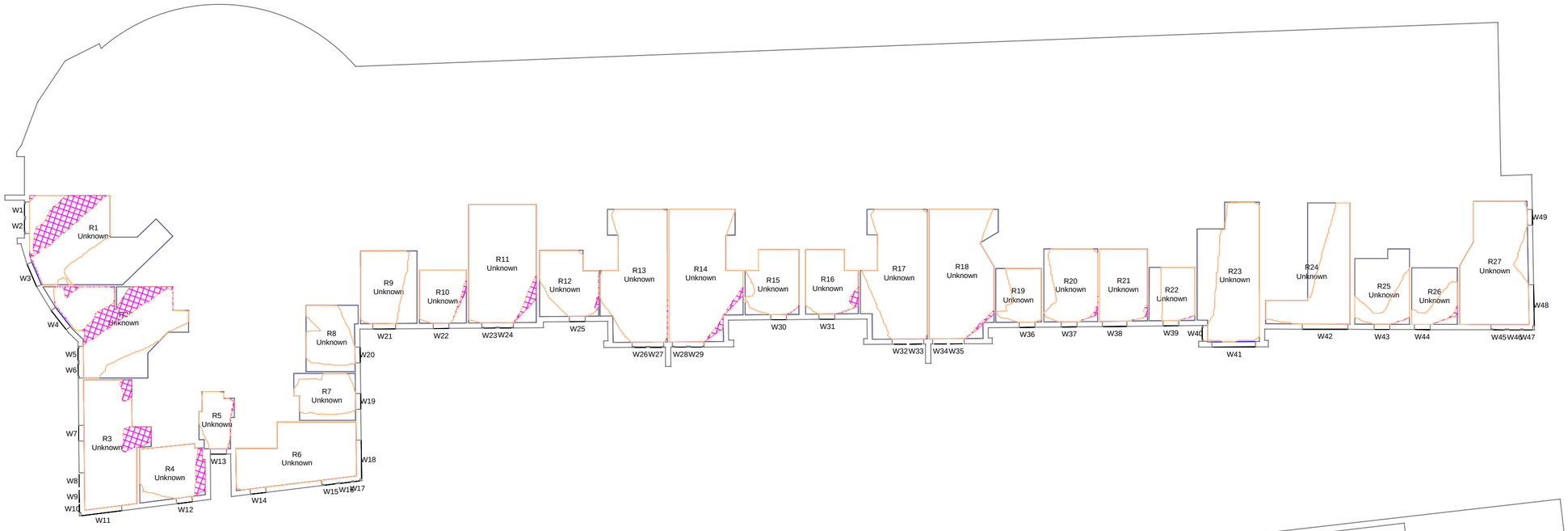
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Seventh Floor



1:200

Jefferson Place
Eighth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-15	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

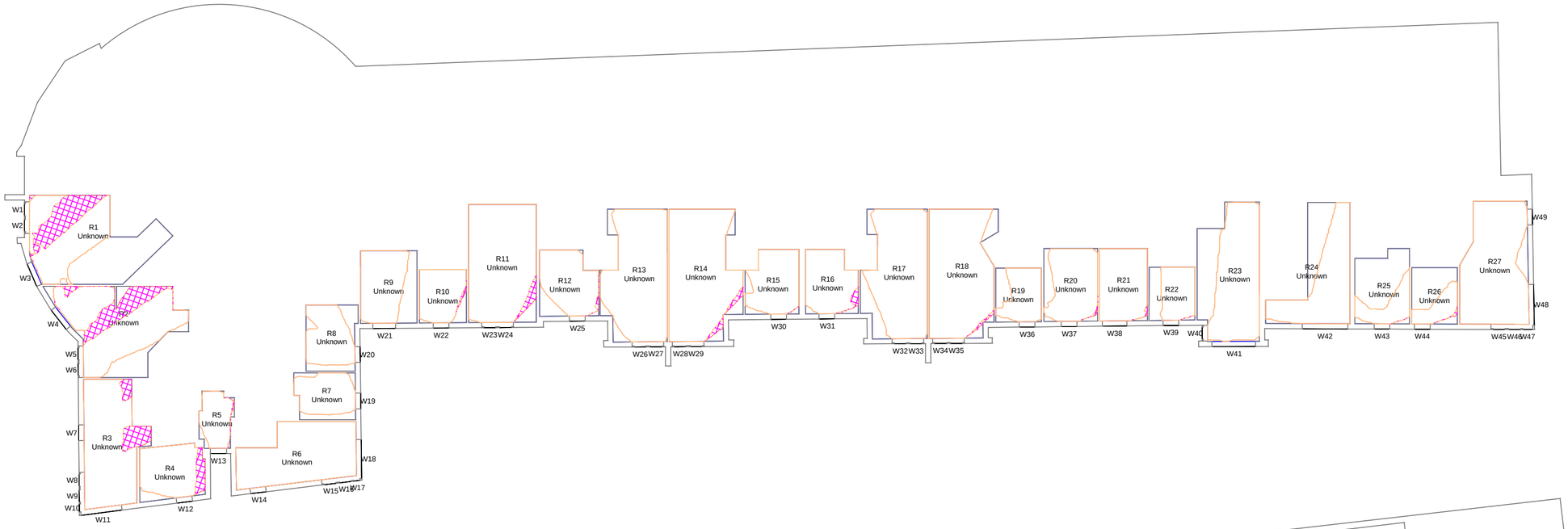
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

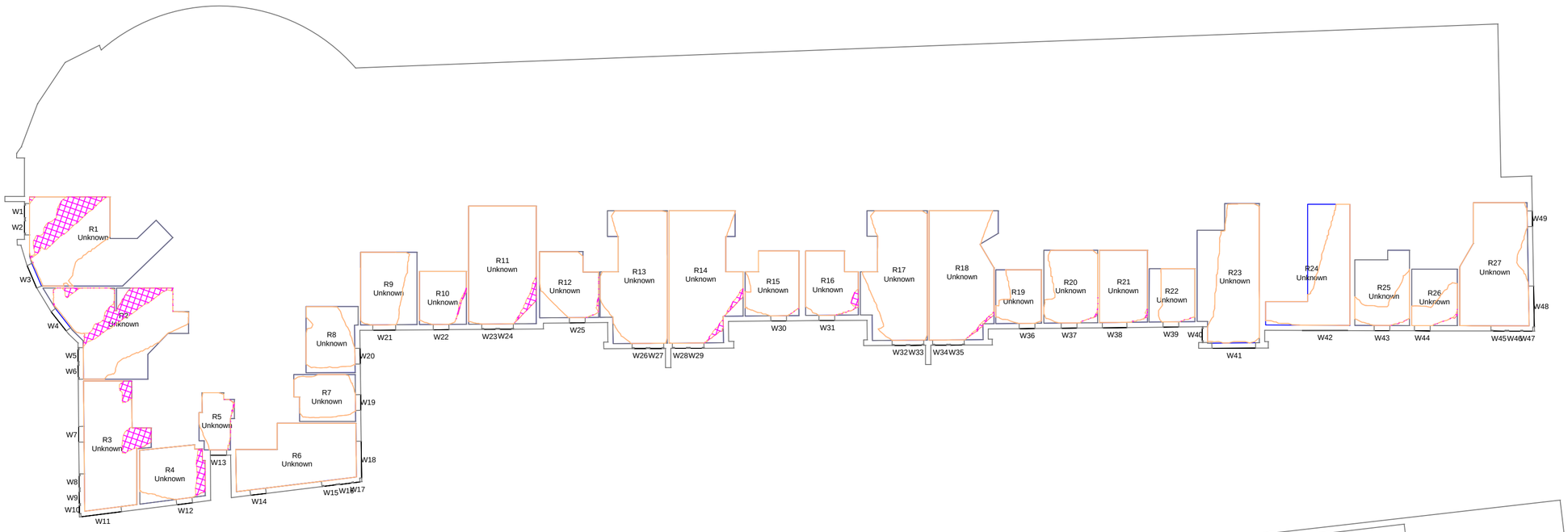
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Ninth Floor



1:200

Jefferson Place
Tenth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-16	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

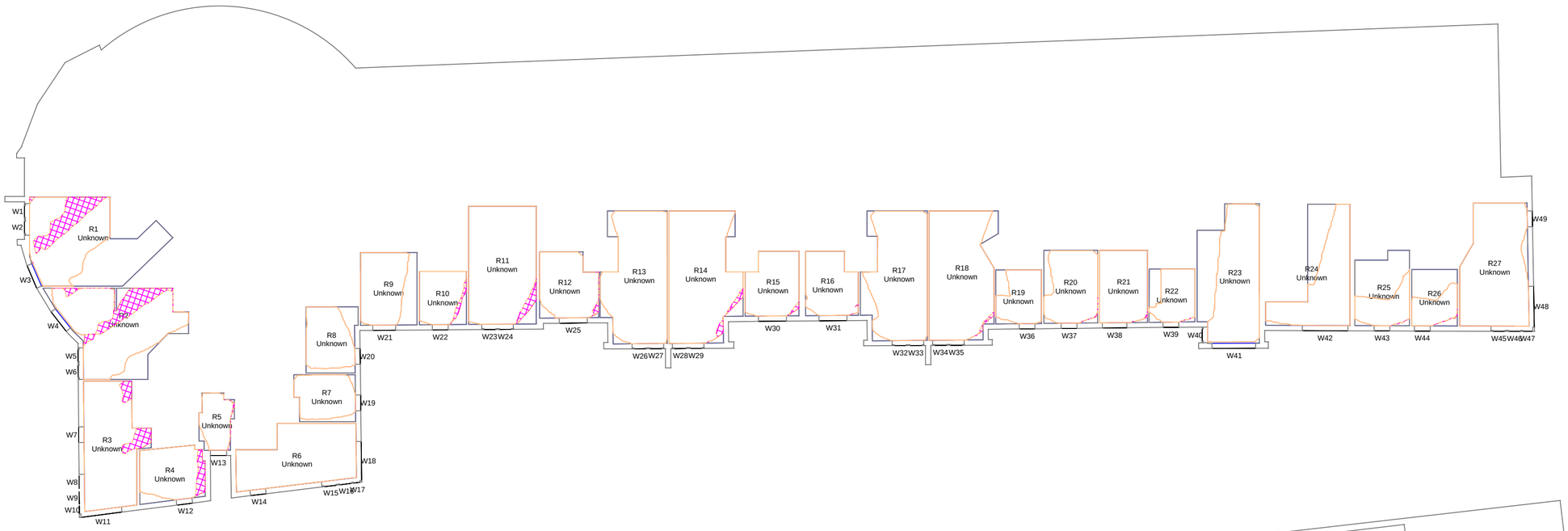
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

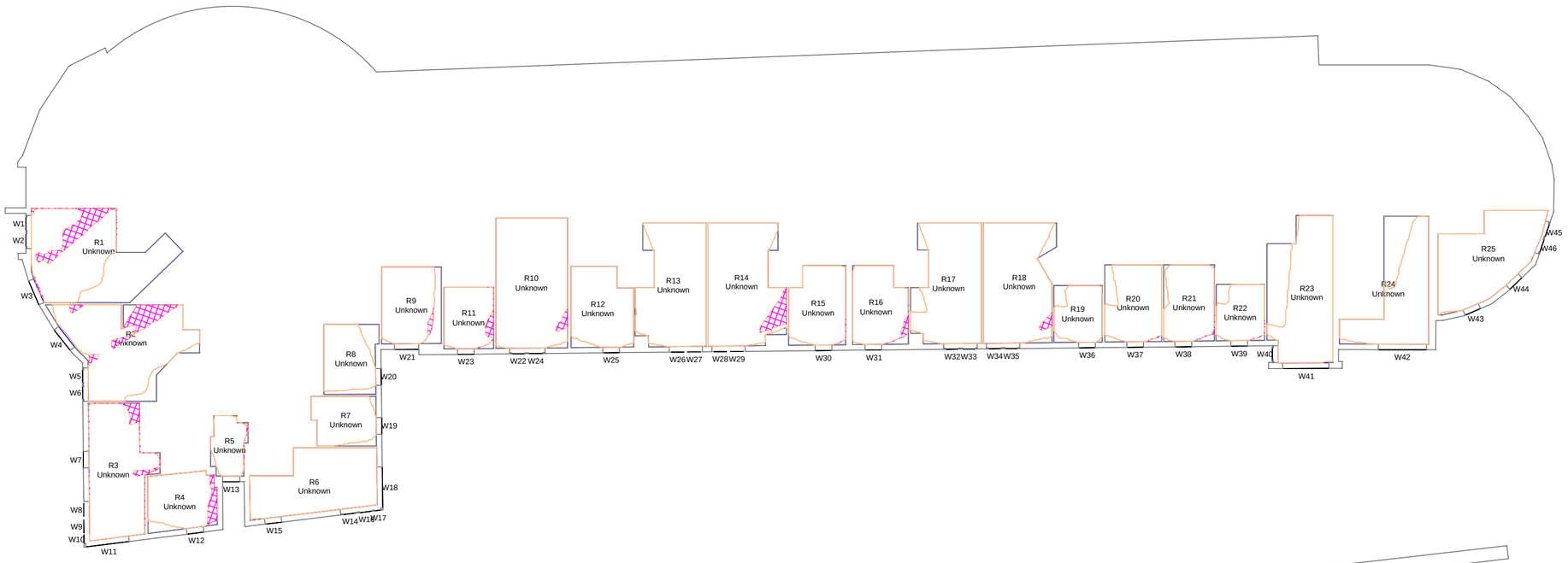
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Eleventh Floor



1:200

Jefferson Place
Twelfth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-17	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

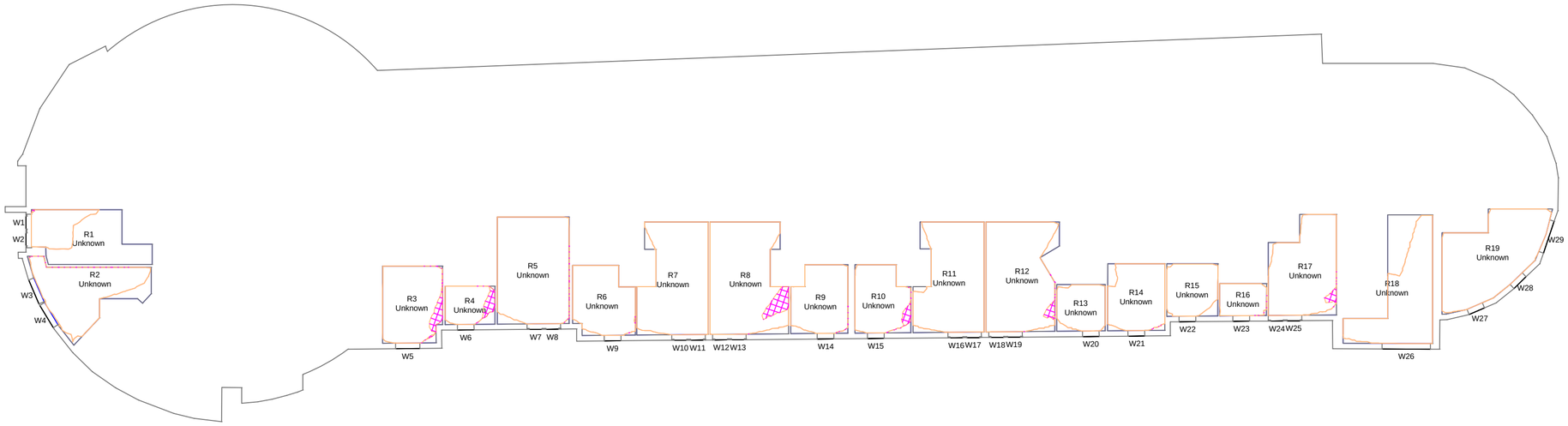
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

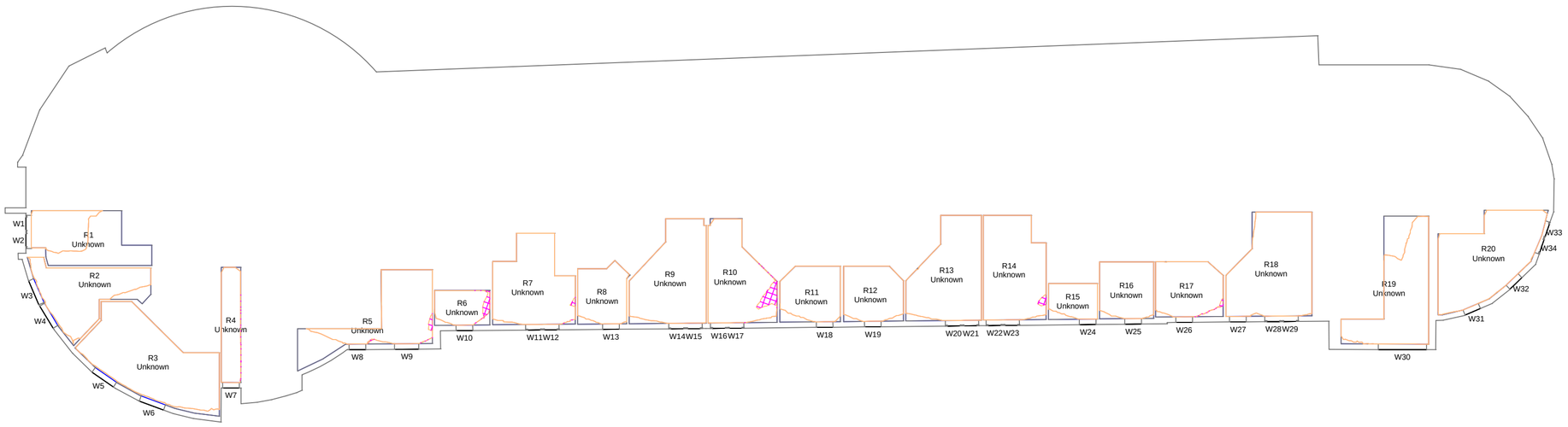
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Thirteenth Floor



1:200

Jefferson Place
Fourteenth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-18	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

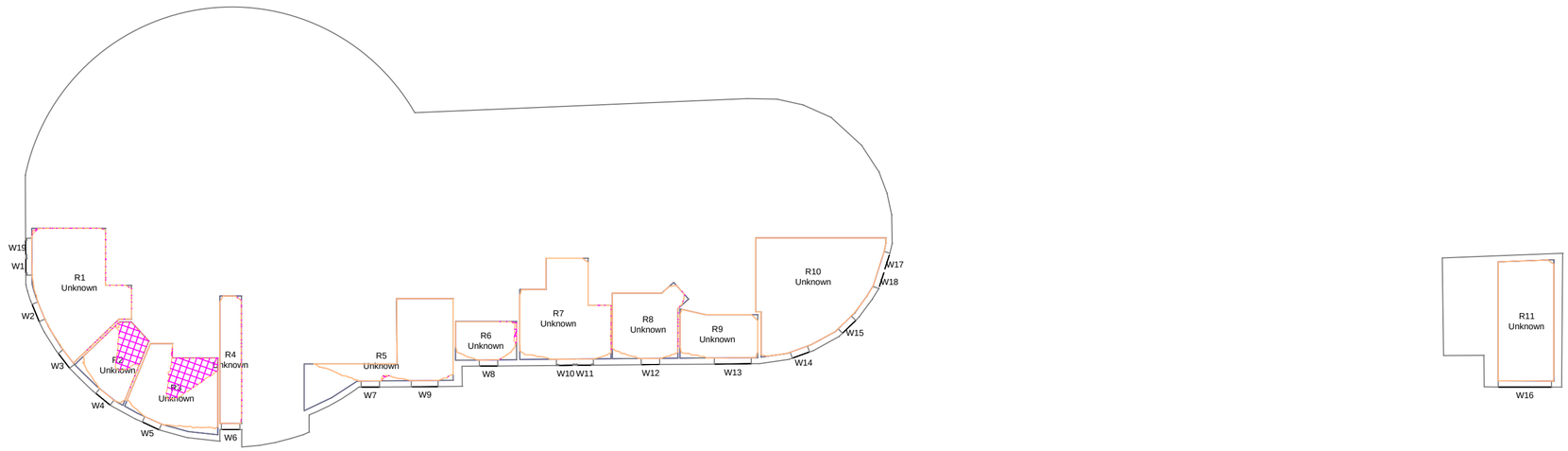
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Fifteenth Floor



1:200

Jefferson Place
Sixteenth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:100	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-19	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

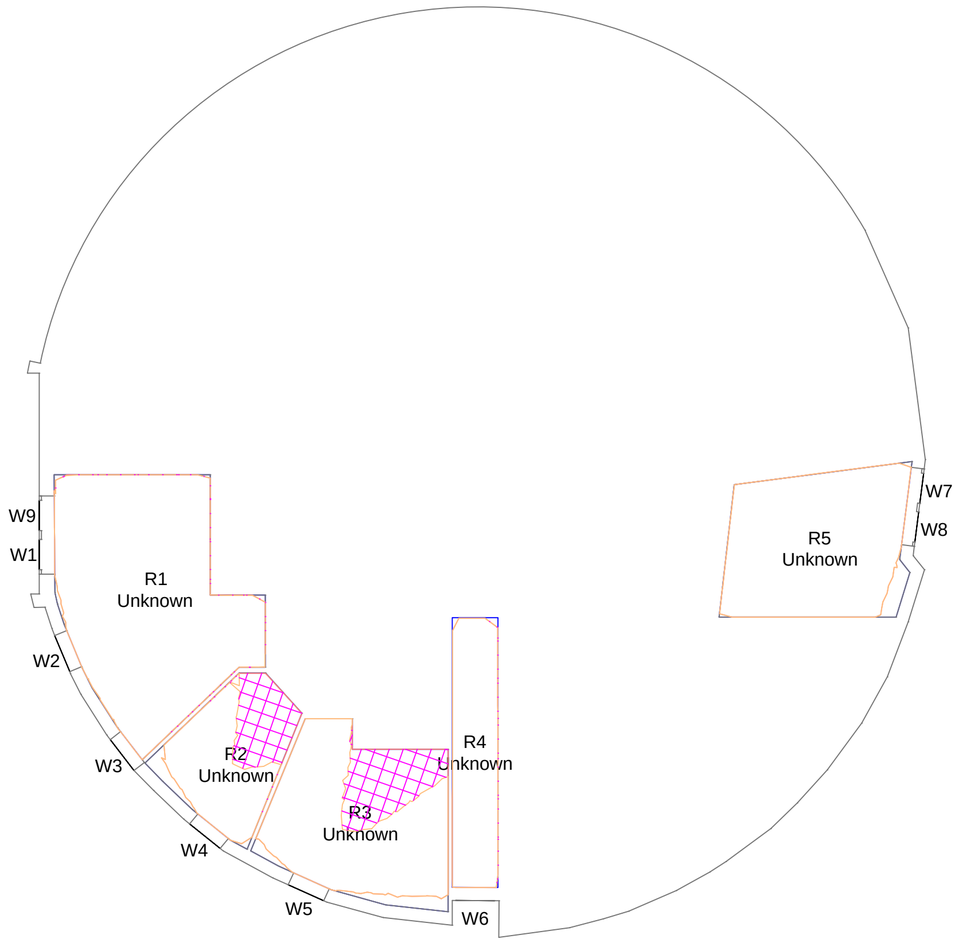
All heights in m AOD

DD Legend

Room Area (Measured Layout)
Existing No Sky Area
Proposed No Sky Area
Area of Loss/Gain

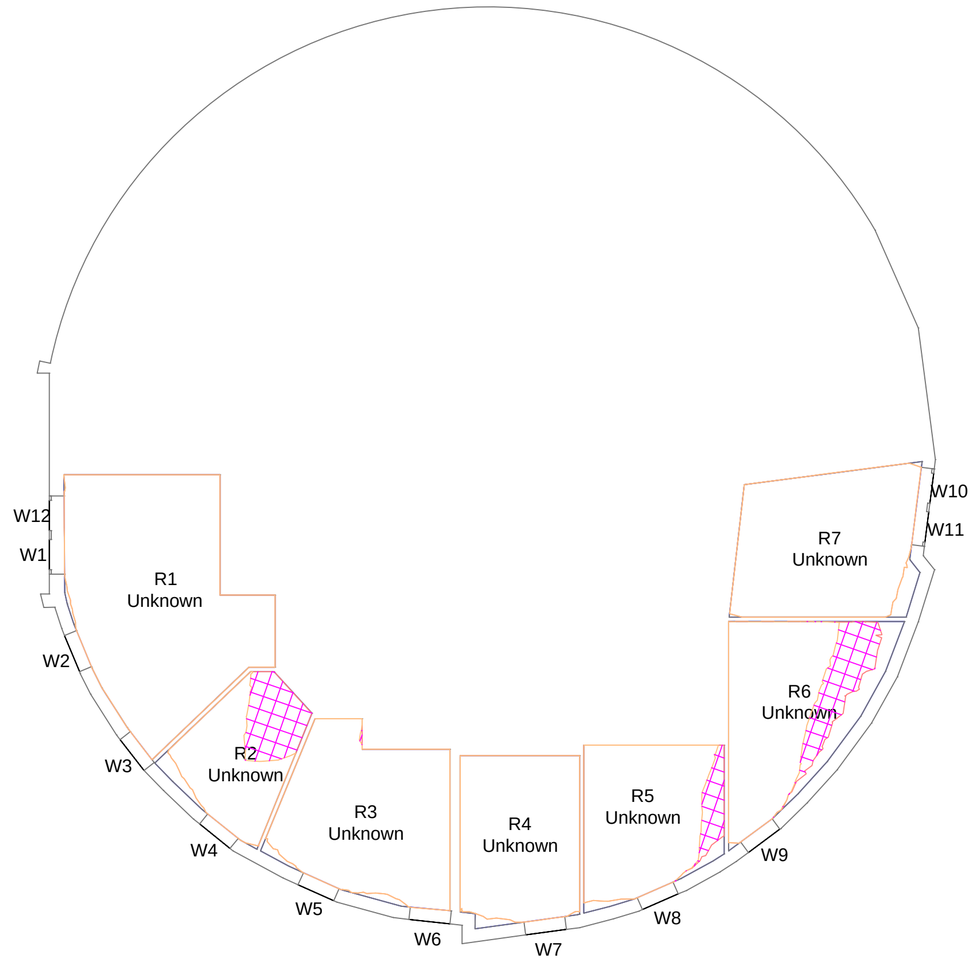
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Seventeenth Floor



1:100

Jefferson Place
Eighteenth Floor



1:100

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-20	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

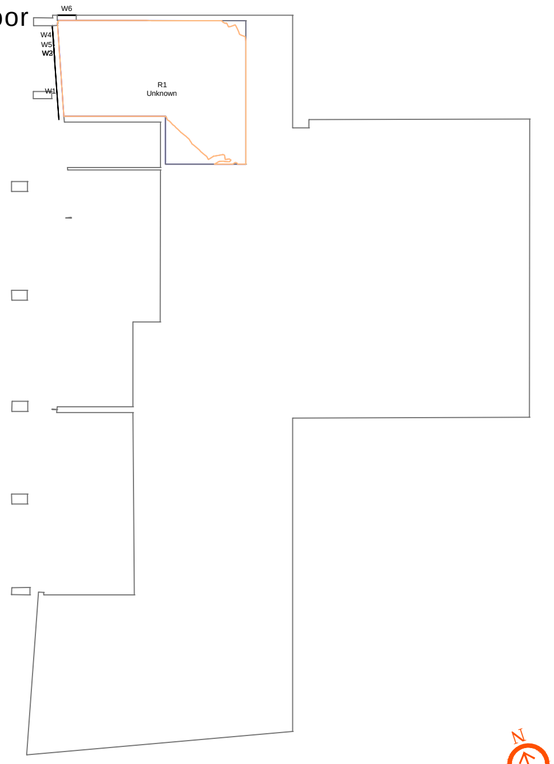
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

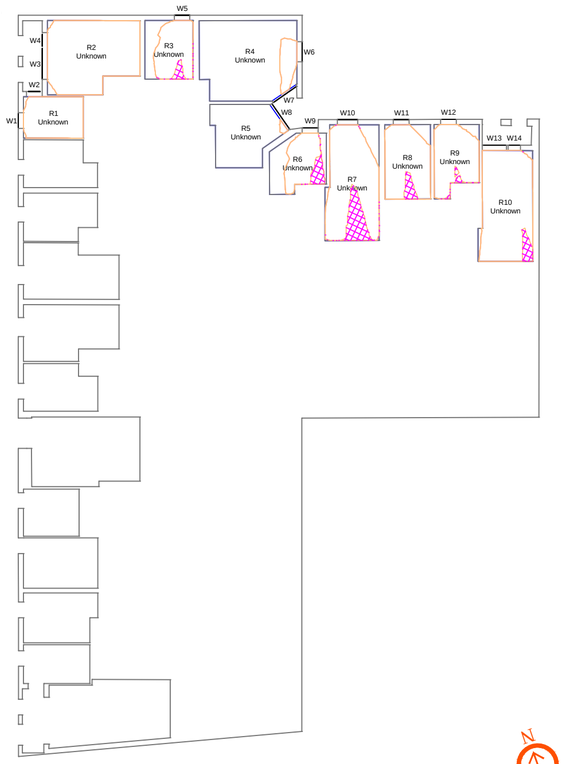
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Ground Floor



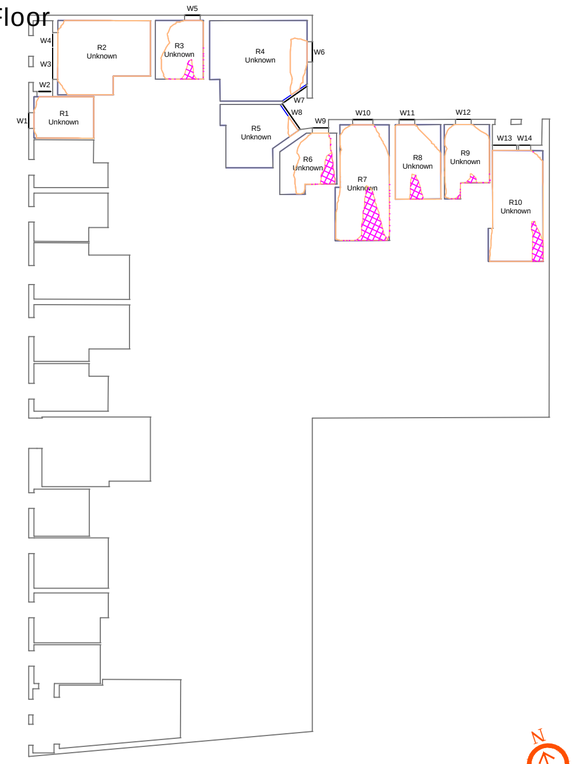
1:250

The Hallmark
First Floor



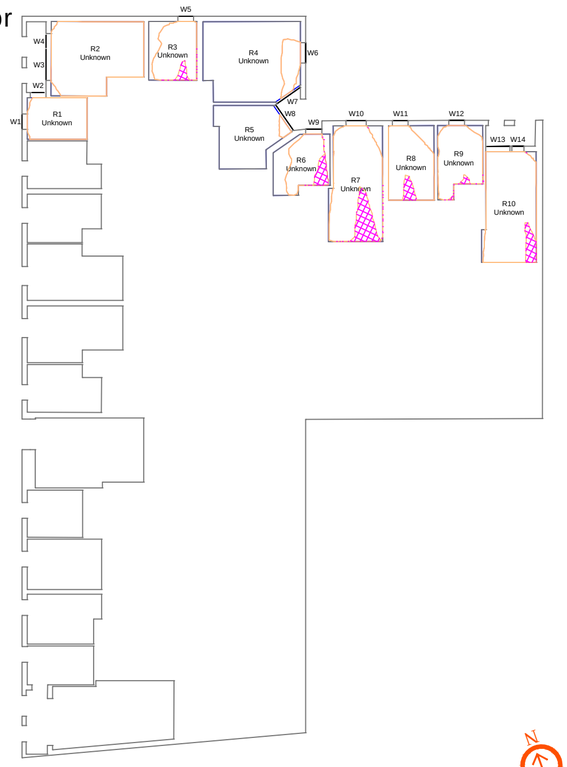
1:250

The Hallmark
Second Floor



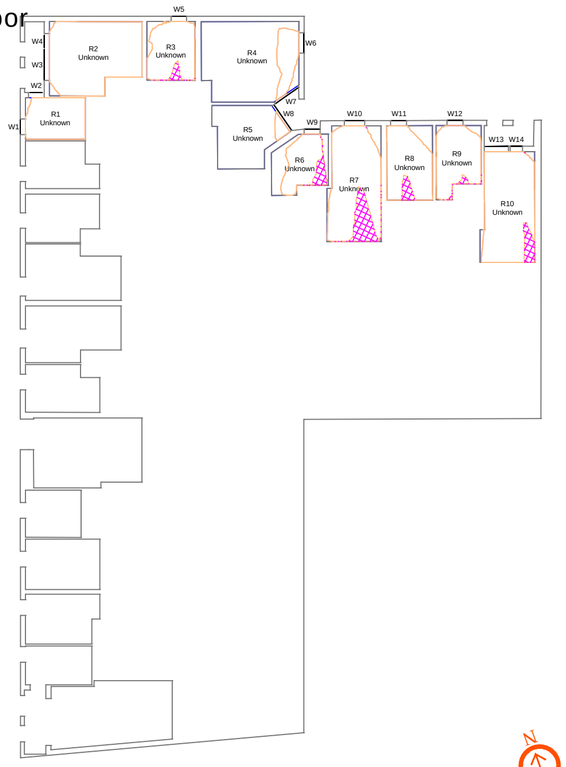
1:250

The Hallmark
Third Floor



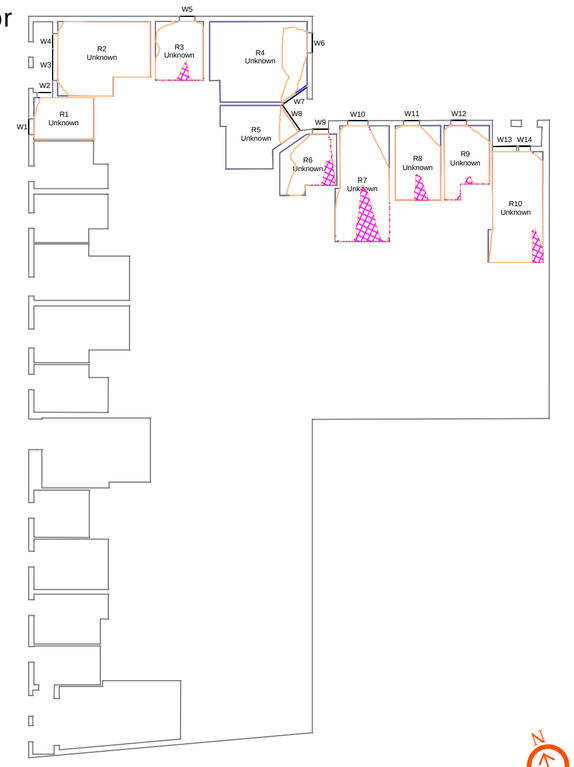
1:250

The Hallmark
Fourth Floor



1:250

The Hallmark
Fifth Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-21	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

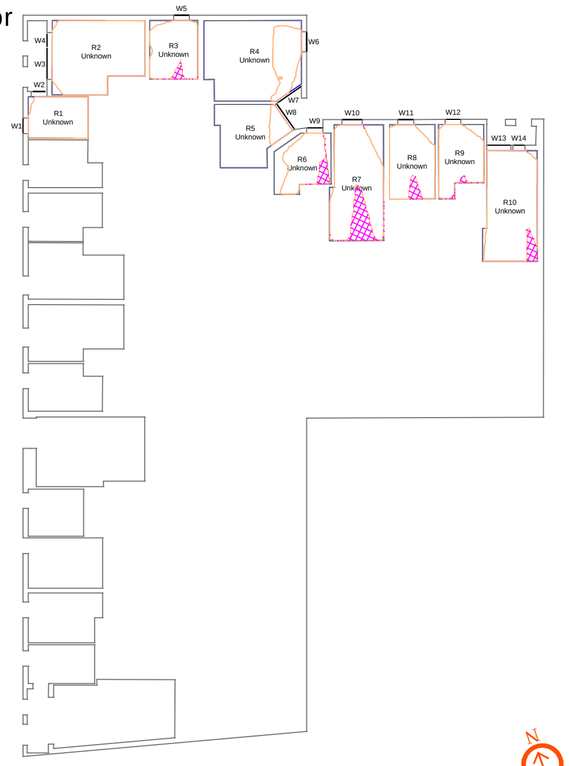
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

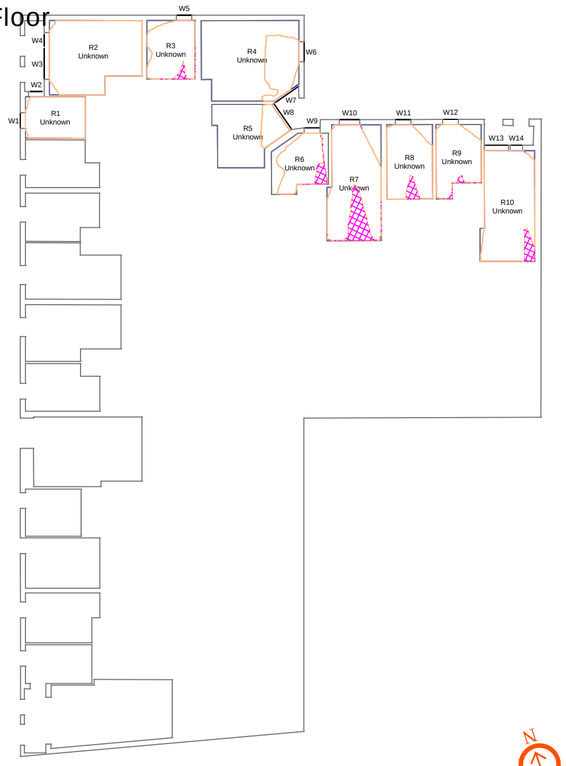
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Sixth Floor



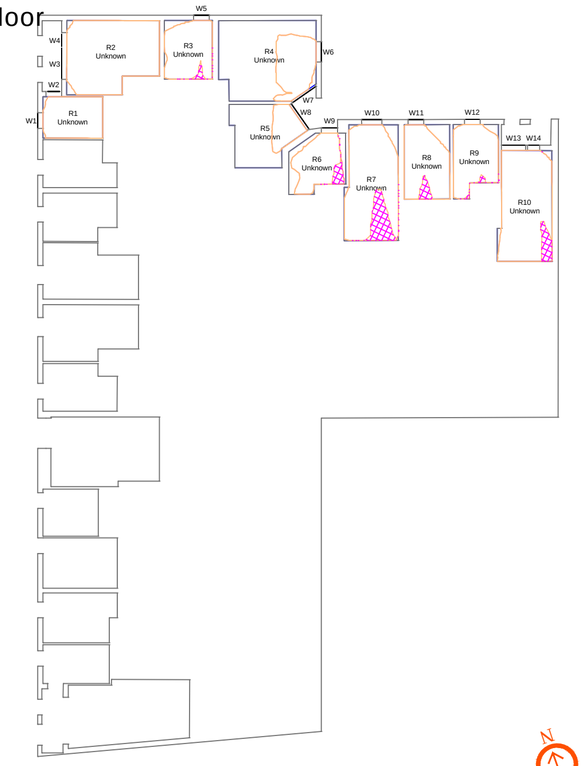
1:250

The Hallmark
Seventh Floor



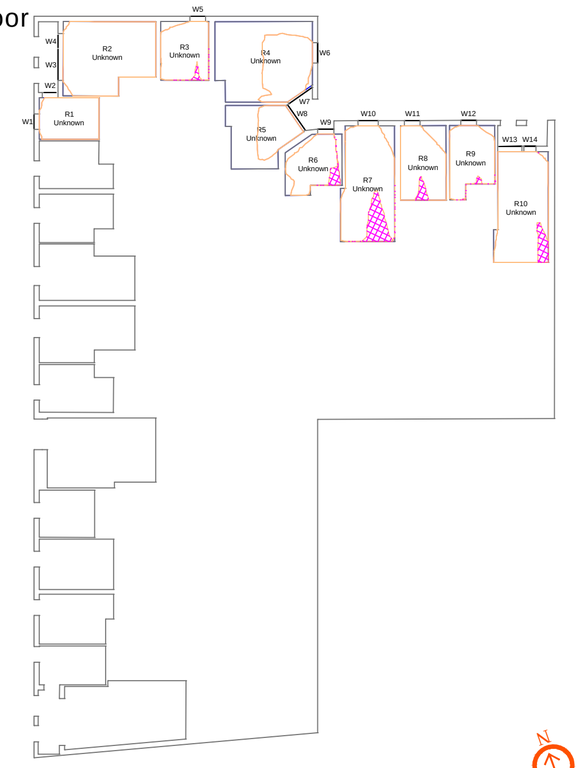
1:250

The Hallmark
Eighth Floor



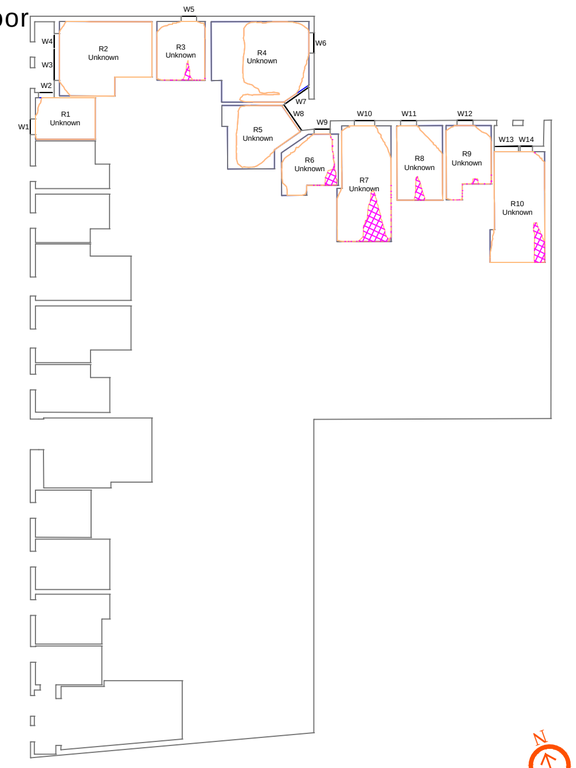
1:250

The Hallmark
Ninth Floor



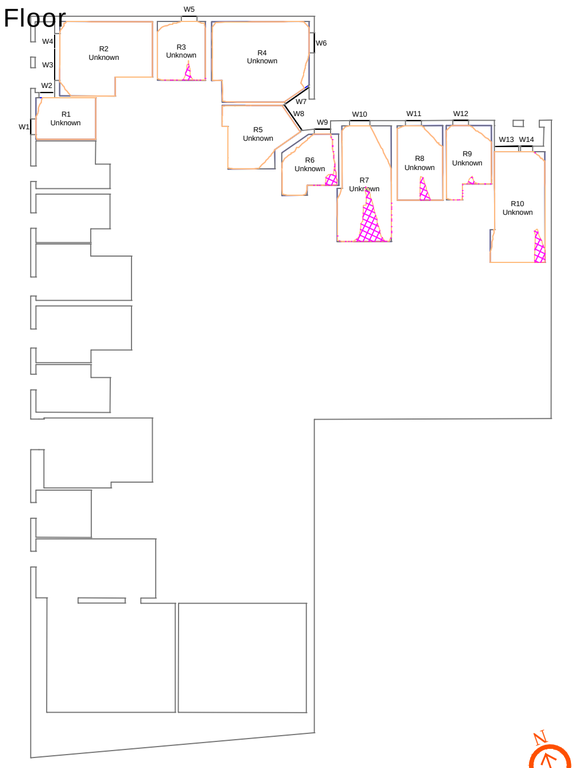
1:250

The Hallmark
Tenth Floor



1:250

The Hallmark
Eleventh Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-22	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

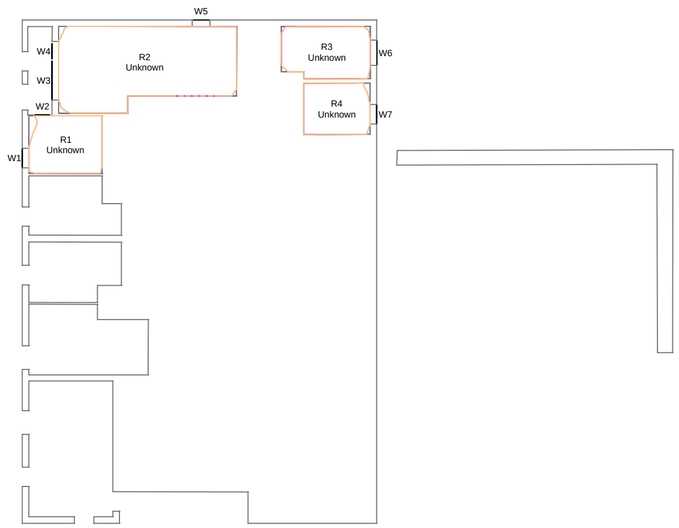
All heights in m AOD

DD Legend

Room Area (Measured Layout)
Existing No Sky Area
Proposed No Sky Area
Area of Loss/Gain

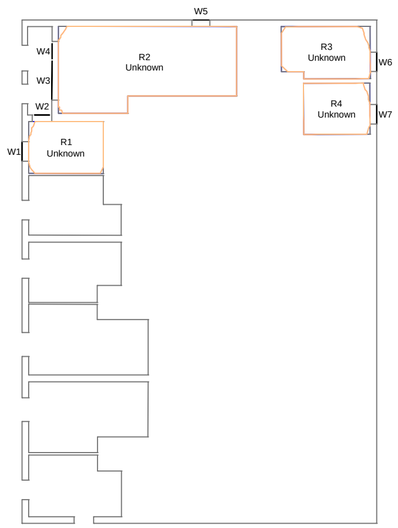
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Twelfth Floor



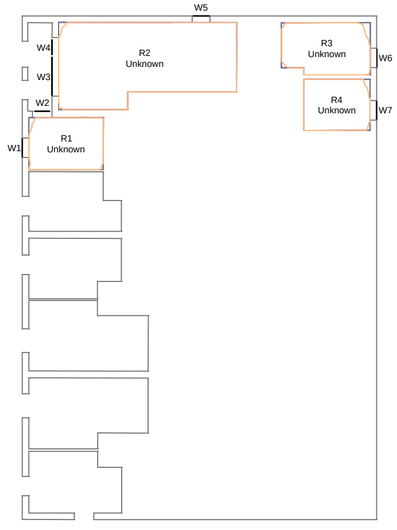
1:200

The Hallmark
Thirteenth Floor



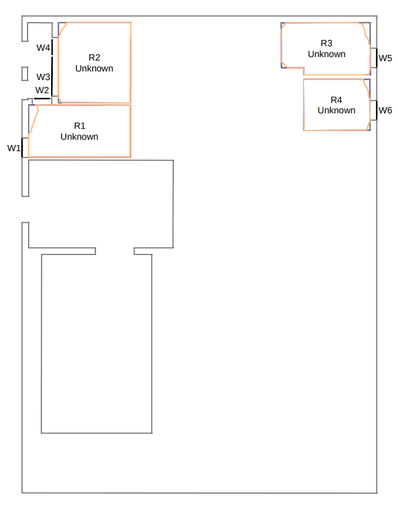
1:200

The Hallmark
Fourteenth Floor



1:200

The Hallmark
Fifteenth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-23	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

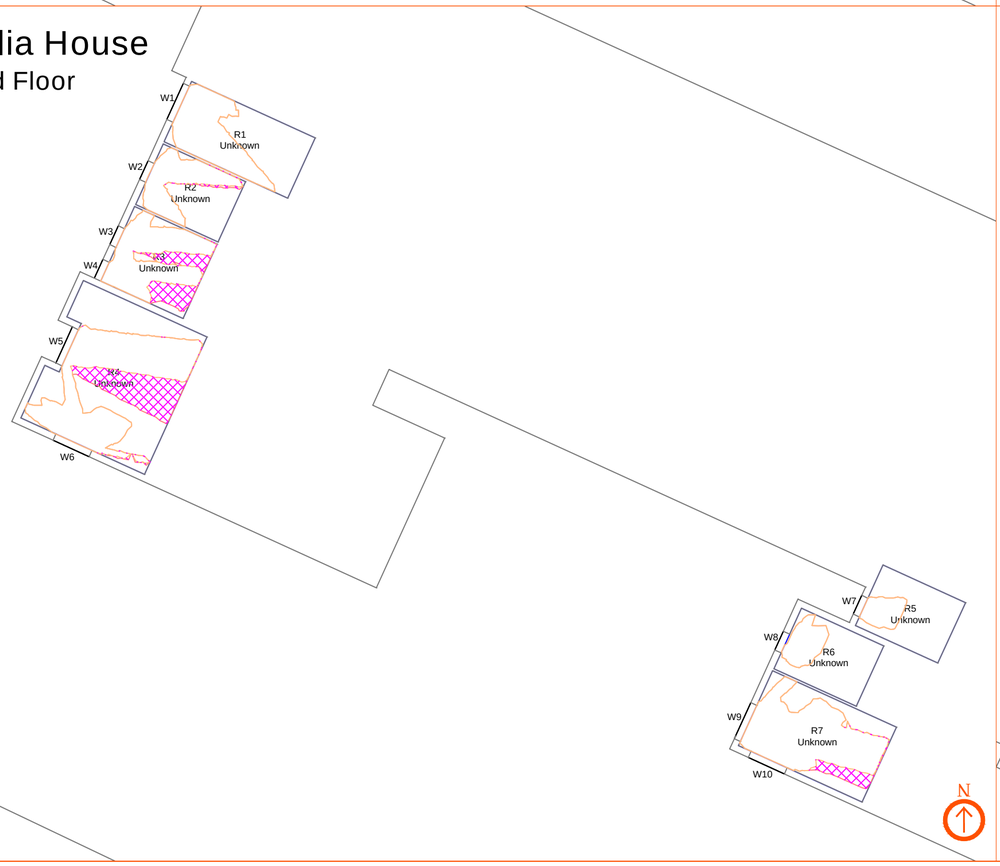
Melia House
First Floor



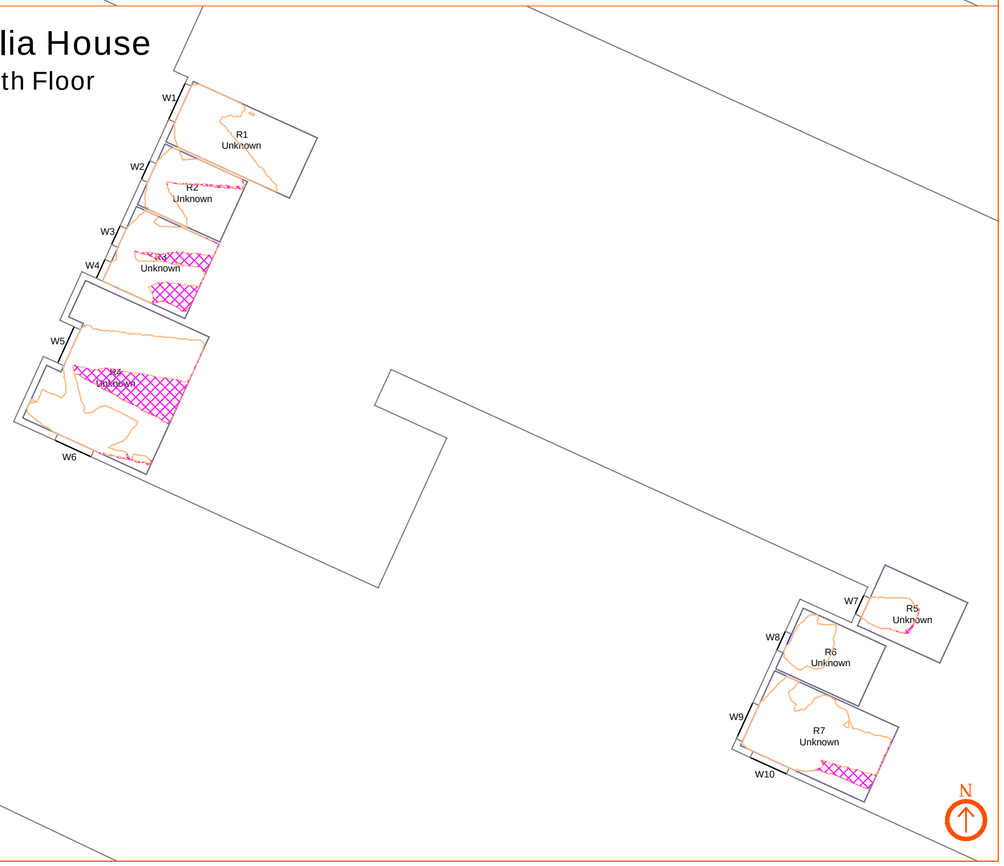
Melia House
Second Floor



Melia House
Third Floor



Melia House
Fourth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-24	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Melia House
Fifth Floor



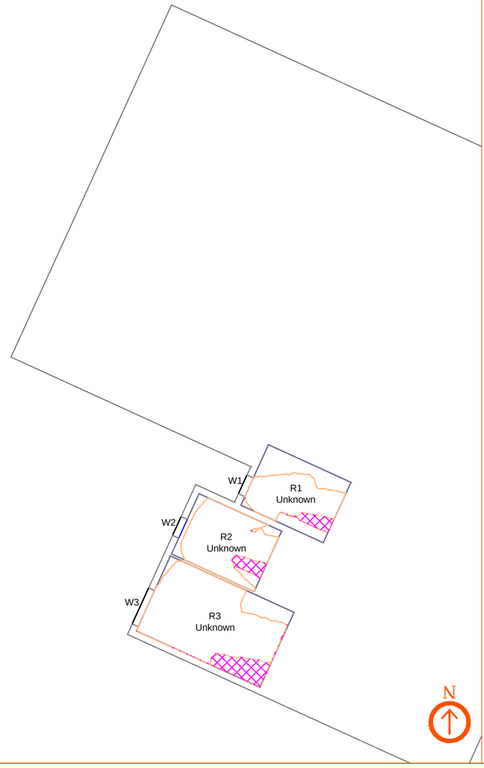
Melia House
Sixth Floor



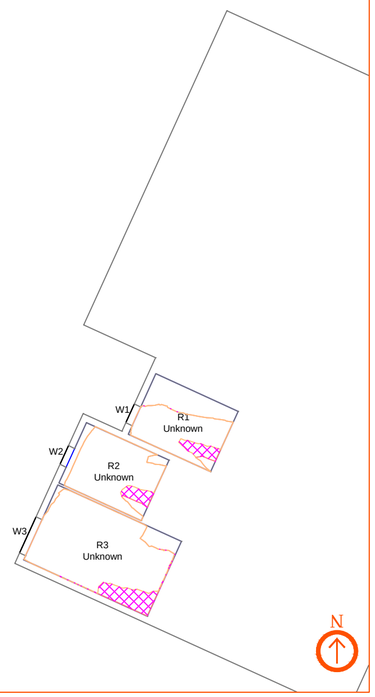
Melia House
Seventh Floor



Melia House
Eighth Floor



Melia House
Ninth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-25	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

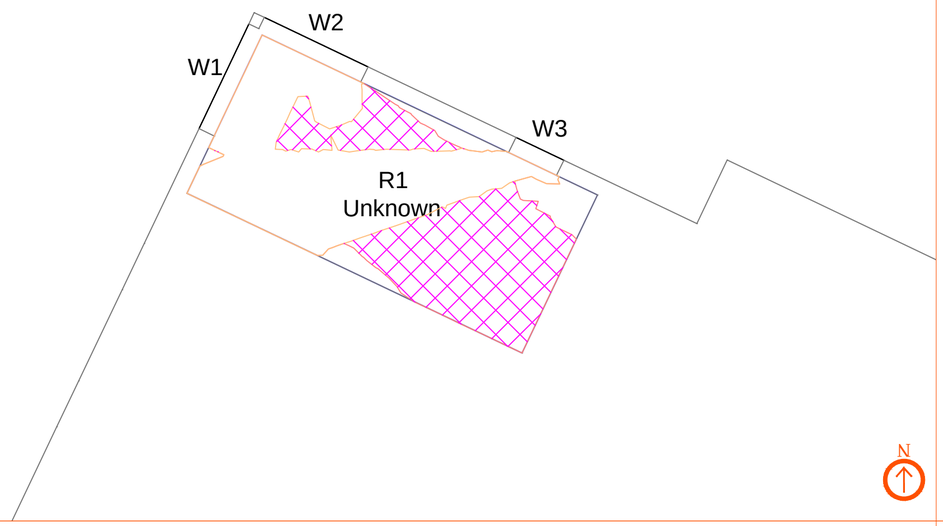
All heights in m AOD

DD Legend

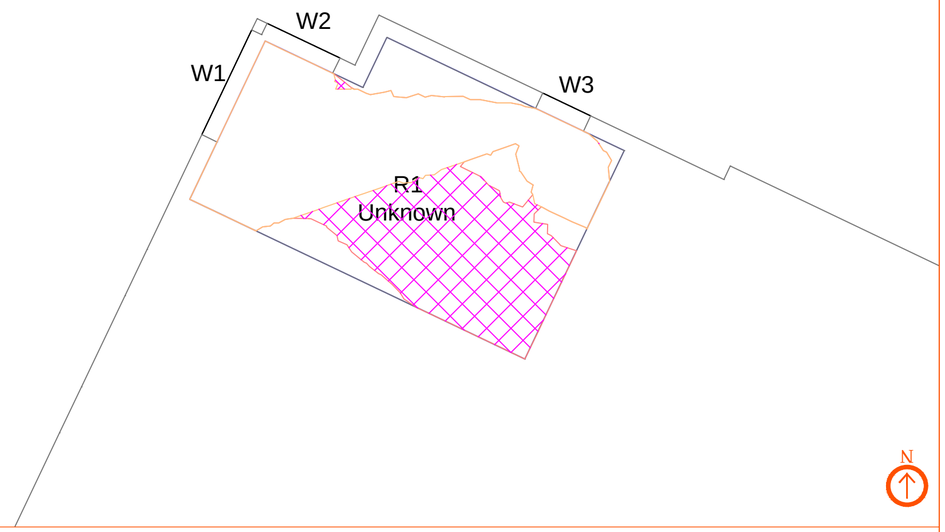
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

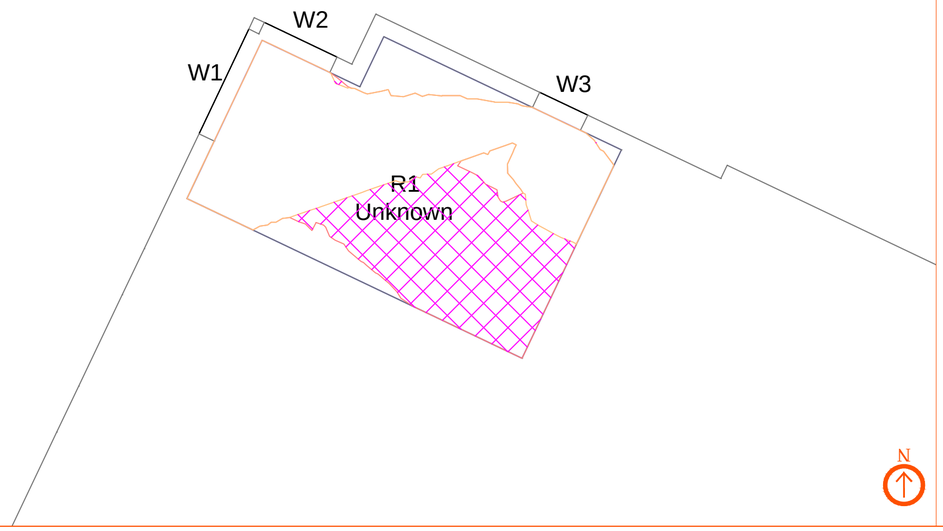
Masson Place
First Floor



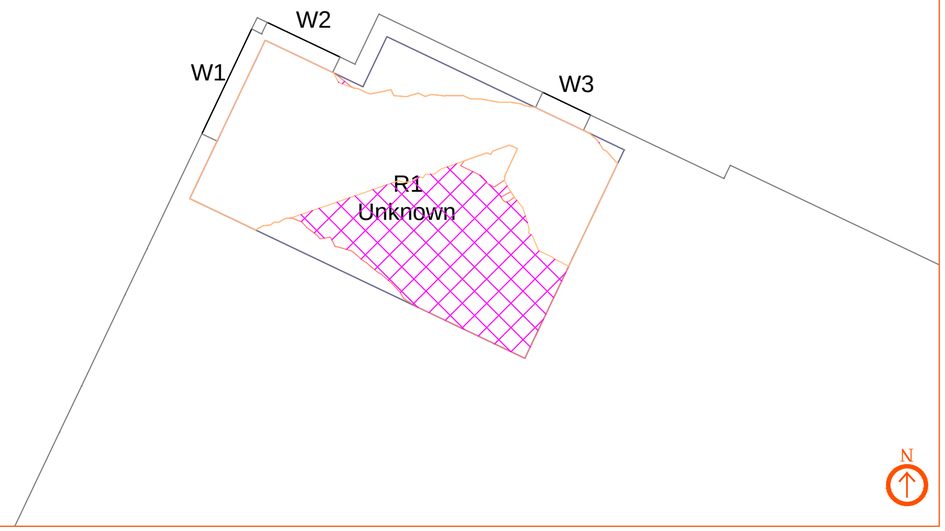
Masson Place
Second Floor



Masson Place
Third Floor



Masson Place
Fourth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-26	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

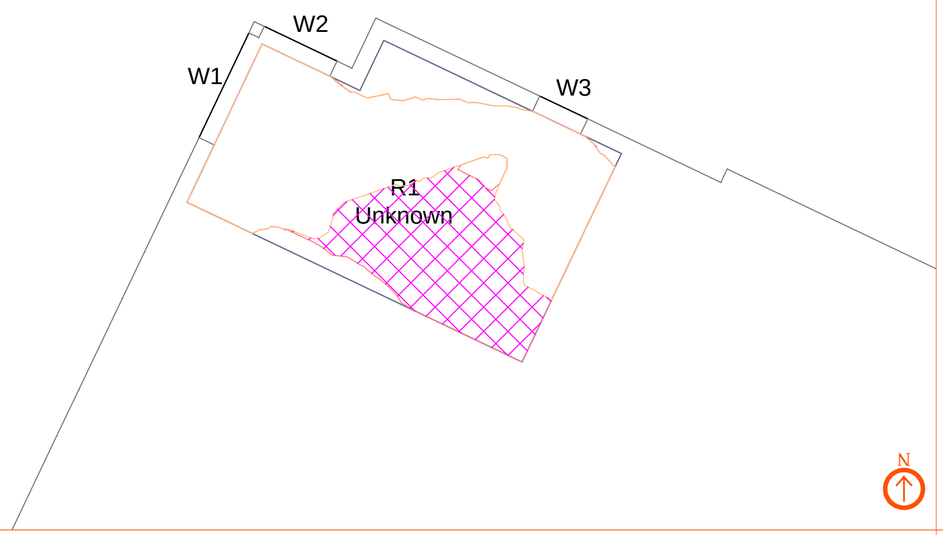
All heights in m AOD

DD Legend

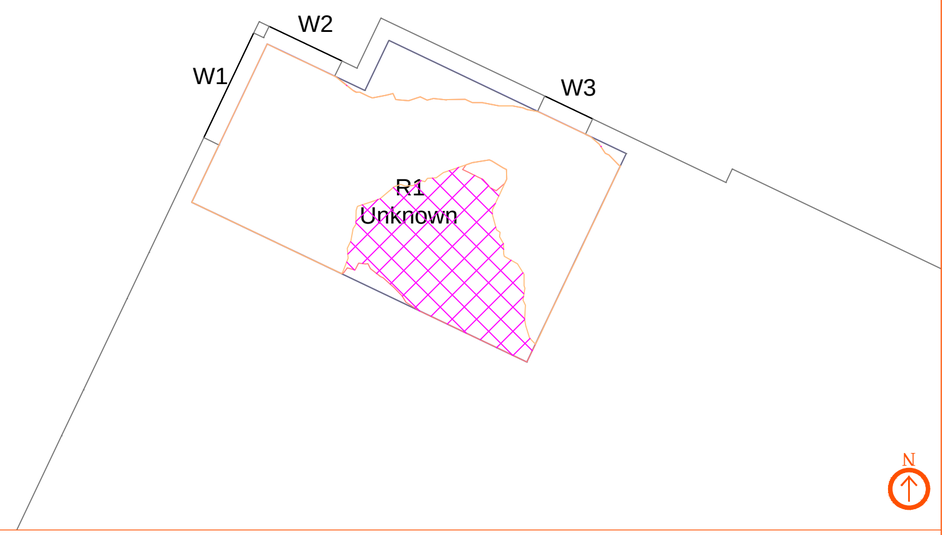
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

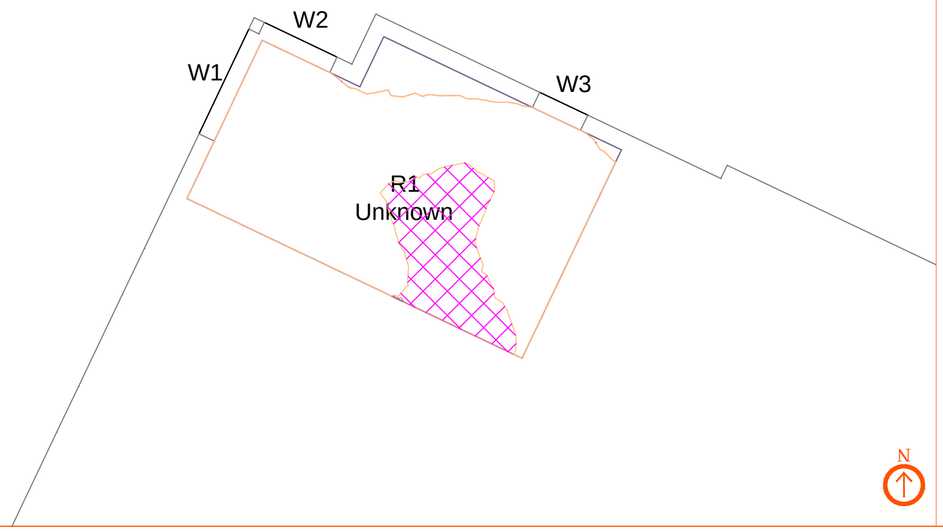
Masson Place
Fifth Floor



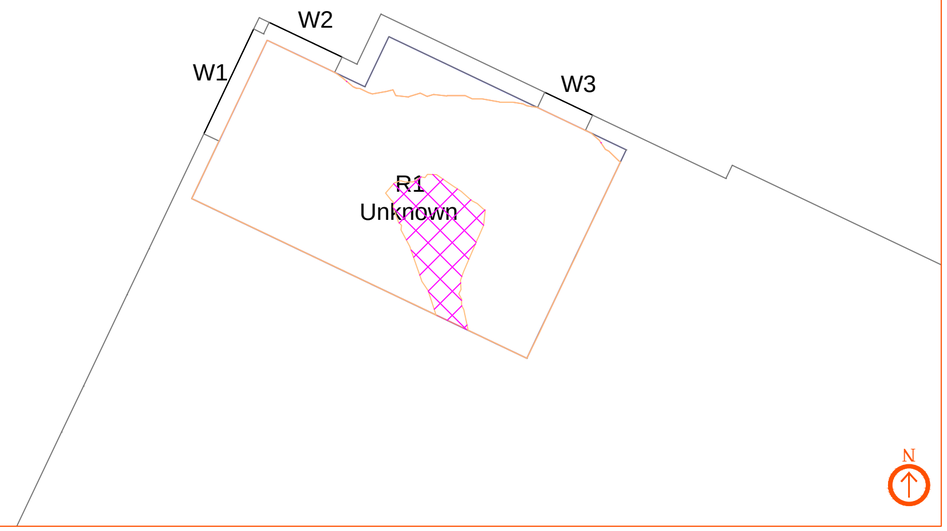
Masson Place
Sixth Floor



Masson Place
Seventh Floor



Masson Place
Eighth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-27	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

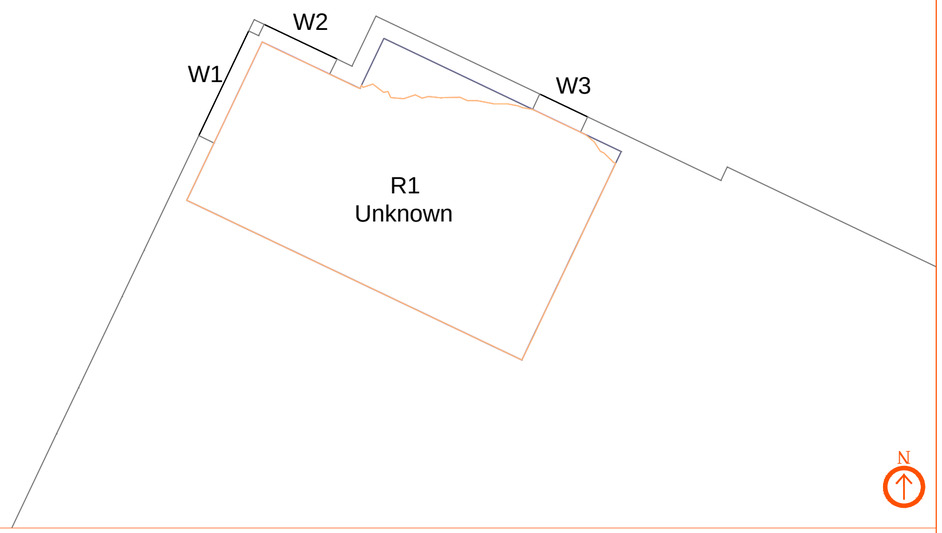
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Masson Place
Ninth Floor



Masson Place
Tenth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-28	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

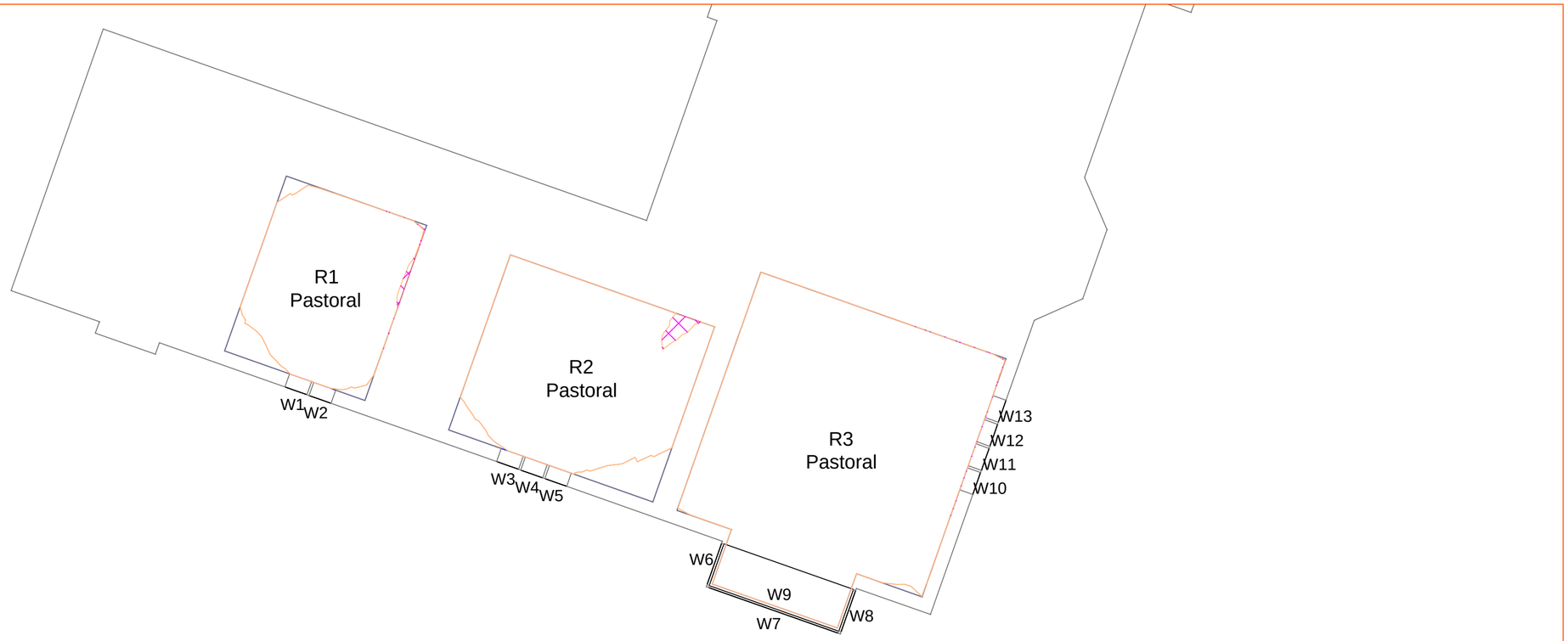
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

St Chad's Church
Ground Floor



St Chad's Church
First Floor



Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
St Chads Church													
Ground	R1		Pastoral	W1	199°	79.00	71.00	8.00	0.90	23.00	18.00	5.00	0.78
				W2	199°								
	R2		Pastoral	W3	199°	77.00	69.00	8.00	0.90	19.00	14.00	5.00	0.74
				W4	199°								
				W5	199°								
	R3		Pastoral	W6	289°N	90.00	82.00	8.00	0.91	20.00	15.00	5.00	0.75
				W7	199°								
				W8	109°								
				W9	199° Inc								
				W10	109°								
				W11	109°								
				W12	109°								
				W13	109°								
First	R1		Pastoral	W1	289°N	76.00	70.00	6.00	0.92	22.00	18.00	4.00	0.82
				W2	289°N								
				W3	289°N								
				W4	199°								
				W5	199°								
				W6	199° Inc								
	R2		Pastoral	W7	199°	86.00	79.00	7.00	0.92	24.00	19.00	5.00	0.79
				W8	199°								
				W9	199° Inc								
	R3		Pastoral	W10	199°	81.00	74.00	7.00	0.91	22.00	17.00	5.00	0.77
				W11	199°								
				W12	199° Inc								
Britton House													
Ground	R4	Residential	LKD	W6	292°N	33.00	12.00	21.00	0.36	5.00	4.00	1.00	0.80
				W7	205°								
	R5	Residential	Bedroom	W8	206°	14.00	14.00	0.00	1.00	3.00	3.00	0.00	1.00
	R6	Residential	Bedroom	W9	205°	44.00	29.00	15.00	0.66	6.00	6.00	0.00	1.00
	R7	Residential	LKD	W10	205°	44.00	29.00	15.00	0.66	6.00	6.00	0.00	1.00
	R8	Residential	Bedroom	W11	205°	43.00	29.00	14.00	0.67	5.00	5.00	0.00	1.00
	R9	Residential	LKD	W12	206°	8.00	6.00	2.00	0.75	4.00	4.00	0.00	1.00
	R10	Residential	LKD	W13	205°	45.00	35.00	10.00	0.78	8.00	8.00	0.00	1.00
				W14	205°								
	R11	Residential	Bedroom	W15	205°	6.00	6.00	0.00	1.00	4.00	4.00	0.00	1.00
	R12	Residential	LKD	W16	206°	22.00	22.00	0.00	1.00	4.00	4.00	0.00	1.00
	R13	Residential	Bedroom	W17	206°	26.00	21.00	5.00	0.81	6.00	6.00	0.00	1.00
First	R4	Residential	LKD	W6	24°N	36.00	15.00	21.00	0.42	6.00	5.00	1.00	0.83
				W7	292°N								
				W8	205°								
	R5	Residential	Bedroom	W9	206°	15.00	15.00	0.00	1.00	4.00	4.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	46.00	30.00	16.00	0.65	7.00	7.00	0.00	1.00
	R7	Residential	LKD	W11	205°	44.00	30.00	14.00	0.68	7.00	7.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	44.00	30.00	14.00	0.68	6.00	6.00	0.00	1.00
	R9	Residential	LKD	W13	206°	18.00	16.00	2.00	0.89	4.00	4.00	0.00	1.00
	R10	Residential	LKD	W14	205°	48.00	38.00	10.00	0.79	9.00	9.00	0.00	1.00
				W15	205°								
	R11	Residential	Bedroom	W16	205°	11.00	11.00	0.00	1.00	5.00	5.00	0.00	1.00
	R12	Residential	LKD	W17	206°	27.00	27.00	0.00	1.00	5.00	5.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	28.00	22.00	6.00	0.79	6.00	6.00	0.00	1.00
Second	R4	Residential	LKD	W6	24°N	38.00	16.00	22.00	0.42	7.00	6.00	1.00	0.86
				W7	292°N								
				W8	205°								
	R5	Residential	Bedroom	W9	206°	16.00	16.00	0.00	1.00	4.00	4.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R6	Residential	Bedroom	W10	205°	50.00	33.00	17.00	0.66	9.00	9.00	0.00	1.00
	R7	Residential	LKD	W11	205°	49.00	34.00	15.00	0.69	10.00	10.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	47.00	32.00	15.00	0.68	7.00	7.00	0.00	1.00
	R9	Residential	LKD	W13	206°	19.00	17.00	2.00	0.89	5.00	5.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	50.00	39.00	11.00	0.78	10.00	10.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	12.00	12.00	0.00	1.00	5.00	5.00	0.00	1.00
	R12	Residential	LKD	W17	206°	29.00	29.00	0.00	1.00	7.00	7.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	31.00	25.00	6.00	0.81	8.00	8.00	0.00	1.00
Third	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	39.00	17.00	22.00	0.44	7.00	6.00	1.00	0.86
	R5	Residential	Bedroom	W9	206°	17.00	17.00	0.00	1.00	4.00	4.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	53.00	36.00	17.00	0.68	11.00	11.00	0.00	1.00
	R7	Residential	LKD	W11	205°	51.00	36.00	15.00	0.71	12.00	12.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	49.00	34.00	15.00	0.69	9.00	9.00	0.00	1.00
	R9	Residential	LKD	W13	206°	19.00	17.00	2.00	0.89	5.00	5.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	52.00	41.00	11.00	0.79	11.00	11.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	13.00	13.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	30.00	30.00	0.00	1.00	8.00	8.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	33.00	27.00	6.00	0.82	9.00	9.00	0.00	1.00
Fourth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	39.00	17.00	22.00	0.44	7.00	6.00	1.00	0.86
	R5	Residential	Bedroom	W9	206°	17.00	17.00	0.00	1.00	4.00	4.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	53.00	36.00	17.00	0.68	11.00	11.00	0.00	1.00
	R7	Residential	LKD	W11	205°	52.00	37.00	15.00	0.71	12.00	12.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	52.00	37.00	15.00	0.71	11.00	11.00	0.00	1.00
	R9	Residential	LKD	W13	206°	21.00	19.00	2.00	0.90	6.00	6.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	54.00	43.00	11.00	0.80	12.00	12.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	14.00	14.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	32.00	32.00	0.00	1.00	10.00	10.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	36.00	30.00	6.00	0.83	10.00	10.00	0.00	1.00
Fifth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	18.00	22.00	0.45	7.00	6.00	1.00	0.86
	R5	Residential	Bedroom	W9	206°	17.00	17.00	0.00	1.00	4.00	4.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	54.00	37.00	17.00	0.69	11.00	11.00	0.00	1.00
	R7	Residential	LKD	W11	205°	54.00	39.00	15.00	0.72	13.00	13.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	53.00	38.00	15.00	0.72	12.00	12.00	0.00	1.00
	R9	Residential	LKD	W13	206°	22.00	20.00	2.00	0.91	6.00	6.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	54.00	43.00	11.00	0.80	12.00	12.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	15.00	15.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	34.00	34.00	0.00	1.00	10.00	10.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R13	Residential	Bedroom	W18	206°	36.00	30.00	6.00	0.83	10.00	10.00	0.00	1.00
Sixth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	18.00	22.00	0.45	7.00	6.00	1.00	0.86
	R5	Residential	Bedroom	W9	206°	20.00	20.00	0.00	1.00	4.00	4.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	57.00	40.00	17.00	0.70	12.00	12.00	0.00	1.00
	R7	Residential	LKD	W11	205°	57.00	42.00	15.00	0.74	14.00	14.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	55.00	40.00	15.00	0.73	12.00	12.00	0.00	1.00
	R9	Residential	LKD	W13	206°	24.00	22.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	57.00	46.00	11.00	0.81	14.00	14.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	15.00	15.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	37.00	37.00	0.00	1.00	12.00	12.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	36.00	30.00	6.00	0.83	10.00	10.00	0.00	1.00
Seventh	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	19.00	21.00	0.48	7.00	6.00	1.00	0.86
	R5	Residential	Bedroom	W9	206°	22.00	22.00	0.00	1.00	5.00	5.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	60.00	43.00	17.00	0.72	13.00	13.00	0.00	1.00
	R7	Residential	LKD	W11	205°	59.00	44.00	15.00	0.75	14.00	14.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	57.00	43.00	14.00	0.75	13.00	13.00	0.00	1.00
	R9	Residential	LKD	W13	206°	26.00	24.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	57.00	46.00	11.00	0.81	16.00	16.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	17.00	17.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	36.00	36.00	0.00	1.00	12.00	12.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	36.00	30.00	6.00	0.83	10.00	10.00	0.00	1.00
Eighth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	42.00	21.00	21.00	0.50	8.00	7.00	1.00	0.88
	R5	Residential	Bedroom	W9	206°	23.00	23.00	0.00	1.00	6.00	6.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	62.00	46.00	16.00	0.74	14.00	14.00	0.00	1.00
	R7	Residential	LKD	W11	205°	61.00	47.00	14.00	0.77	15.00	15.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	59.00	45.00	14.00	0.76	14.00	14.00	0.00	1.00
	R9	Residential	LKD	W13	206°	26.00	24.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	60.00	49.00	11.00	0.82	16.00	16.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	17.00	17.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	42.00	42.00	0.00	1.00	15.00	15.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	38.00	32.00	6.00	0.84	11.00	11.00	0.00	1.00
Ninth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	43.00	23.00	20.00	0.53	8.00	7.00	1.00	0.88
	R5	Residential	Bedroom	W9	206°	25.00	25.00	0.00	1.00	7.00	7.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	63.00	47.00	16.00	0.75	15.00	15.00	0.00	1.00
	R7	Residential	LKD	W11	205°	63.00	49.00	14.00	0.78	16.00	16.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	61.00	48.00	13.00	0.79	15.00	15.00	0.00	1.00
	R9	Residential	LKD	W13	206°	29.00	27.00	2.00	0.93	8.00	8.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R10	Residential	LKD	W14 W15	205° 205°	63.00	53.00	10.00	0.84	17.00	17.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	20.00	20.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	43.00	43.00	0.00	1.00	16.00	16.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	40.00	34.00	6.00	0.85	11.00	11.00	0.00	1.00
Tenth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	46.00	27.00	19.00	0.59	9.00	8.00	1.00	0.89
	R5	Residential	Bedroom	W9	206°	27.00	27.00	0.00	1.00	8.00	8.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	64.00	49.00	15.00	0.77	15.00	15.00	0.00	1.00
	R7	Residential	LKD	W11	205°	64.00	51.00	13.00	0.80	16.00	16.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	64.00	51.00	13.00	0.80	15.00	15.00	0.00	1.00
	R9	Residential	LKD	W13	206°	30.00	29.00	1.00	0.97	8.00	8.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	64.00	55.00	9.00	0.86	17.00	17.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	21.00	21.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	47.00	47.00	0.00	1.00	16.00	16.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	42.00	37.00	5.00	0.88	11.00	11.00	0.00	1.00
Eleventh	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	46.00	27.00	19.00	0.59	9.00	8.00	1.00	0.89
	R5	Residential	Bedroom	W9	206°	31.00	31.00	0.00	1.00	9.00	9.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	67.00	53.00	14.00	0.79	15.00	15.00	0.00	1.00
	R7	Residential	LKD	W11	205°	68.00	55.00	13.00	0.81	16.00	16.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	66.00	54.00	12.00	0.82	15.00	15.00	0.00	1.00
	R9	Residential	LKD	W13	206°	31.00	30.00	1.00	0.97	8.00	8.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	67.00	59.00	8.00	0.88	18.00	18.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	22.00	22.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	48.00	48.00	0.00	1.00	16.00	16.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	44.00	39.00	5.00	0.89	11.00	11.00	0.00	1.00
Twelfth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	48.00	29.00	19.00	0.60	10.00	9.00	1.00	0.90
	R5	Residential	Bedroom	W9	206°	31.00	31.00	0.00	1.00	9.00	9.00	0.00	1.00
	R6	Residential	Bedroom	W10	205°	71.00	59.00	12.00	0.83	16.00	16.00	0.00	1.00
	R7	Residential	LKD	W11	205°	69.00	57.00	12.00	0.83	16.00	16.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	68.00	56.00	12.00	0.82	16.00	16.00	0.00	1.00
	R9	Residential	LKD	W13	206°	36.00	35.00	1.00	0.97	9.00	9.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	70.00	62.00	8.00	0.89	19.00	19.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	24.00	24.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	51.00	51.00	0.00	1.00	16.00	16.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	46.00	42.00	4.00	0.91	11.00	11.00	0.00	1.00
Thirteenth	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	50.00	33.00	17.00	0.66	10.00	9.00	1.00	0.90
	R5	Residential	Bedroom	W9	206°	33.00	33.00	0.00	1.00	10.00	10.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R6	Residential	Bedroom	W10	205°	73.00	61.00	12.00	0.84	17.00	17.00	0.00	1.00
	R7	Residential	LKD	W11	205°	72.00	60.00	12.00	0.83	16.00	16.00	0.00	1.00
	R8	Residential	Bedroom	W12	205°	71.00	59.00	12.00	0.83	16.00	16.00	0.00	1.00
	R9	Residential	LKD	W13	206°	28.00	27.00	1.00	0.96	10.00	10.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	72.00	66.00	6.00	0.92	19.00	19.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	19.00	19.00	0.00	1.00	8.00	8.00	0.00	1.00
	R12	Residential	LKD	W17	206°	52.00	52.00	0.00	1.00	16.00	16.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	46.00	42.00	4.00	0.91	11.00	11.00	0.00	1.00
Fourteenth	R2	Residential	LKD	W3 W4	295°N 205°	76.00	65.00	11.00	0.86	21.00	21.00	0.00	1.00
	R3	Residential	Bedroom	W5	205°	74.00	64.00	10.00	0.86	20.00	20.00	0.00	1.00
	R4	Residential	LKD	W6	205°	75.00	66.00	9.00	0.88	22.00	22.00	0.00	1.00
	R5	Residential	Bedroom	W7	205°	73.00	66.00	7.00	0.90	21.00	21.00	0.00	1.00
	R6	Residential	LKD	W8	205°	69.00	63.00	6.00	0.91	19.00	19.00	0.00	1.00
	R7	Residential	LKD	W9	205°	63.00	57.00	6.00	0.90	15.00	15.00	0.00	1.00
	R8	Residential	Bedroom	W10	205°	47.00	41.00	6.00	0.87	9.00	9.00	0.00	1.00
Fifteenth	R1	Residential	Bedroom	W1	205°	51.00	45.00	6.00	0.88	13.00	13.00	0.00	1.00
Sixteenth	R1	Residential	Bedroom	W1	205°	51.00	45.00	6.00	0.88	13.00	13.00	0.00	1.00

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
2 Hour Time in Sun

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-29	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

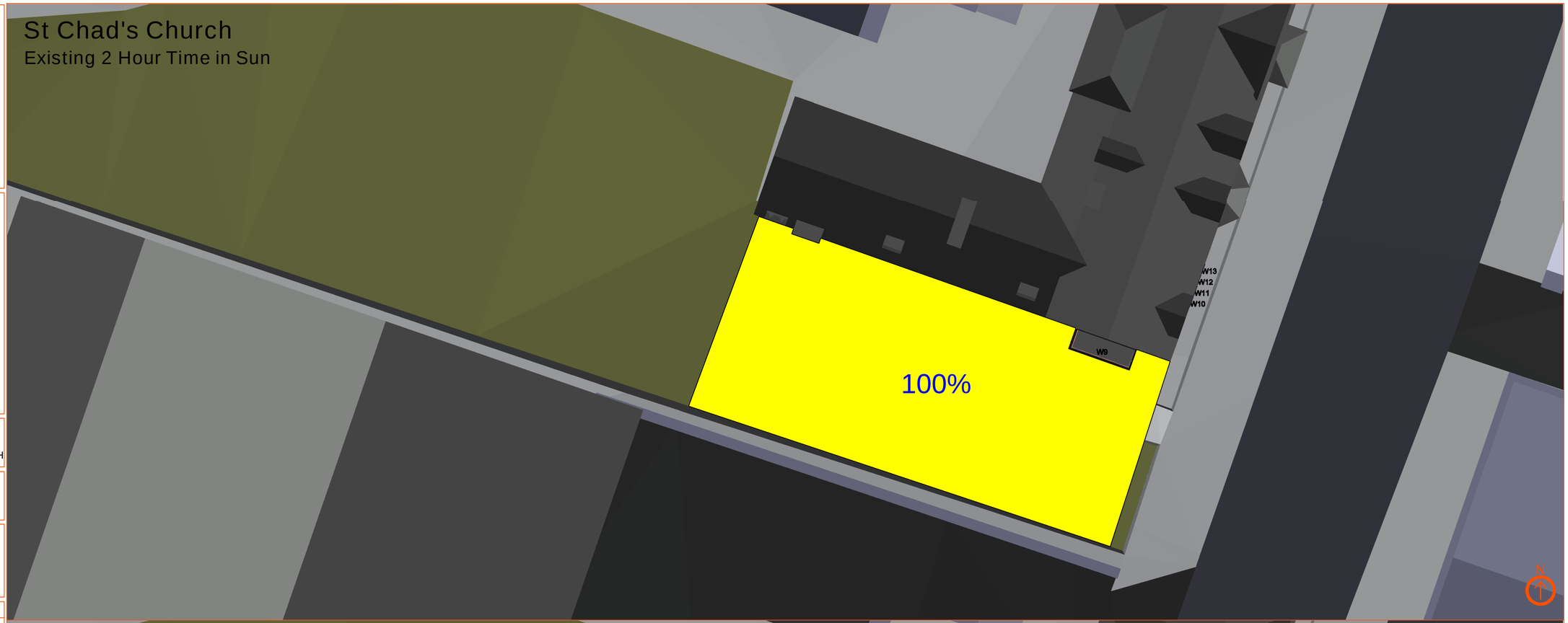
Existing
Proposed

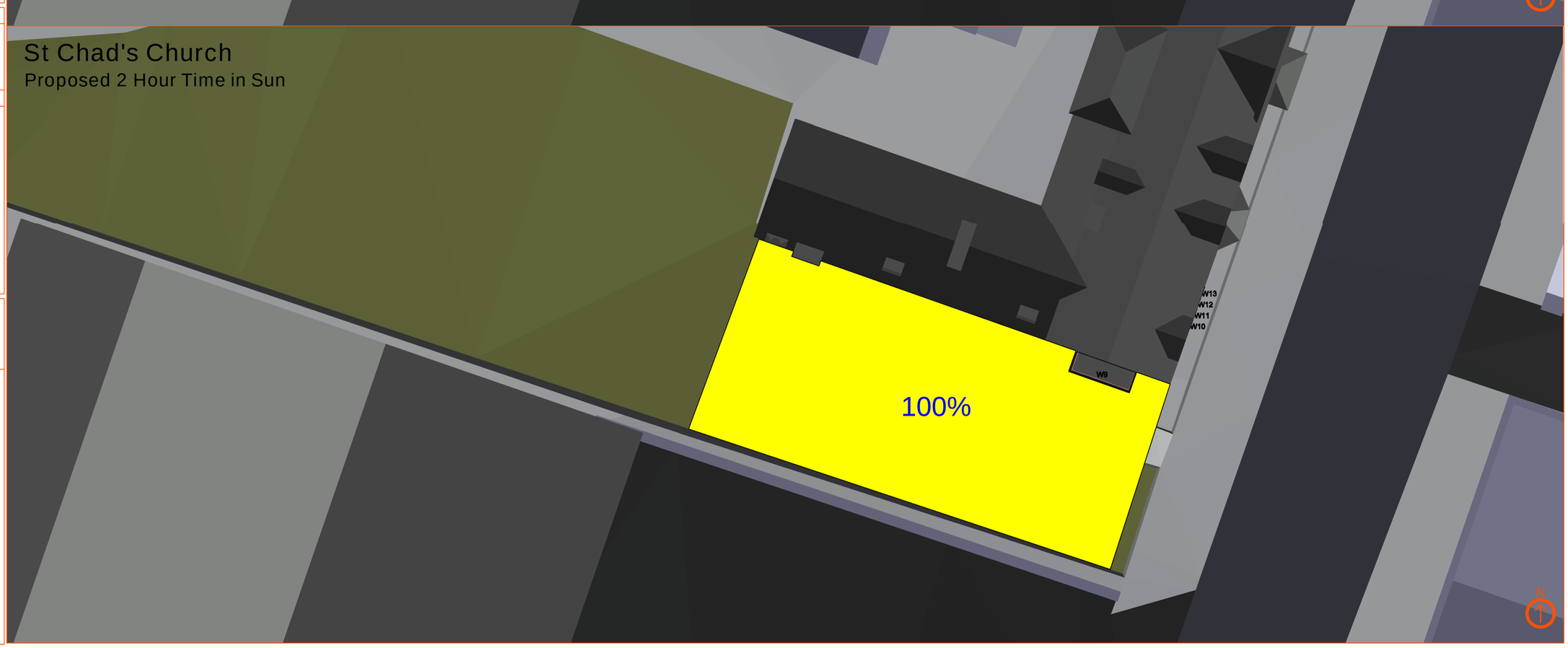
All heights in m AOD

Amenity Legend

Area analysed
Area with more than 1 Hours direct sunlight
Area with less than 1 Hours direct sunlight
% Percentage of area with more than 2 Hours direct sunlight

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.





Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
2 Hour Time in Sun

SCALE @ A2:	DATE:	DRAWN:	CHECKED:
NTS	28.10.2025	SC	DMH

DRAWING NUMBER:	REV:
2375_MA-30	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

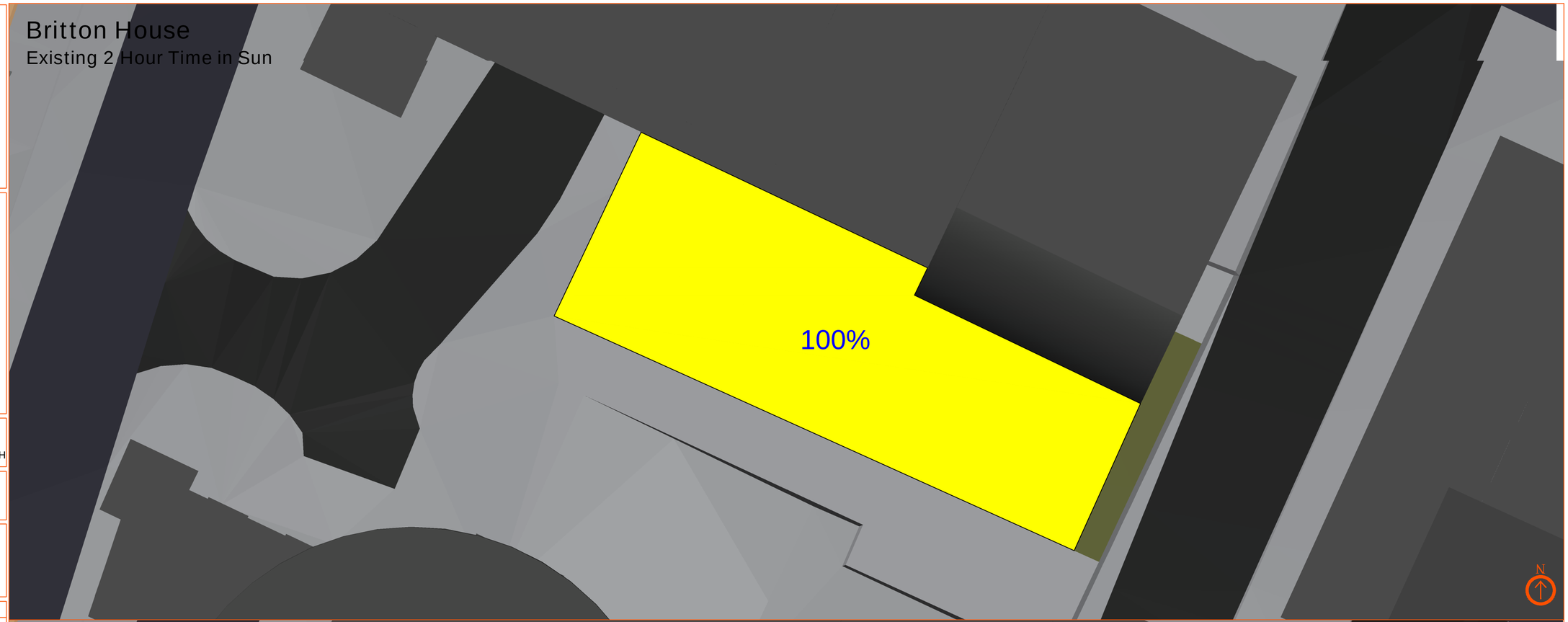
- Existing
- Proposed

All heights in m AOD

Amenity Legend

- Area analysed
- Area with more than 1 Hours direct sunlight
- Area with less than 1 Hours direct sunlight
- % Percentage of area with more than 2 Hours direct sunlight

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Plan View
Existing Site

SCALE @ A2:	DATE:	DRAWN:	CHECKED:
NTS	03.12.2025	SC	DMH

DRAWING NUMBER:	REV:
2375_MA-01	02

REV:	NOTES:	DRWN:	DATE:

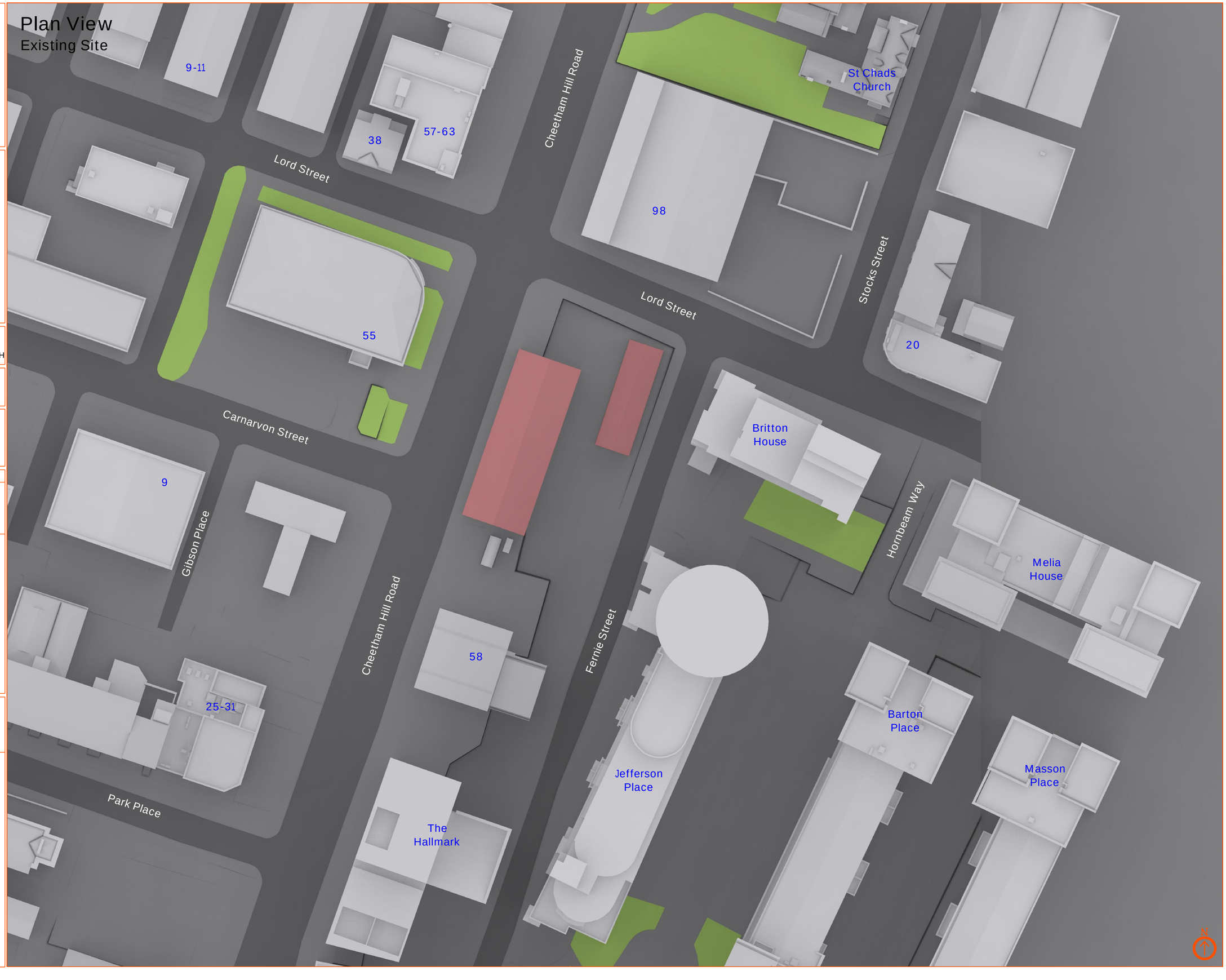
Massing Legend

- Existing
- Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Plan View
Existing Site



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	03.12.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-02	02

REV:	NOTES:	DRWN:	DATE:

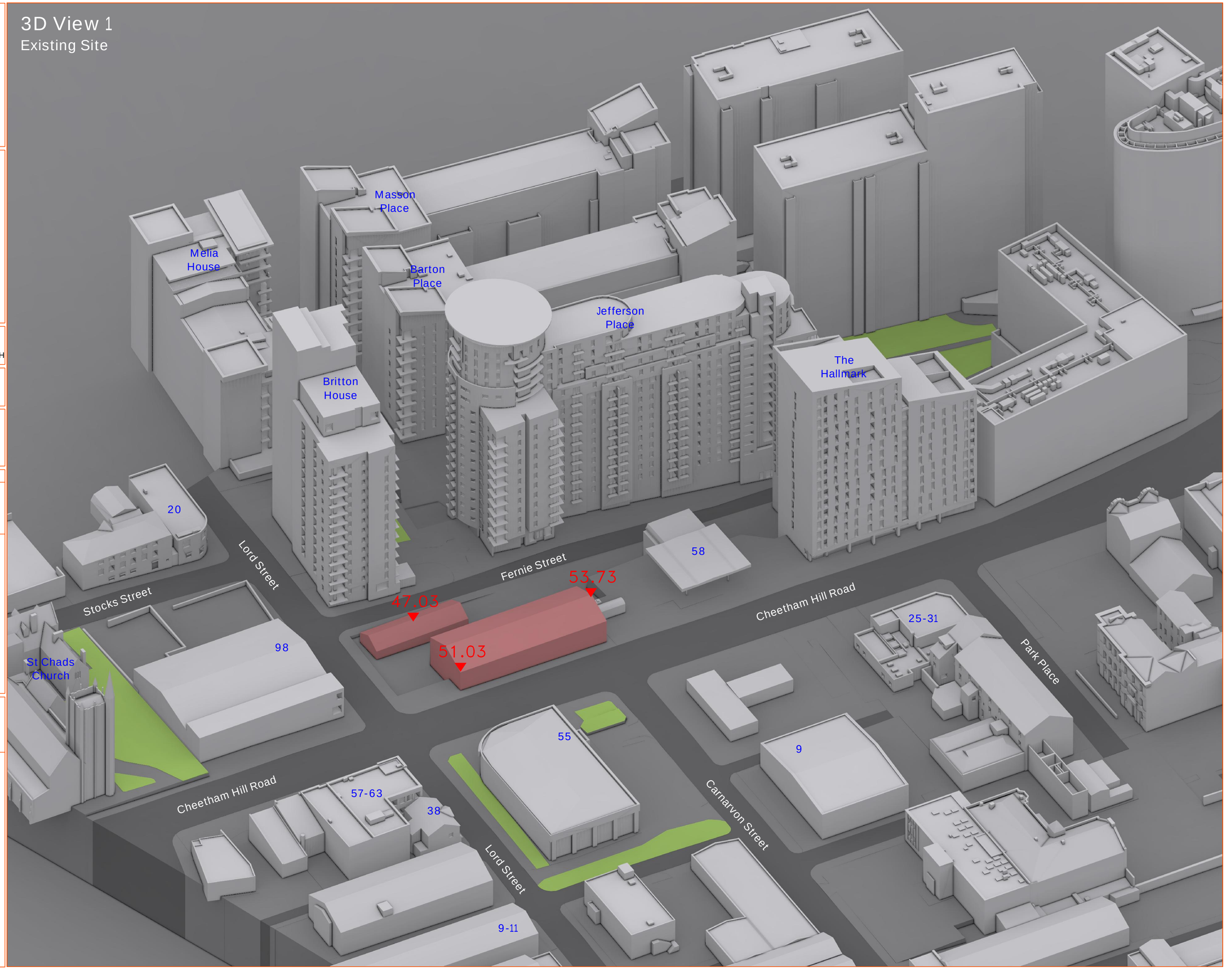
Massing Legend

Existing
Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

3D View 1
Existing Site



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Plan View
Proposed Site
Future Baseline Massing

SCALE @ A2:	DATE:	DRAWN:	CHECKED:
NTS	03.12.2025	SC	DMH

DRAWING NUMBER:	REV:
2375_MA-05	02

REV:	NOTES:	DRWN:	DATE:

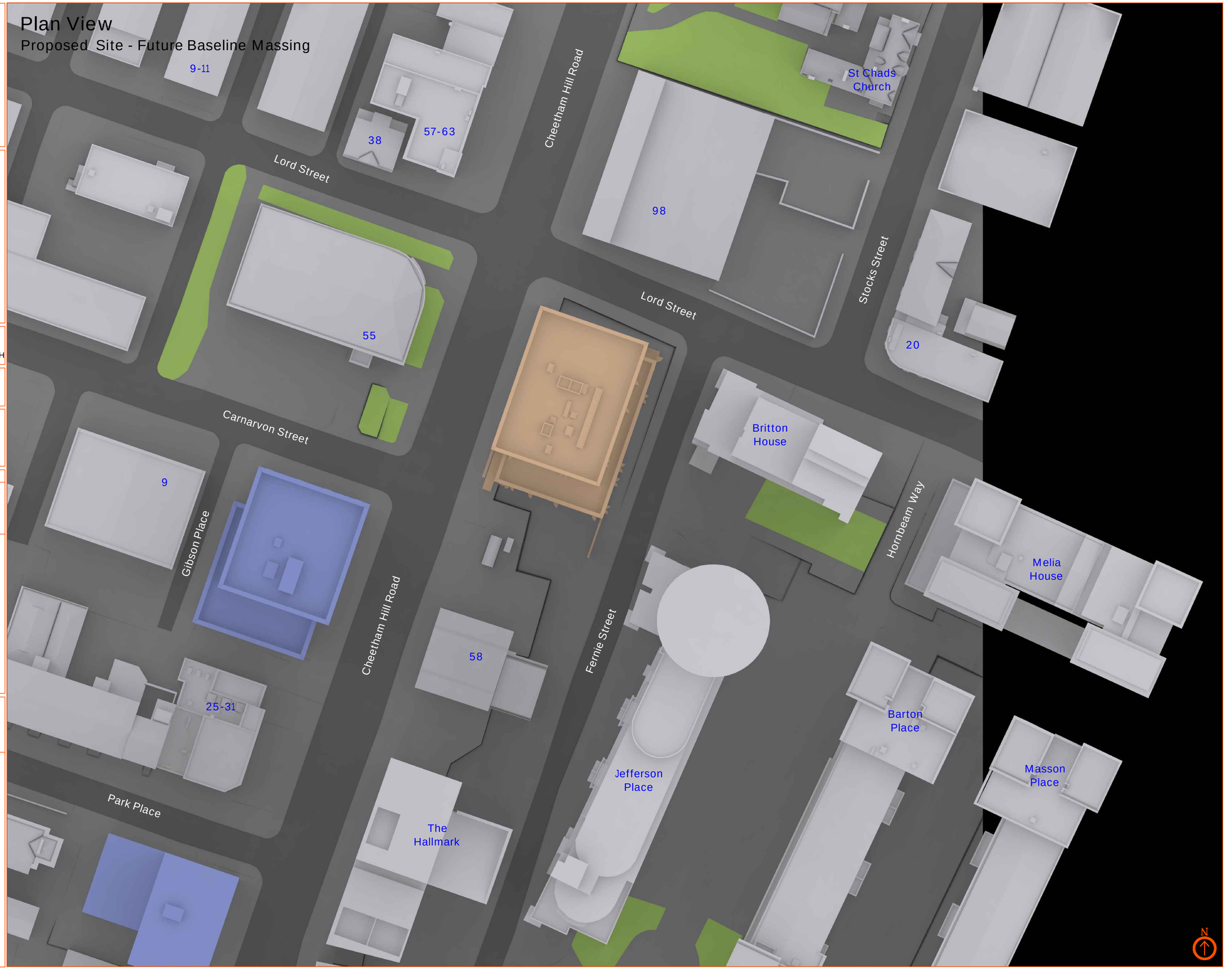
Massing Legend

- Existing
- Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Plan View
Proposed Site - Future Baseline Massing



Proximity
3 Barrington Road, Altrincham,
WA14 1GY
weareproximity.co.uk
Tel: 0345 257 5535

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
3D View 1
Proposed Site
Future Baseline Massing

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	03.12.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-06	02

REV:	NOTES:	DRWN:	DATE:

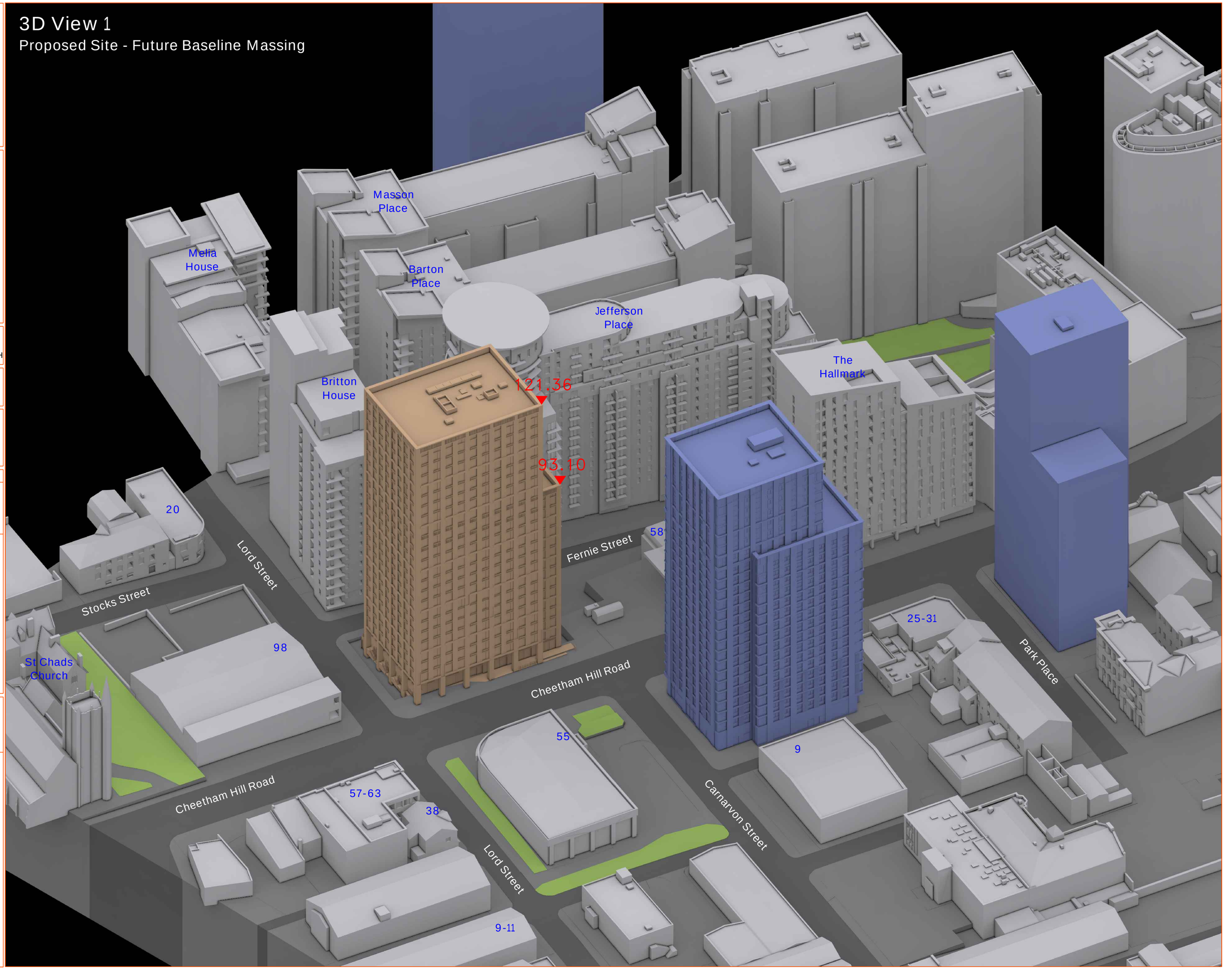
Massing Legend

- Existing
- Proposed

All heights in m AOD

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

3D View 1
Proposed Site - Future Baseline Massing



Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
St Chads Church								
Ground	R1		Pastoral	W1	31.15	25.04	6.11	0.80
				W2	31.12	25.06	6.06	0.81
	R2		Pastoral	W3	30.97	24.98	5.99	0.81
				W4	30.93	24.95	5.98	0.81
				W5	30.80	24.83	5.97	0.81
	R3		Pastoral	W6	20.30	17.73	2.57	0.87
				W7	31.05	25.14	5.91	0.81
				W8	23.77	22.98	0.79	0.97
				W9	62.58	57.11	5.47	0.91
				W10	36.78	36.01	0.77	0.98
				W11	36.73	35.97	0.76	0.98
				W12	36.68	35.93	0.75	0.98
				W13	36.54	35.79	0.75	0.98
First	R1		Pastoral	W1	32.64	30.57	2.07	0.94
				W2	32.82	30.72	2.10	0.94
				W3	33.02	30.88	2.14	0.94
				W4	32.84	26.05	6.79	0.79
				W5	31.93	25.16	6.77	0.79
				W6	59.00	51.68	7.32	0.88
	R2		Pastoral	W7	32.99	26.38	6.61	0.80
				W8	32.95	26.41	6.54	0.80
				W9	64.91	57.99	6.92	0.89
	R3		Pastoral	W10	32.76	26.40	6.36	0.81
				W11	32.76	26.43	6.33	0.81
				W12	58.78	52.20	6.58	0.89
Britton House								
Ground	R1	Residential	LKD	W1	33.33	33.33	0.00	1.00
				W2	25.23	13.74	11.49	0.54
				W3	24.66	10.88	13.78	0.44
	R2	Residential	Bedroom	W4	29.89	10.77	19.12	0.36
	R3	Residential	Bedroom	W5	27.88	10.43	17.45	0.37
	R4	Residential	LKD	W6	33.03	8.02	25.01	0.24
				W7	8.30	2.81	5.49	0.34
	R5	Residential	Bedroom	W8	8.73	6.41	2.32	0.73

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6	Residential	Bedroom	W9	18.42	10.73	7.69	0.58
	R7	Residential	LKD	W10	18.02	11.00	7.02	0.61
	R8	Residential	Bedroom	W11	17.64	11.44	6.20	0.65
	R9	Residential	LKD	W12	5.61	3.91	1.70	0.70
	R10	Residential	LKD	W13	16.86	12.29	4.57	0.73
				W14	16.73	12.53	4.20	0.75
	R11	Residential	Bedroom	W15	3.55	3.55	0.00	1.00
	R12	Residential	LKD	W16	12.24	11.33	0.91	0.93
	R13	Residential	Bedroom	W17	14.05	11.15	2.90	0.79
First	R1	Residential	LKD	W1	35.59	35.59	0.00	1.00
				W2	27.21	14.85	12.36	0.55
				W3	26.73	11.90	14.83	0.45
	R2	Residential	Bedroom	W4	32.23	11.98	20.25	0.37
	R3	Residential	Bedroom	W5	30.25	11.29	18.96	0.37
	R4	Residential	LKD	W6	16.21	14.53	1.68	0.90
				W7	35.14	8.06	27.08	0.23
				W8	11.65	4.26	7.39	0.37
	R5	Residential	Bedroom	W9	9.14	6.79	2.35	0.74
	R6	Residential	Bedroom	W10	19.46	11.39	8.07	0.59
	R7	Residential	LKD	W11	18.87	11.86	7.01	0.63
	R8	Residential	Bedroom	W12	18.62	12.13	6.49	0.65
	R9	Residential	LKD	W13	8.63	6.50	2.13	0.75
	R10	Residential	LKD	W14	17.83	13.05	4.78	0.73
				W15	17.70	13.31	4.39	0.75
	R11	Residential	Bedroom	W16	5.24	5.24	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R12	Residential	LKD	W17	13.05	12.05	1.00	0.92
	R13	Residential	Bedroom	W18	14.75	11.81	2.94	0.80
Second	R1	Residential	LKD	W1	37.07	37.07	0.00	1.00
				W2	29.46	16.16	13.30	0.55
				W3	28.95	13.09	15.86	0.45
	R2	Residential	Bedroom	W4	34.01	12.94	21.07	0.38
	R3	Residential	Bedroom	W5	31.77	11.94	19.83	0.38
	R4	Residential	LKD	W6	17.05	15.33	1.72	0.90
				W7	36.90	8.52	28.38	0.23
				W8	12.70	4.73	7.97	0.37
	R5	Residential	Bedroom	W9	9.61	7.25	2.36	0.75
	R6	Residential	Bedroom	W10	20.47	12.07	8.40	0.59
	R7	Residential	LKD	W11	19.84	12.57	7.27	0.63
	R8	Residential	Bedroom	W12	19.60	12.88	6.72	0.66
	R9	Residential	LKD	W13	9.42	7.21	2.21	0.77
	R10	Residential	LKD	W14	18.82	13.85	4.97	0.74
				W15	18.70	14.14	4.56	0.76
	R11	Residential	Bedroom	W16	5.71	5.71	0.00	1.00
	R12	Residential	LKD	W17	13.89	12.79	1.10	0.92
	R13	Residential	Bedroom	W18	15.46	12.50	2.96	0.81
Third	R1	Residential	LKD	W1	38.18	38.18	0.00	1.00
				W2	30.91	17.00	13.91	0.55
				W3	30.39	13.88	16.51	0.46
	R2	Residential	Bedroom	W4	35.38	13.67	21.71	0.39
	R3	Residential	Bedroom	W5	33.07	12.48	20.59	0.38
	R4	Residential	LKD	W6	17.79	16.03	1.76	0.90
				W7	38.39	8.94	29.45	0.23

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W8	13.44	5.14	8.30	0.38
	R5	Residential	Bedroom	W9	10.11	7.78	2.33	0.77
	R6	Residential	Bedroom	W10	21.47	12.83	8.64	0.60
	R7	Residential	LKD	W11	20.83	13.37	7.46	0.64
	R8	Residential	Bedroom	W12	20.59	13.71	6.88	0.67
	R9	Residential	LKD	W13	10.02	7.77	2.25	0.78
	R10	Residential	LKD	W14	19.86	14.74	5.12	0.74
				W15	19.75	15.05	4.70	0.76
	R11	Residential	Bedroom	W16	6.08	6.08	0.00	1.00
	R12	Residential	LKD	W17	14.82	13.61	1.21	0.92
	R13	Residential	Bedroom	W18	16.20	13.26	2.94	0.82
Fourth	R1	Residential	LKD	W1	38.69	38.69	0.00	1.00
				W2	31.54	17.49	14.05	0.55
				W3	30.99	14.34	16.65	0.46
	R2	Residential	Bedroom	W4	35.86	14.10	21.76	0.39
	R3	Residential	Bedroom	W5	33.47	12.76	20.71	0.38
	R4	Residential	LKD	W6	18.27	16.48	1.79	0.90
				W7	38.92	9.20	29.72	0.24
				W8	13.98	5.62	8.36	0.40
	R5	Residential	Bedroom	W9	10.68	8.40	2.28	0.79
	R6	Residential	Bedroom	W10	22.36	13.70	8.66	0.61
	R7	Residential	LKD	W11	21.74	14.26	7.48	0.66
	R8	Residential	Bedroom	W12	21.51	14.61	6.90	0.68
	R9	Residential	LKD	W13	10.64	8.37	2.27	0.79
	R10	Residential	LKD	W14	20.86	15.69	5.17	0.75
				W15	20.77	16.03	4.74	0.77

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R11	Residential	Bedroom	W16	6.47	6.47	0.00	1.00
	R12	Residential	LKD	W17	15.81	14.49	1.32	0.92
	R13	Residential	Bedroom	W18	16.93	14.07	2.86	0.83
Fifth	R1	Residential	LKD	W1	39.01	39.01	0.00	1.00
				W2	31.71	17.63	14.08	0.56
				W3	31.16	14.49	16.67	0.47
	R2	Residential	Bedroom	W4	35.99	14.29	21.70	0.40
	R3	Residential	Bedroom	W5	33.57	12.88	20.69	0.38
	R4	Residential	LKD	W6	18.54	16.74	1.80	0.90
				W7	39.07	9.38	29.69	0.24
				W8	14.51	6.15	8.36	0.42
	R5	Residential	Bedroom	W9	11.31	9.09	2.22	0.80
	R6	Residential	Bedroom	W10	23.28	14.67	8.61	0.63
	R7	Residential	LKD	W11	22.68	15.24	7.44	0.67
	R8	Residential	Bedroom	W12	22.45	15.59	6.86	0.69
	R9	Residential	LKD	W13	11.27	9.01	2.26	0.80
	R10	Residential	LKD	W14	21.89	16.71	5.18	0.76
				W15	21.83	17.08	4.75	0.78
	R11	Residential	Bedroom	W16	6.89	6.89	0.00	1.00
	R12	Residential	LKD	W17	16.87	15.43	1.44	0.91
	R13	Residential	Bedroom	W18	17.70	14.94	2.76	0.84
Sixth	R1	Residential	LKD	W1	39.26	39.26	0.00	1.00
				W2	31.81	17.73	14.08	0.56
				W3	31.25	14.60	16.65	0.47
	R2	Residential	Bedroom	W4	36.00	14.40	21.60	0.40
	R3	Residential	Bedroom	W5	33.63	12.99	20.64	0.39

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R4	Residential	LKD	W6	18.77	16.97	1.80	0.90
				W7	39.15	9.59	29.56	0.24
				W8	15.08	6.80	8.28	0.45
	R5	Residential	Bedroom	W9	12.00	9.88	2.12	0.82
	R6	Residential	Bedroom	W10	24.27	15.74	8.53	0.65
	R7	Residential	LKD	W11	23.67	16.34	7.33	0.69
	R8	Residential	Bedroom	W12	23.46	16.70	6.76	0.71
	R9	Residential	LKD	W13	11.92	9.73	2.19	0.82
	R10	Residential	LKD	W14	22.96	17.81	5.15	0.78
				W15	22.93	18.19	4.74	0.79
	R11	Residential	Bedroom	W16	7.31	7.31	0.00	1.00
	R12	Residential	LKD	W17	17.97	16.41	1.56	0.91
	R13	Residential	Bedroom	W18	18.49	15.85	2.64	0.86
Seventh	R1	Residential	LKD	W1	39.42	39.42	0.00	1.00
				W2	31.90	17.81	14.09	0.56
				W3	31.34	14.73	16.61	0.47
	R2	Residential	Bedroom	W4	36.14	14.67	21.47	0.41
	R3	Residential	Bedroom	W5	33.69	13.10	20.59	0.39
	R4	Residential	LKD	W6	18.96	17.16	1.80	0.91
				W7	39.23	9.81	29.42	0.25
				W8	15.77	7.60	8.17	0.48
	R5	Residential	Bedroom	W9	12.79	10.77	2.02	0.84
	R6	Residential	Bedroom	W10	25.33	16.92	8.41	0.67
	R7	Residential	LKD	W11	24.74	17.51	7.23	0.71
	R8	Residential	Bedroom	W12	24.53	17.88	6.65	0.73
	R9	Residential	LKD	W13	12.68	10.58	2.10	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R10	Residential	LKD	W14	24.07	18.96	5.11	0.79
				W15	24.05	19.34	4.71	0.80
	R11	Residential	Bedroom	W16	7.81	7.81	0.00	1.00
	R12	Residential	LKD	W17	19.07	17.40	1.67	0.91
	R13	Residential	Bedroom	W18	19.29	16.77	2.52	0.87
Eighth	R1	Residential	LKD	W1	39.47	39.47	0.00	1.00
				W2	31.95	17.86	14.09	0.56
				W3	31.38	14.82	16.56	0.47
	R2	Residential	Bedroom	W4	36.19	14.85	21.34	0.41
	R3	Residential	Bedroom	W5	33.72	13.20	20.52	0.39
	R4	Residential	LKD	W6	19.06	17.27	1.79	0.91
				W7	39.28	10.03	29.25	0.26
				W8	16.60	8.58	8.02	0.52
	R5	Residential	Bedroom	W9	13.69	11.78	1.91	0.86
	R6	Residential	Bedroom	W10	26.51	18.24	8.27	0.69
	R7	Residential	LKD	W11	25.92	18.81	7.11	0.73
	R8	Residential	Bedroom	W12	25.70	19.16	6.54	0.75
	R9	Residential	LKD	W13	13.66	11.65	2.01	0.85
	R10	Residential	LKD	W14	25.26	20.22	5.04	0.80
				W15	25.26	20.59	4.67	0.82
	R11	Residential	Bedroom	W16	8.53	8.53	0.00	1.00
	R12	Residential	LKD	W17	20.27	18.48	1.79	0.91
	R13	Residential	Bedroom	W18	20.17	17.78	2.39	0.88
Ninth	R1	Residential	LKD	W1	39.52	39.52	0.00	1.00
				W2	31.99	17.90	14.09	0.56
				W3	31.42	14.92	16.50	0.47

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Bedroom	W4	36.23	15.05	21.18	0.42
	R3	Residential	Bedroom	W5	33.75	13.31	20.44	0.39
	R4	Residential	LKD	W6	19.21	17.43	1.78	0.91
				W7	39.33	10.30	29.03	0.26
				W8	17.48	9.69	7.79	0.55
	R5	Residential	Bedroom	W9	14.68	12.89	1.79	0.88
	R6	Residential	Bedroom	W10	27.75	19.67	8.08	0.71
	R7	Residential	LKD	W11	27.18	20.23	6.95	0.74
	R8	Residential	Bedroom	W12	26.97	20.57	6.40	0.76
	R9	Residential	LKD	W13	14.75	12.76	1.99	0.87
	R10	Residential	LKD	W14	26.54	21.48	5.06	0.81
				W15	26.55	21.83	4.72	0.82
	R11	Residential	Bedroom	W16	9.35	9.25	0.10	0.99
	R12	Residential	LKD	W17	21.51	19.58	1.93	0.91
	R13	Residential	Bedroom	W18	21.09	18.83	2.26	0.89
Tenth	R1	Residential	LKD	W1	39.57	39.57	0.00	1.00
				W2	32.04	17.95	14.09	0.56
				W3	31.47	15.03	16.44	0.48
	R2	Residential	Bedroom	W4	36.27	15.29	20.98	0.42
	R3	Residential	Bedroom	W5	33.80	13.46	20.34	0.40
	R4	Residential	LKD	W6	19.49	17.71	1.78	0.91
				W7	39.38	10.61	28.77	0.27
				W8	18.44	10.93	7.51	0.59
	R5	Residential	Bedroom	W9	15.76	14.10	1.66	0.89
	R6	Residential	Bedroom	W10	29.06	21.20	7.86	0.73
	R7	Residential	LKD	W11	28.48	21.73	6.75	0.76

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R8	Residential	Bedroom	W12	28.25	21.95	6.30	0.78
	R9	Residential	LKD	W13	15.88	13.84	2.04	0.87
	R10	Residential	LKD	W14	27.81	22.64	5.17	0.81
				W15	27.84	23.01	4.83	0.83
	R11	Residential	Bedroom	W16	10.23	10.00	0.23	0.98
	R12	Residential	LKD	W17	22.79	20.71	2.08	0.91
	R13	Residential	Bedroom	W18	22.06	19.91	2.15	0.90
Eleventh	R1	Residential	LKD	W1	39.60	39.60	0.00	1.00
				W2	32.07	18.00	14.07	0.56
				W3	31.50	15.13	16.37	0.48
	R2	Residential	Bedroom	W4	36.34	15.59	20.75	0.43
	R3	Residential	Bedroom	W5	33.88	13.66	20.22	0.40
	R4	Residential	LKD	W6	20.09	18.33	1.76	0.91
				W7	39.43	10.97	28.46	0.28
				W8	19.39	12.20	7.19	0.63
	R5	Residential	Bedroom	W9	16.85	15.35	1.50	0.91
	R6	Residential	Bedroom	W10	30.32	22.79	7.53	0.75
	R7	Residential	LKD	W11	29.62	23.15	6.47	0.78
	R8	Residential	Bedroom	W12	29.31	23.27	6.04	0.79
	R9	Residential	LKD	W13	16.82	14.85	1.97	0.88
	R10	Residential	LKD	W14	28.90	23.75	5.15	0.82
				W15	28.98	24.14	4.84	0.83
	R11	Residential	Bedroom	W16	11.14	10.83	0.31	0.97
	R12	Residential	LKD	W17	23.98	21.78	2.20	0.91
	R13	Residential	Bedroom	W18	23.04	20.97	2.07	0.91
Twelfth	R1	Residential	LKD	W1	39.61	39.61	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W2	32.09	18.08	14.01	0.56
				W3	31.53	15.24	16.29	0.48
	R2	Residential	Bedroom	W4	36.73	16.25	20.48	0.44
	R3	Residential	Bedroom	W5	34.03	13.94	20.09	0.41
	R4	Residential	LKD	W6	21.11	19.36	1.75	0.92
				W7	39.47	11.39	28.08	0.29
				W8	20.30	13.48	6.82	0.66
	R5	Residential	Bedroom	W9	17.93	16.59	1.34	0.93
	R6	Residential	Bedroom	W10	31.46	24.34	7.12	0.77
	R7	Residential	LKD	W11	30.66	24.55	6.11	0.80
	R8	Residential	Bedroom	W12	30.32	24.58	5.74	0.81
	R9	Residential	LKD	W13	17.80	15.90	1.90	0.89
	R10	Residential	LKD	W14	29.99	24.91	5.08	0.83
				W15	30.09	25.30	4.79	0.84
	R11	Residential	Bedroom	W16	12.15	11.70	0.45	0.96
	R12	Residential	LKD	W17	25.04	22.71	2.33	0.91
	R13	Residential	Bedroom	W18	24.02	21.91	2.11	0.91
Thirteenth	R1	Residential	LKD	W1	39.62	39.62	0.00	1.00
				W2	39.53	23.61	15.92	0.60
				W3	39.49	21.42	18.07	0.54
	R2	Residential	Bedroom	W4	39.35	19.18	20.17	0.49
	R3	Residential	Bedroom	W5	34.21	14.30	19.91	0.42
	R4	Residential	LKD	W6	22.22	20.48	1.74	0.92
				W7	39.50	11.87	27.63	0.30
				W8	27.36	19.07	8.29	0.70
	R5	Residential	Bedroom	W9	18.08	16.91	1.17	0.94
	R6	Residential	Bedroom	W10	32.53	25.81	6.72	0.79

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R7	Residential	LKD	W11	31.79	25.92	5.87	0.82
	R8	Residential	Bedroom	W12	31.43	25.91	5.52	0.82
	R9	Residential	LKD	W13	16.00	14.20	1.80	0.89
	R10	Residential	LKD	W14	31.05	26.18	4.87	0.84
				W15	31.12	26.52	4.60	0.85
	R11	Residential	Bedroom	W16	10.64	10.18	0.46	0.96
	R12	Residential	LKD	W17	24.56	22.28	2.28	0.91
	R13	Residential	Bedroom	W18	23.26	21.35	1.91	0.92
Fourteenth	R1	Residential	Unknown	W1	39.54	39.50	0.04	1.00
				W2	39.57	25.46	14.11	0.64
	R2	Residential	LKD	W3	39.55	20.70	18.85	0.52
				W4	35.01	29.28	5.73	0.84
	R3	Residential	Bedroom	W5	34.56	29.45	5.11	0.85
	R4	Residential	LKD	W6	34.27	29.55	4.72	0.86
	R5	Residential	Bedroom	W7	34.08	29.63	4.45	0.87
	R6	Residential	LKD	W8	33.29	29.18	4.11	0.88
	R7	Residential	LKD	W9	32.20	28.58	3.62	0.89
	R8	Residential	Bedroom	W10	25.63	23.68	1.95	0.92
Fifteenth	R1	Residential	Bedroom	W1	26.98	25.24	1.74	0.94
Sixteenth	R1	Residential	Bedroom	W1	28.44	26.91	1.53	0.95
Jefferson Pl								
Lower Ground	R1	Residential	Unknown	W1	13.20	7.69	5.51	0.58
				W2	12.45	7.49	4.96	0.60
				W3	11.20	7.23	3.97	0.65
Ground	R1	Residential	Unknown	W1	22.60	9.09	13.51	0.40
				W2	20.80	8.27	12.53	0.40

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W3	20.38	8.15	12.23	0.40
				W4	18.05	6.61	11.44	0.37
				W5	21.48	9.05	12.43	0.42
				W6	12.06	10.26	1.80	0.85
				W7	10.65	9.03	1.62	0.85
First	R1	Residential	Unknown	W1	3.78	0.65	3.13	0.17
				W2	3.57	1.01	2.56	0.28
				W3	15.34	5.23	10.11	0.34
	R2	Residential	Unknown	W4	18.32	5.30	13.02	0.29
				W5	12.64	5.80	6.84	0.46
				W6	13.76	6.66	7.10	0.48
	R3	Residential	Unknown	W7	15.45	7.93	7.52	0.51
				W8	15.42	8.19	7.23	0.53
	R4	Residential	Unknown	W9	13.91	7.06	6.85	0.51
	R5	Residential	Unknown	W10	8.82	3.42	5.40	0.39
				W11	12.38	10.91	1.47	0.88
				W12	11.34	9.57	1.77	0.84
	R6	Residential	Unknown	W13	16.36	10.07	6.29	0.62
	R7	Residential	Unknown	W14	21.62	14.78	6.84	0.68
	R8	Residential	Unknown	W15	18.99	10.42	8.57	0.55
				W16	20.57	11.54	9.03	0.56
	R9	Residential	Unknown	W17	25.75	15.41	10.34	0.60
	R10	Residential	Unknown	W18	22.45	11.53	10.92	0.51
				W19	19.36	9.18	10.18	0.47
	R11	Residential	Unknown	W20	15.62	9.58	6.04	0.61
				W21	20.78	12.20	8.58	0.59
	R12	Residential	Unknown	W22	25.36	16.49	8.87	0.65
	R13	Residential	Unknown	W23	25.73	16.20	9.53	0.63
	R14	Residential	Unknown	W24	20.45	11.39	9.06	0.56
				W25	19.21	10.56	8.65	0.55

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R15	Residential	Unknown	W26	12.50	6.67	5.83	0.53
				W27	17.16	10.40	6.76	0.61
	R16	Residential	Unknown	W28	22.33	14.29	8.04	0.64
	R17	Residential	Unknown	W29	22.54	13.96	8.58	0.62
	R18	Residential	Unknown	W30	21.38	13.00	8.38	0.61
	R19	Residential	Unknown	W31	14.17	6.05	8.12	0.43
	R20	Residential	Unknown	W32	10.55	5.50	5.05	0.52
				W33	17.97	10.20	7.77	0.57
	R21	Residential	Unknown	W34	11.66	8.69	2.97	0.75
	R22	Residential	Unknown	W35	10.05	8.33	1.72	0.83
	R23	Residential	Unknown	W36	4.73	3.42	1.31	0.72
				W37	3.67	2.40	1.27	0.65
				W38	3.60	2.48	1.12	0.69
				W39	13.62	13.58	0.04	1.00
				W40	20.54	20.50	0.04	1.00
Second	R1	Residential	Unknown	W1	3.96	0.68	3.28	0.17
				W2	3.72	1.11	2.61	0.30
				W3	16.20	5.72	10.48	0.35
	R2	Residential	Unknown	W4	19.32	5.77	13.55	0.30
				W5	13.58	6.46	7.12	0.48
				W6	14.50	7.18	7.32	0.50
	R3	Residential	Unknown	W7	16.52	8.73	7.79	0.53
				W8	12.92	6.02	6.90	0.47
				W9	12.92	5.51	7.41	0.43
				W10	13.56	5.44	8.12	0.40
				W11	27.54	8.85	18.69	0.32
	R4	Residential	Unknown	W12	34.20	14.92	19.28	0.44
	R5	Residential	Unknown	W13	8.46	6.61	1.85	0.78
	R6	Residential	Unknown	W14	34.12	16.25	17.87	0.48
				W15	27.99	11.82	16.17	0.42
				W16	26.79	11.90	14.89	0.44

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W17	26.89	12.36	14.53	0.46
				W18	10.70	8.32	2.38	0.78
	R7	Residential	Unknown	W19	13.48	11.58	1.90	0.86
	R8	Residential	Unknown	W20	12.15	10.09	2.06	0.83
	R9	Residential	Unknown	W21	17.29	10.53	6.76	0.61
	R10	Residential	Unknown	W22	22.82	15.47	7.35	0.68
	R11	Residential	Unknown	W23	20.38	11.12	9.26	0.55
				W24	22.07	12.29	9.78	0.56
	R12	Residential	Unknown	W25	27.22	16.14	11.08	0.59
	R13	Residential	Unknown	W26	24.22	12.27	11.95	0.51
				W27	20.89	9.82	11.07	0.47
	R14	Residential	Unknown	W28	17.13	10.29	6.84	0.60
				W29	22.73	13.16	9.57	0.58
	R15	Residential	Unknown	W30	26.98	17.23	9.75	0.64
	R16	Residential	Unknown	W31	27.28	16.95	10.33	0.62
	R17	Residential	Unknown	W32	22.03	12.23	9.80	0.56
				W33	20.71	11.33	9.38	0.55
	R18	Residential	Unknown	W34	13.41	7.05	6.36	0.53
				W35	18.53	11.24	7.29	0.61
	R19	Residential	Unknown	W36	23.59	15.22	8.37	0.65
	R20	Residential	Unknown	W37	23.70	14.89	8.81	0.63
	R21	Residential	Unknown	W38	22.34	13.81	8.53	0.62
	R22	Residential	Unknown	W39	14.87	6.64	8.23	0.45
	R23	Residential	Unknown	W40	11.08	5.97	5.11	0.54
				W41	18.77	10.94	7.83	0.58
	R24	Residential	Unknown	W42	15.29	9.67	5.62	0.63

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R25	Residential	Unknown	W43	12.36	9.34	3.02	0.76
	R26	Residential	Unknown	W44	10.72	8.98	1.74	0.84
	R27	Residential	Unknown	W45	5.31	3.99	1.32	0.75
				W46	4.27	2.98	1.29	0.70
				W47	4.21	3.06	1.15	0.73
				W48	14.92	14.88	0.04	1.00
				W49	21.96	21.92	0.04	1.00
Third	R1	Residential	Unknown	W1	4.13	0.73	3.40	0.18
				W2	3.87	1.23	2.64	0.32
				W3	17.06	6.27	10.79	0.37
	R2	Residential	Unknown	W4	20.28	6.28	14.00	0.31
				W5	14.38	7.05	7.33	0.49
				W6	15.34	7.80	7.54	0.51
	R3	Residential	Unknown	W7	17.45	9.38	8.07	0.54
				W8	13.78	6.49	7.29	0.47
				W9	13.72	5.89	7.83	0.43
				W10	14.37	5.82	8.55	0.41
				W11	29.16	9.25	19.91	0.32
	R4	Residential	Unknown	W12	35.63	15.44	20.19	0.43
	R5	Residential	Unknown	W13	8.81	6.72	2.09	0.76
	R6	Residential	Unknown	W14	35.52	16.81	18.71	0.47
				W15	29.37	12.30	17.07	0.42
				W16	28.22	12.42	15.80	0.44
				W17	28.36	12.91	15.45	0.46
				W18	11.57	8.97	2.60	0.78
	R7	Residential	Unknown	W19	14.23	12.23	2.00	0.86
	R8	Residential	Unknown	W20	12.74	10.61	2.13	0.83
	R9	Residential	Unknown	W21	17.85	10.98	6.87	0.62
	R10	Residential	Unknown	W22	23.65	16.04	7.61	0.68
	R11	Residential	Unknown	W23	21.37	11.66	9.71	0.55
				W24	23.15	12.90	10.25	0.56

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R12	Residential	Unknown	W25	28.23	16.72	11.51	0.59
	R13	Residential	Unknown	W26	25.46	12.90	12.56	0.51
				W27	21.98	10.32	11.66	0.47
	R14	Residential	Unknown	W28	18.08	10.83	7.25	0.60
				W29	24.11	13.92	10.19	0.58
	R15	Residential	Unknown	W30	28.24	17.96	10.28	0.64
	R16	Residential	Unknown	W31	28.49	17.67	10.82	0.62
	R17	Residential	Unknown	W32	23.21	12.88	10.33	0.55
				W33	21.84	11.89	9.95	0.54
	R18	Residential	Unknown	W34	14.18	7.42	6.76	0.52
				W35	19.58	11.85	7.73	0.61
	R19	Residential	Unknown	W36	24.64	15.97	8.67	0.65
	R20	Residential	Unknown	W37	24.67	15.64	9.03	0.63
	R21	Residential	Unknown	W38	23.27	14.54	8.73	0.62
	R22	Residential	Unknown	W39	15.41	7.06	8.35	0.46
	R23	Residential	Unknown	W40	11.51	6.32	5.19	0.55
				W41	19.48	11.58	7.90	0.59
	R24	Residential	Unknown	W42	15.93	10.27	5.66	0.64
	R25	Residential	Unknown	W43	13.01	9.95	3.06	0.76
	R26	Residential	Unknown	W44	11.35	9.60	1.75	0.85
	R27	Residential	Unknown	W45	5.96	4.64	1.32	0.78
				W46	4.95	3.67	1.28	0.74
				W47	4.94	3.75	1.19	0.76
				W48	16.29	16.25	0.04	1.00
				W49	23.46	23.38	0.08	1.00
Fourth	R1	Residential	Unknown	W1	4.38	0.86	3.52	0.20
				W2	4.09	1.42	2.67	0.35
				W3	17.95	6.90	11.05	0.38

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Unknown	W4	21.23	6.87	14.36	0.32
				W5	15.24	7.74	7.50	0.51
				W6	16.24	8.51	7.73	0.52
	R3	Residential	Unknown	W7	18.39	10.10	8.29	0.55
				W8	14.75	7.14	7.61	0.48
				W9	14.58	6.42	8.16	0.44
				W10	15.24	6.35	8.89	0.42
				W11	30.52	9.64	20.88	0.32
	R4	Residential	Unknown	W12	36.78	15.97	20.81	0.43
	R5	Residential	Unknown	W13	9.12	6.81	2.31	0.75
	R6	Residential	Unknown	W14	36.56	17.36	19.20	0.47
				W15	30.30	12.76	17.54	0.42
				W16	29.18	12.93	16.25	0.44
				W17	29.34	13.45	15.89	0.46
				W18	12.28	9.65	2.63	0.79
	R7	Residential	Unknown	W19	14.93	12.94	1.99	0.87
	R8	Residential	Unknown	W20	13.30	11.18	2.12	0.84
	R9	Residential	Unknown	W21	18.23	11.41	6.82	0.63
	R10	Residential	Unknown	W22	24.24	16.58	7.66	0.68
	R11	Residential	Unknown	W23	22.01	12.17	9.84	0.55
				W24	23.83	13.45	10.38	0.56
	R12	Residential	Unknown	W25	28.78	17.25	11.53	0.60
	R13	Residential	Unknown	W26	26.09	13.49	12.60	0.52
				W27	22.42	10.69	11.73	0.48
	R14	Residential	Unknown	W28	18.44	11.25	7.19	0.61
				W29	24.80	14.58	10.22	0.59
	R15	Residential	Unknown	W30	28.87	18.67	10.20	0.65
	R16	Residential	Unknown	W31	29.07	18.33	10.74	0.63
	R17	Residential	Unknown	W32	23.70	13.43	10.27	0.57
				W33	22.29	12.35	9.94	0.55

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R18	Residential	Unknown	W34	14.46	7.77	6.69	0.54
				W35	20.10	12.43	7.67	0.62
	R19	Residential	Unknown	W36	25.25	16.68	8.57	0.66
	R20	Residential	Unknown	W37	25.28	16.36	8.92	0.65
	R21	Residential	Unknown	W38	23.87	15.23	8.64	0.64
	R22	Residential	Unknown	W39	15.65	7.42	8.23	0.47
	R23	Residential	Unknown	W40	11.77	6.63	5.14	0.56
				W41	19.98	12.21	7.77	0.61
	R24	Residential	Unknown	W42	16.45	10.87	5.58	0.66
	R25	Residential	Unknown	W43	13.59	10.58	3.01	0.78
	R26	Residential	Unknown	W44	11.99	10.27	1.72	0.86
	R27	Residential	Unknown	W45	6.64	5.33	1.31	0.80
				W46	5.69	4.42	1.27	0.78
				W47	5.72	4.53	1.19	0.79
				W48	17.73	17.70	0.03	1.00
				W49	25.02	24.86	0.16	0.99
Fifth	R1	Residential	Unknown	W1	4.73	1.14	3.59	0.24
				W2	4.44	1.75	2.69	0.39
				W3	18.64	7.59	11.05	0.41
	R2	Residential	Unknown	W4	21.87	7.49	14.38	0.34
				W5	15.99	8.44	7.55	0.53
				W6	17.02	9.24	7.78	0.54
	R3	Residential	Unknown	W7	19.23	10.88	8.35	0.57
				W8	15.59	7.85	7.74	0.50
				W9	15.31	7.02	8.29	0.46
				W10	15.98	6.95	9.03	0.43
				W11	31.09	10.04	21.05	0.32
	R4	Residential	Unknown	W12	37.25	16.50	20.75	0.44
	R5	Residential	Unknown	W13	9.17	6.87	2.30	0.75

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6	Residential	Unknown	W14	37.02	17.92	19.10	0.48
				W15	30.76	13.24	17.52	0.43
				W16	29.68	13.44	16.24	0.45
				W17	13.03	10.40	2.63	0.80
	R7	Residential	Unknown	W18	15.69	13.70	1.99	0.87
	R8	Residential	Unknown	W19	13.91	11.81	2.10	0.85
	R9	Residential	Unknown	W20	18.55	11.87	6.68	0.64
	R10	Residential	Unknown	W21	24.59	17.07	7.52	0.69
	R11	Residential	Unknown	W22	22.39	12.69	9.70	0.57
				W23	24.23	13.98	10.25	0.58
	R12	Residential	Unknown	W24	29.12	17.74	11.38	0.61
	R13	Residential	Unknown	W25	26.50	14.09	12.41	0.53
				W26	22.60	11.03	11.57	0.49
	R14	Residential	Unknown	W27	18.79	11.76	7.03	0.63
				W28	25.30	15.23	10.07	0.60
	R15	Residential	Unknown	W29	29.37	19.39	9.98	0.66
	R16	Residential	Unknown	W30	29.48	18.99	10.49	0.64
	R17	Residential	Unknown	W31	24.05	14.03	10.02	0.58
				W32	22.55	12.80	9.75	0.57
	R18	Residential	Unknown	W33	14.68	8.19	6.49	0.56
				W34	20.56	13.10	7.46	0.64
	R19	Residential	Unknown	W35	25.77	17.44	8.33	0.68
	R20	Residential	Unknown	W36	25.81	17.13	8.68	0.66
	R21	Residential	Unknown	W37	24.37	15.97	8.40	0.66
	R22	Residential	Unknown	W38	15.75	7.76	7.99	0.49
	R23	Residential	Unknown	W39	11.97	6.93	5.04	0.58
				W40	20.45	12.90	7.55	0.63

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R24	Residential	Unknown	W41	16.96	11.53	5.43	0.68
	R25	Residential	Unknown	W42	14.21	11.27	2.94	0.79
	R26	Residential	Unknown	W43	12.70	11.01	1.69	0.87
	R27	Residential	Unknown	W44	7.38	6.09	1.29	0.83
				W45	6.49	5.23	1.26	0.81
				W46	6.58	5.38	1.20	0.82
				W47	19.24	19.19	0.05	1.00
				W48	26.64	26.39	0.25	0.99
Sixth	R1	Residential	Unknown	W1	5.20	1.59	3.61	0.31
				W2	4.93	2.27	2.66	0.46
				W3	19.34	8.41	10.93	0.43
	R2	Residential	Unknown	W4	22.44	8.22	14.22	0.37
				W5	16.75	9.25	7.50	0.55
				W6	17.80	10.08	7.72	0.57
	R3	Residential	Unknown	W7	20.04	11.75	8.29	0.59
				W8	16.40	8.65	7.75	0.53
				W9	16.03	7.73	8.30	0.48
				W10	16.69	7.65	9.04	0.46
				W11	31.31	10.46	20.85	0.33
	R4	Residential	Unknown	W12	37.47	17.06	20.41	0.46
	R5	Residential	Unknown	W13	9.17	6.94	2.23	0.76
	R6	Residential	Unknown	W14	37.26	18.51	18.75	0.50
				W15	31.04	13.79	17.25	0.44
				W16	29.97	13.98	15.99	0.47
				W17	30.14	14.52	15.62	0.48
				W18	13.80	11.21	2.59	0.81
	R7	Residential	Unknown	W19	16.47	14.53	1.94	0.88
	R8	Residential	Unknown	W20	14.53	12.49	2.04	0.86
	R9	Residential	Unknown	W21	18.85	12.36	6.49	0.66
	R10	Residential	Unknown	W22	24.89	17.58	7.31	0.71
	R11	Residential	Unknown	W23	22.66	13.22	9.44	0.58

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W24	24.52	14.52	10.00	0.59
	R12	Residential	Unknown	W25	29.36	18.25	11.11	0.62
	R13	Residential	Unknown	W26	26.80	14.69	12.11	0.55
				W27	22.64	11.33	11.31	0.50
	R14	Residential	Unknown	W28	19.15	12.33	6.82	0.64
				W29	25.69	15.87	9.82	0.62
	R15	Residential	Unknown	W30	29.76	20.10	9.66	0.68
	R16	Residential	Unknown	W31	29.81	19.64	10.17	0.66
	R17	Residential	Unknown	W32	24.45	14.69	9.76	0.60
				W33	22.69	13.20	9.49	0.58
	R18	Residential	Unknown	W34	14.98	8.71	6.27	0.58
				W35	21.03	13.81	7.22	0.66
	R19	Residential	Unknown	W36	26.27	18.22	8.05	0.69
	R20	Residential	Unknown	W37	26.33	17.94	8.39	0.68
	R21	Residential	Unknown	W38	24.88	16.76	8.12	0.67
	R22	Residential	Unknown	W39	15.79	8.08	7.71	0.51
	R23	Residential	Unknown	W40	12.10	7.20	4.90	0.60
				W41	20.95	13.66	7.29	0.65
	R24	Residential	Unknown	W42	17.52	12.26	5.26	0.70
	R25	Residential	Unknown	W43	14.90	12.06	2.84	0.81
	R26	Residential	Unknown	W44	13.51	11.85	1.66	0.88
	R27	Residential	Unknown	W45	8.19	6.79	1.40	0.83
				W46	7.34	5.97	1.37	0.81
				W47	7.51	6.17	1.34	0.82
				W48	20.80	20.70	0.10	1.00
				W49	28.29	27.94	0.35	0.99
Seventh	R1	Residential	Unknown	W1	5.79	2.18	3.61	0.38
				W2	5.54	2.94	2.60	0.53

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W3	20.15	9.39	10.76	0.47
	R2	Residential	Unknown	W4	23.13	9.10	14.03	0.39
				W5	17.62	10.22	7.40	0.58
				W6	18.70	11.07	7.63	0.59
	R3	Residential	Unknown	W7	20.96	12.76	8.20	0.61
				W8	17.28	9.56	7.72	0.55
				W9	16.83	8.55	8.28	0.51
				W10	17.48	8.47	9.01	0.48
				W11	31.44	10.91	20.53	0.35
	R4	Residential	Unknown	W12	37.63	17.67	19.96	0.47
	R5	Residential	Unknown	W13	9.18	7.02	2.16	0.76
	R6	Residential	Unknown	W14	37.44	19.13	18.31	0.51
				W15	31.24	14.37	16.87	0.46
				W16	30.17	14.55	15.62	0.48
				W17	30.35	15.10	15.25	0.50
				W18	14.58	12.08	2.50	0.83
	R7	Residential	Unknown	W19	17.31	15.47	1.84	0.89
	R8	Residential	Unknown	W20	15.21	13.26	1.95	0.87
	R9	Residential	Unknown	W21	19.14	12.92	6.22	0.68
	R10	Residential	Unknown	W22	25.21	18.19	7.02	0.72
	R11	Residential	Unknown	W23	22.89	13.78	9.11	0.60
				W24	24.76	15.10	9.66	0.61
	R12	Residential	Unknown	W25	29.59	18.81	10.78	0.64
	R13	Residential	Unknown	W26	27.07	15.33	11.74	0.57
				W27	22.69	11.68	11.01	0.51
	R14	Residential	Unknown	W28	19.48	12.93	6.55	0.66
				W29	26.04	16.55	9.49	0.64
	R15	Residential	Unknown	W30	30.16	20.84	9.32	0.69
	R16	Residential	Unknown	W31	30.13	20.33	9.80	0.67

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R17	Residential	Unknown	W32	24.73	15.35	9.38	0.62
				W33	22.78	13.59	9.19	0.60
	R18	Residential	Unknown	W34	15.34	9.31	6.03	0.61
				W35	21.54	14.60	6.94	0.68
	R19	Residential	Unknown	W36	26.86	19.11	7.75	0.71
	R20	Residential	Unknown	W37	26.95	18.88	8.07	0.70
	R21	Residential	Unknown	W38	25.49	17.68	7.81	0.69
	R22	Residential	Unknown	W39	15.82	8.41	7.41	0.53
	R23	Residential	Unknown	W40	12.21	7.48	4.73	0.61
				W41	21.57	14.57	7.00	0.68
	R24	Residential	Unknown	W42	18.23	13.16	5.07	0.72
	R25	Residential	Unknown	W43	15.76	13.03	2.73	0.83
	R26	Residential	Unknown	W44	14.51	12.87	1.64	0.89
	R27	Residential	Unknown	W45	9.09	7.50	1.59	0.83
				W46	8.27	6.68	1.59	0.81
				W47	8.53	6.96	1.57	0.82
				W48	22.41	22.22	0.19	0.99
				W49	29.97	29.49	0.48	0.98
Eighth	R1	Residential	Unknown	W1	6.59	2.98	3.61	0.45
				W2	6.36	3.82	2.54	0.60
				W3	21.15	10.57	10.58	0.50
	R2	Residential	Unknown	W4	24.00	10.19	13.81	0.42
				W5	18.64	11.34	7.30	0.61
				W6	19.75	12.22	7.53	0.62
	R3	Residential	Unknown	W7	22.03	13.92	8.11	0.63
				W8	18.30	10.62	7.68	0.58
				W9	17.78	9.54	8.24	0.54
				W10	18.40	9.44	8.96	0.51
				W11	31.58	11.39	20.19	0.36
	R4	Residential	Unknown	W12	37.80	18.32	19.48	0.48

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W13	9.19	7.10	2.09	0.77
	R6	Residential	Unknown	W14	37.60	19.78	17.82	0.53
				W15	31.44	15.00	16.44	0.48
				W16	30.38	15.15	15.23	0.50
				W17	30.56	15.70	14.86	0.51
				W18	15.42	12.99	2.43	0.84
	R7	Residential	Unknown	W19	18.19	16.44	1.75	0.90
	R8	Residential	Unknown	W20	16.02	14.14	1.88	0.88
	R9	Residential	Unknown	W21	19.51	13.55	5.96	0.69
	R10	Residential	Unknown	W22	25.67	18.97	6.70	0.74
	R11	Residential	Unknown	W23	23.20	14.40	8.80	0.62
				W24	25.08	15.74	9.34	0.63
	R12	Residential	Unknown	W25	29.86	19.39	10.47	0.65
	R13	Residential	Unknown	W26	27.38	16.03	11.35	0.59
				W27	22.71	12.01	10.70	0.53
	R14	Residential	Unknown	W28	19.85	13.58	6.27	0.68
				W29	26.42	17.29	9.13	0.65
	R15	Residential	Unknown	W30	30.59	21.65	8.94	0.71
	R16	Residential	Unknown	W31	30.48	21.06	9.42	0.69
	R17	Residential	Unknown	W32	25.11	16.09	9.02	0.64
				W33	22.89	14.02	8.87	0.61
	R18	Residential	Unknown	W34	15.82	10.04	5.78	0.63
				W35	22.14	15.48	6.66	0.70
	R19	Residential	Unknown	W36	27.57	20.14	7.43	0.73
	R20	Residential	Unknown	W37	27.72	19.99	7.73	0.72
	R21	Residential	Unknown	W38	26.25	18.77	7.48	0.72
	R22	Residential	Unknown	W39	15.96	8.87	7.09	0.56

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R23	Residential	Unknown	W40	12.31	7.76	4.55	0.63
				W41	22.38	15.68	6.70	0.70
	R24	Residential	Unknown	W42	19.16	14.29	4.87	0.75
	R25	Residential	Unknown	W43	16.89	14.27	2.62	0.84
	R26	Residential	Unknown	W44	15.79	14.17	1.62	0.90
	R27	Residential	Unknown	W45	10.12	8.27	1.85	0.82
				W46	9.27	7.40	1.87	0.80
				W47	9.63	7.76	1.87	0.81
				W48	24.02	23.71	0.31	0.99
				W49	31.66	31.02	0.64	0.98
Ninth	R1	Residential	Unknown	W1	7.56	3.96	3.60	0.52
				W2	7.36	4.87	2.49	0.66
				W3	22.34	11.97	10.37	0.54
	R2	Residential	Unknown	W4	25.11	11.55	13.56	0.46
				W5	19.83	12.65	7.18	0.64
				W6	20.96	13.55	7.41	0.65
	R3	Residential	Unknown	W7	23.23	15.23	8.00	0.66
				W8	19.42	11.78	7.64	0.61
				W9	18.86	10.67	8.19	0.57
				W10	19.47	10.55	8.92	0.54
				W11	31.70	11.91	19.79	0.38
	R4	Residential	Unknown	W12	37.98	19.03	18.95	0.50
	R5	Residential	Unknown	W13	9.20	7.21	1.99	0.78
	R6	Residential	Unknown	W14	37.78	20.49	17.29	0.54
				W15	31.65	15.66	15.99	0.49
				W16	30.60	15.78	14.82	0.52
				W17	30.77	16.34	14.43	0.53
				W18	16.34	13.97	2.37	0.85
	R7	Residential	Unknown	W19	19.16	17.49	1.67	0.91
	R8	Residential	Unknown	W20	17.06	15.25	1.81	0.89
	R9	Residential	Unknown	W21	20.07	14.37	5.70	0.72

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R10	Residential	Unknown	W22	26.40	20.02	6.38	0.76
	R11	Residential	Unknown	W23	23.96	15.37	8.59	0.64
				W24	25.50	16.45	9.05	0.65
	R12	Residential	Unknown	W25	30.22	20.03	10.19	0.66
	R13	Residential	Unknown	W26	27.74	16.80	10.94	0.61
				W27	22.90	12.53	10.37	0.55
	R14	Residential	Unknown	W28	20.25	14.27	5.98	0.70
				W29	26.83	18.08	8.75	0.67
	R15	Residential	Unknown	W30	31.11	22.56	8.55	0.73
	R16	Residential	Unknown	W31	30.89	21.87	9.02	0.71
	R17	Residential	Unknown	W32	25.54	16.90	8.64	0.66
				W33	23.00	14.48	8.52	0.63
	R18	Residential	Unknown	W34	16.45	10.94	5.51	0.67
				W35	22.84	16.48	6.36	0.72
	R19	Residential	Unknown	W36	28.44	21.35	7.09	0.75
	R20	Residential	Unknown	W37	28.69	21.31	7.38	0.74
	R21	Residential	Unknown	W38	27.22	20.07	7.15	0.74
	R22	Residential	Unknown	W39	16.27	9.51	6.76	0.58
	R23	Residential	Unknown	W40	12.51	8.15	4.36	0.65
				W41	23.44	17.05	6.39	0.73
	R24	Residential	Unknown	W42	20.42	15.74	4.68	0.77
	R25	Residential	Unknown	W43	18.41	15.88	2.53	0.86
	R26	Residential	Unknown	W44	17.49	15.87	1.62	0.91
	R27	Residential	Unknown	W45	11.78	9.61	2.17	0.82
				W46	10.95	8.68	2.27	0.79
				W47	11.40	9.13	2.27	0.80
				W48	25.64	25.08	0.56	0.98
				W49	33.22	32.38	0.84	0.97

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Tenth	R1	Residential	Unknown	W1	8.73	5.15	3.58	0.59
				W2	8.68	6.26	2.42	0.72
				W3	23.76	13.63	10.13	0.57
	R2	Residential	Unknown	W4	26.46	13.17	13.29	0.50
				W5	21.21	14.14	7.07	0.67
				W6	22.36	15.06	7.30	0.67
	R3	Residential	Unknown	W7	24.64	16.77	7.87	0.68
				W8	20.66	13.07	7.59	0.63
				W9	20.07	11.93	8.14	0.59
				W10	20.65	11.80	8.85	0.57
				W11	31.83	12.48	19.35	0.39
	R4	Residential	Unknown	W12	38.21	19.84	18.37	0.52
	R5	Residential	Unknown	W13	9.24	7.33	1.91	0.79
	R6	Residential	Unknown	W14	38.03	21.30	16.73	0.56
				W15	31.86	16.36	15.50	0.51
				W16	30.81	16.44	14.37	0.53
				W17	30.99	17.00	13.99	0.55
				W18	17.29	15.01	2.28	0.87
	R7	Residential	Unknown	W19	20.23	18.64	1.59	0.92
	R8	Residential	Unknown	W20	18.15	16.41	1.74	0.90
	R9	Residential	Unknown	W21	20.99	15.57	5.42	0.74
	R10	Residential	Unknown	W22	27.52	21.38	6.14	0.78
	R11	Residential	Unknown	W23	25.04	16.44	8.60	0.66
				W24	26.13	17.22	8.91	0.66
	R12	Residential	Unknown	W25	30.60	20.63	9.97	0.67
	R13	Residential	Unknown	W26	28.16	17.64	10.52	0.63
				W27	23.12	13.11	10.01	0.57
	R14	Residential	Unknown	W28	20.67	15.00	5.67	0.73
				W29	27.27	18.93	8.34	0.69
	R15	Residential	Unknown	W30	31.54	23.39	8.15	0.74

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R16	Residential	Unknown	W31	31.20	22.60	8.60	0.72
	R17	Residential	Unknown	W32	26.01	17.78	8.23	0.68
				W33	23.12	14.98	8.14	0.65
	R18	Residential	Unknown	W34	17.22	11.98	5.24	0.70
				W35	23.63	17.60	6.03	0.74
	R19	Residential	Unknown	W36	29.50	22.77	6.73	0.77
	R20	Residential	Unknown	W37	29.88	22.87	7.01	0.77
	R21	Residential	Unknown	W38	28.44	21.65	6.79	0.76
	R22	Residential	Unknown	W39	16.86	10.45	6.41	0.62
	R23	Residential	Unknown	W40	12.83	8.67	4.16	0.68
				W41	24.85	18.79	6.06	0.76
	R24	Residential	Unknown	W42	22.14	17.68	4.46	0.80
	R25	Residential	Unknown	W43	20.45	18.05	2.40	0.88
	R26	Residential	Unknown	W44	19.79	18.21	1.58	0.92
	R27	Residential	Unknown	W45	14.14	11.63	2.51	0.82
				W46	13.37	10.70	2.67	0.80
				W47	13.87	11.18	2.69	0.81
				W48	26.71	25.90	0.81	0.97
				W49	34.39	33.40	0.99	0.97
Eleventh	R1	Residential	Unknown	W1	10.11	6.56	3.55	0.65
				W2	10.30	7.95	2.35	0.77
				W3	25.42	15.56	9.86	0.61
	R2	Residential	Unknown	W4	28.10	15.11	12.99	0.54
				W5	22.80	15.86	6.94	0.70
				W6	23.96	16.77	7.19	0.70
	R3	Residential	Unknown	W7	26.44	18.50	7.94	0.70
				W8	22.06	14.54	7.52	0.66
				W9	21.43	13.37	8.06	0.62
				W10	21.97	13.19	8.78	0.60
				W11	31.96	13.14	18.82	0.41

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R4	Residential	Unknown	W12	38.54	20.79	17.75	0.54
	R5	Residential	Unknown	W13	9.36	7.55	1.81	0.81
	R6	Residential	Unknown	W14	38.37	22.25	16.12	0.58
				W15	32.08	17.15	14.93	0.53
				W16	31.03	17.15	13.88	0.55
				W17	31.22	17.71	13.51	0.57
				W18	18.48	16.21	2.27	0.88
	R7	Residential	Unknown	W19	21.69	20.16	1.53	0.93
	R8	Residential	Unknown	W20	19.36	17.64	1.72	0.91
	R9	Residential	Unknown	W21	21.94	16.77	5.17	0.76
	R10	Residential	Unknown	W22	28.09	21.49	6.60	0.77
	R11	Residential	Unknown	W23	26.41	17.49	8.92	0.66
				W24	27.09	17.93	9.16	0.66
	R12	Residential	Unknown	W25	27.48	17.64	9.84	0.64
	R13	Residential	Unknown	W26	34.26	24.20	10.06	0.71
				W27	28.52	18.83	9.69	0.66
	R14	Residential	Unknown	W28	26.30	20.95	5.35	0.80
				W29	33.36	25.47	7.89	0.76
	R15	Residential	Unknown	W30	27.14	19.75	7.39	0.73
	R16	Residential	Unknown	W31	26.90	18.71	8.19	0.70
	R17	Residential	Unknown	W32	32.16	24.35	7.81	0.76
				W33	28.45	20.73	7.72	0.73
	R18	Residential	Unknown	W34	23.26	18.29	4.97	0.79
				W35	30.16	24.44	5.72	0.81
	R19	Residential	Unknown	W36	30.78	24.30	6.48	0.79
	R20	Residential	Unknown	W37	31.21	24.53	6.68	0.79
	R21	Residential	Unknown	W38	30.04	23.62	6.42	0.79

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R22	Residential	Unknown	W39	18.23	12.19	6.04	0.67
	R23	Residential	Unknown	W40	13.14	9.19	3.95	0.70
				W41	26.81	21.09	5.72	0.79
	R24	Residential	Unknown	W42	24.70	20.48	4.22	0.83
	R25	Residential	Unknown	W43	23.47	21.18	2.29	0.90
	R26	Residential	Unknown	W44	23.08	21.49	1.59	0.93
	R27	Residential	Unknown	W45	23.50	20.63	2.87	0.88
				W46	23.98	20.86	3.12	0.87
				W47	24.43	21.28	3.15	0.87
				W48	35.14	33.99	1.15	0.97
				W49	35.42	34.30	1.12	0.97
Twelfth	R1	Residential	Unknown	W1	12.36	8.73	3.63	0.71
				W2	12.86	10.60	2.26	0.82
				W3	27.32	17.72	9.60	0.65
	R2	Residential	Unknown	W4	30.26	17.65	12.61	0.58
				W5	24.67	17.88	6.79	0.72
				W6	25.83	18.80	7.03	0.73
	R3	Residential	Unknown	W7	28.54	20.36	8.18	0.71
				W8	29.65	20.41	9.24	0.69
				W9	30.05	20.46	9.59	0.68
				W10	30.36	20.51	9.85	0.68
				W11	38.96	19.50	19.46	0.50
	R4	Residential	Unknown	W12	38.83	21.75	17.08	0.56
	R5	Residential	Unknown	W13	10.12	8.42	1.70	0.83
	R6	Residential	Unknown	W14	38.48	24.17	14.31	0.63
				W15	38.67	23.21	15.46	0.60
				W16	38.43	24.41	14.02	0.64
				W17	38.40	24.55	13.85	0.64
				W18	26.30	24.10	2.20	0.92
	R7	Residential	Unknown	W19	23.52	21.62	1.90	0.92
	R8	Residential	Unknown	W20	20.42	18.70	1.72	0.92

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R9	Residential	Unknown	W21	23.69	18.79	4.90	0.79
	R10	Residential	Unknown	W22	35.54	25.77	9.77	0.73
				W24	35.96	26.03	9.93	0.72
	R11	Residential	Unknown	W23	33.58	24.97	8.61	0.74
	R12	Residential	Unknown	W25	36.86	27.00	9.86	0.73
	R13	Residential	Unknown	W26	25.95	21.85	4.10	0.84
				W27	25.86	21.79	4.07	0.84
	R14	Residential	Unknown	W28	25.99	22.01	3.98	0.85
				W29	26.24	22.31	3.93	0.85
	R15	Residential	Unknown	W30	36.24	27.95	8.29	0.77
	R16	Residential	Unknown	W31	35.84	27.94	7.90	0.78
	R17	Residential	Unknown	W32	25.66	22.43	3.23	0.87
				W33	25.44	22.22	3.22	0.87
	R18	Residential	Unknown	W34	25.40	22.19	3.21	0.87
				W35	25.55	22.37	3.18	0.88
	R19	Residential	Unknown	W36	33.57	26.88	6.69	0.80
	R20	Residential	Unknown	W37	32.93	26.49	6.44	0.80
	R21	Residential	Unknown	W38	32.11	25.94	6.17	0.81
	R22	Residential	Unknown	W39	29.14	23.15	5.99	0.79
	R23	Residential	Unknown	W40	19.51	15.78	3.73	0.81
				W41	29.45	23.80	5.65	0.81
	R24	Residential	Unknown	W42	28.45	23.87	4.58	0.84
	R25	Residential	Unknown	W43	27.84	25.59	2.25	0.92
				W44	32.04	29.62	2.42	0.92
				W45	34.66	32.72	1.94	0.94
				W46	34.55	32.64	1.91	0.94
Thirteenth	R1	Residential	Unknown	W1	13.64	10.18	3.46	0.75

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W2	14.45	12.28	2.17	0.85
	R2	Residential	Unknown	W3	29.53	20.23	9.30	0.69
				W4	31.65	20.37	11.28	0.64
	R3	Residential	Unknown	W5	34.26	23.98	10.28	0.70
	R4	Residential	Unknown	W6	33.79	24.16	9.63	0.72
	R5	Residential	Unknown	W7	29.74	19.54	10.20	0.66
				W8	28.91	18.86	10.05	0.65
	R6	Residential	Unknown	W9	37.59	27.99	9.60	0.74
	R7	Residential	Unknown	W10	36.37	27.34	9.03	0.75
				W11	36.18	27.31	8.87	0.75
	R8	Residential	Unknown	W12	36.15	27.49	8.66	0.76
				W13	36.24	27.69	8.55	0.76
	R9	Residential	Unknown	W14	36.87	29.04	7.83	0.79
	R10	Residential	Unknown	W15	36.58	29.07	7.51	0.79
	R11	Residential	Unknown	W16	34.94	27.88	7.06	0.80
				W17	34.68	27.69	6.99	0.80
	R12	Residential	Unknown	W18	34.47	27.60	6.87	0.80
				W19	34.47	27.68	6.79	0.80
	R13	Residential	Unknown	W20	34.91	28.45	6.46	0.81
	R14	Residential	Unknown	W21	34.52	28.22	6.30	0.82
	R15	Residential	Unknown	W22	30.21	25.66	4.55	0.85
	R16	Residential	Unknown	W23	31.92	25.91	6.01	0.81
	R17	Residential	Unknown	W24	24.67	18.70	5.97	0.76
				W25	22.55	16.59	5.96	0.74
	R18	Residential	Unknown	W26	31.28	26.19	5.09	0.84
	R19	Residential	Unknown	W27	30.66	27.34	3.32	0.89
				W28	34.09	30.93	3.16	0.91

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W29	28.97	26.74	2.23	0.92
Fourteenth	R1	Residential	Unknown	W1	19.60	16.09	3.51	0.82
				W2	20.98	18.91	2.07	0.90
	R2	Residential	Unknown	W3	31.68	22.78	8.90	0.72
				W4	33.47	22.69	10.78	0.68
	R3	Residential	Unknown	W5	37.66	22.60	15.06	0.60
				W6	38.83	23.04	15.79	0.59
	R4	Residential	Unknown	W7	10.71	6.40	4.31	0.60
	R5	Residential	Unknown	W8	23.53	15.50	8.03	0.66
				W9	35.99	25.05	10.94	0.70
	R6	Residential	Unknown	W10	34.42	25.03	9.39	0.73
	R7	Residential	Unknown	W11	31.75	22.02	9.73	0.69
				W12	32.01	22.44	9.57	0.70
	R8	Residential	Unknown	W13	37.48	28.47	9.01	0.76
	R9	Residential	Unknown	W14	31.30	22.83	8.47	0.73
				W15	30.20	21.86	8.34	0.72
	R10	Residential	Unknown	W16	30.19	22.07	8.12	0.73
				W17	31.13	23.09	8.04	0.74
	R11	Residential	Unknown	W18	37.53	30.18	7.35	0.80
	R12	Residential	Unknown	W19	37.28	30.22	7.06	0.81
	R13	Residential	Unknown	W20	30.14	23.42	6.72	0.78
				W21	29.06	22.43	6.63	0.77
	R14	Residential	Unknown	W22	28.92	22.34	6.58	0.77
				W23	29.81	23.30	6.51	0.78
	R15	Residential	Unknown	W24	36.10	29.89	6.21	0.83
	R16	Residential	Unknown	W25	35.90	29.83	6.07	0.83
	R17	Residential	Unknown	W26	35.37	29.33	6.04	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R18	Residential	Unknown	W27	34.56	28.56	6.00	0.83
				W28	33.25	27.28	5.97	0.82
				W29	31.66	25.68	5.98	0.81
	R19	Residential	Unknown	W30	33.66	28.19	5.47	0.84
	R20	Residential	Unknown	W31	32.83	28.78	4.05	0.88
				W32	35.83	32.24	3.59	0.90
				W33	37.56	35.23	2.33	0.94
				W34	37.51	35.14	2.37	0.94
Fifteenth	R1	Residential	Unknown	W1	25.20	22.12	3.08	0.88
				W2	27.17	21.70	5.47	0.80
				W3	28.22	21.32	6.90	0.76
				W28	24.99	21.89	3.10	0.88
	R2	Residential	Unknown	W4	28.93	21.33	7.60	0.74
	R3	Residential	Unknown	W5	28.79	21.17	7.62	0.74
	R4	Residential	Unknown	W6	16.21	7.49	8.72	0.46
	R5	Residential	Unknown	W7	23.67	16.03	7.64	0.68
				W8	36.15	25.96	10.19	0.72
	R6	Residential	Unknown	W9	34.86	26.10	8.76	0.75
	R7	Residential	Unknown	W10	32.09	22.96	9.13	0.72
				W11	32.35	23.37	8.98	0.72
	R8	Residential	Unknown	W12	38.20	29.72	8.48	0.78
	R9	Residential	Unknown	W13	38.36	30.40	7.96	0.79
				W14	38.34	30.50	7.84	0.80
	R10	Residential	Unknown	W15	38.31	30.67	7.64	0.80
				W16	38.28	30.71	7.57	0.80
	R11	Residential	Unknown	W17	38.10	31.10	7.00	0.82
	R12	Residential	Unknown	W18	37.96	31.23	6.73	0.82
	R13	Residential	Unknown	W19	37.64	31.24	6.40	0.83
				W20	37.58	31.24	6.34	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R14	Residential	Unknown	W21	37.48	31.19	6.29	0.83
				W22	37.39	31.17	6.22	0.83
	R15	Residential	Unknown	W23	37.09	31.09	6.00	0.84
	R16	Residential	Unknown	W24	36.88	30.99	5.89	0.84
	R17	Residential	Unknown	W25	36.58	30.72	5.86	0.84
	R18	Residential	Unknown	W26	36.09	30.30	5.79	0.84
	R19	Residential	Unknown	W27	35.35	30.02	5.33	0.85
Sixteenth	R1	Residential	Unknown	W1	24.64	20.75	3.89	0.84
				W2	34.42	26.59	7.83	0.77
				W3	36.94	26.18	10.76	0.71
				W19	23.36	19.83	3.53	0.85
	R2	Residential	Unknown	W4	38.28	25.56	12.72	0.67
	R3	Residential	Unknown	W5	38.72	25.12	13.60	0.65
	R4	Residential	Unknown	W6	17.64	8.34	9.30	0.47
	R5	Residential	Unknown	W7	24.04	16.75	7.29	0.70
				W9	36.60	27.17	9.43	0.74
	R6	Residential	Unknown	W8	35.50	27.36	8.14	0.77
	R7	Residential	Unknown	W10	38.38	29.90	8.48	0.78
				W11	38.48	30.13	8.35	0.78
	R8	Residential	Unknown	W12	38.68	30.80	7.88	0.80
	R9	Residential	Unknown	W13	38.72	31.33	7.39	0.81
	R10	Residential	Unknown	W14	38.51	32.99	5.52	0.86
				W15	38.14	34.83	3.31	0.91
				W17	38.07	36.38	1.69	0.96
				W18	38.07	36.36	1.71	0.96
	R11	Residential	Unknown	W16	36.92	31.73	5.19	0.86
Seventeenth	R1	Residential	Unknown	W1	26.96	23.64	3.32	0.88
				W2	35.62	28.33	7.29	0.80

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W3	37.55	27.53	10.02	0.73
				W9	26.01	22.61	3.40	0.87
	R2	Residential	Unknown	W4	38.43	26.60	11.83	0.69
	R3	Residential	Unknown	W5	37.97	25.35	12.62	0.67
	R4	Residential	Unknown	W6	15.00	7.36	7.64	0.49
	R5	Residential	Unknown	W7	32.88	30.65	2.23	0.93
				W8	32.03	29.98	2.05	0.94
Eighteenth	R1	Residential	Unknown	W1	33.85	30.78	3.07	0.91
				W2	35.75	29.02	6.73	0.81
				W3	36.92	27.69	9.23	0.75
				W12	33.91	30.76	3.15	0.91
	R2	Residential	Unknown	W4	37.40	26.51	10.89	0.71
	R3	Residential	Unknown	W5	37.51	25.93	11.58	0.69
				W6	35.45	24.66	10.79	0.70
	R4	Residential	Unknown	W7	37.81	28.35	9.46	0.75
	R5	Residential	Unknown	W8	37.47	30.32	7.15	0.81
	R6	Residential	Unknown	W9	37.33	32.19	5.14	0.86
	R7	Residential	Unknown	W10	35.76	33.60	2.16	0.94
				W11	35.08	33.07	2.01	0.94
The Hallmark								
Ground	R1	Residential	Unknown	W1	6.23	2.72	3.51	0.44
				W2	17.01	8.26	8.75	0.49
				W3	10.02	4.76	5.26	0.48
				W4	11.21	6.94	4.27	0.62
				W5	1.49	0.54	0.95	0.36
				W6	28.65	16.37	12.28	0.57
First	R1	Residential	Unknown	W1	37.40	21.02	16.38	0.56
				W2	3.57	0.23	3.34	0.06
	R2	Residential	Unknown	W3	10.04	3.99	6.05	0.40
				W4	9.75	8.65	1.10	0.89

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R3	Residential	Unknown	W5	29.82	17.57	12.25	0.59
	R4	Residential	Unknown	W6	6.22	6.11	0.11	0.98
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	9.82	7.40	2.42	0.75
	R7	Residential	Unknown	W10	16.61	12.11	4.50	0.73
	R8	Residential	Unknown	W11	21.22	15.84	5.38	0.75
	R9	Residential	Unknown	W12	22.80	15.97	6.83	0.70
	R10	Residential	Unknown	W13	7.99	3.81	4.18	0.48
				W14	6.52	4.21	2.31	0.65
Second	R1	Residential	Unknown	W1	38.48	21.88	16.60	0.57
				W2	3.50	0.23	3.27	0.07
	R2	Residential	Unknown	W3	10.02	3.98	6.04	0.40
				W4	9.78	8.59	1.19	0.88
	R3	Residential	Unknown	W5	31.36	18.83	12.53	0.60
	R4	Residential	Unknown	W6	6.93	6.85	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	10.21	7.83	2.38	0.77
	R7	Residential	Unknown	W10	18.01	13.52	4.49	0.75
	R8	Residential	Unknown	W11	21.82	16.65	5.17	0.76
	R9	Residential	Unknown	W12	23.79	16.84	6.95	0.71
	R10	Residential	Unknown	W13	7.06	2.97	4.09	0.42
				W14	6.49	4.42	2.07	0.68
Third	R1	Residential	Unknown	W1	39.19	22.63	16.56	0.58
				W2	3.45	0.23	3.22	0.07

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Unknown	W3	10.02	4.06	5.96	0.41
				W4	9.86	8.65	1.21	0.88
	R3	Residential	Unknown	W5	32.15	19.73	12.42	0.61
	R4	Residential	Unknown	W6	7.81	7.73	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.00	0.00	0.00	1.00
	R6	Residential	Unknown	W9	10.62	8.28	2.34	0.78
	R7	Residential	Unknown	W10	18.74	14.29	4.45	0.76
	R8	Residential	Unknown	W11	22.61	17.50	5.11	0.77
	R9	Residential	Unknown	W12	24.58	17.72	6.86	0.72
	R10	Residential	Unknown	W13	7.28	3.23	4.05	0.44
				W14	6.83	4.77	2.06	0.70
Fourth	R1	Residential	Unknown	W1	39.55	23.25	16.30	0.59
				W2	5.75	0.23	5.52	0.04
	R2	Residential	Unknown	W3	10.63	4.37	6.26	0.41
				W4	7.56	6.20	1.36	0.82
	R3	Residential	Unknown	W5	32.85	20.58	12.27	0.63
	R4	Residential	Unknown	W6	9.00	8.92	0.08	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	0.40	0.40	0.00	1.00
	R6	Residential	Unknown	W9	11.02	8.74	2.28	0.79
	R7	Residential	Unknown	W10	19.43	15.10	4.33	0.78
	R8	Residential	Unknown	W11	23.33	18.36	4.97	0.79
	R9	Residential	Unknown	W12	25.30	18.62	6.68	0.74
	R10	Residential	Unknown	W13	7.44	3.50	3.94	0.47
				W14	7.15	5.11	2.04	0.71

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Fifth	R1	Residential	Unknown	W1	39.61	23.68	15.93	0.60
				W2	5.79	0.28	5.51	0.05
	R2	Residential	Unknown	W3	10.78	4.55	6.23	0.42
				W4	7.67	6.32	1.35	0.82
	R3	Residential	Unknown	W5	33.42	21.44	11.98	0.64
	R4	Residential	Unknown	W6	10.26	10.15	0.11	0.99
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	1.06	1.06	0.00	1.00
	R6	Residential	Unknown	W9	11.43	9.20	2.23	0.80
	R7	Residential	Unknown	W10	19.48	15.24	4.24	0.78
	R8	Residential	Unknown	W11	24.40	19.35	5.05	0.79
	R9	Residential	Unknown	W12	25.99	19.60	6.39	0.75
	R10	Residential	Unknown	W13	8.71	4.81	3.90	0.55
				W14	7.61	5.34	2.27	0.70
Sixth	R1	Residential	Unknown	W1	39.61	24.14	15.47	0.61
				W2	5.75	0.33	5.42	0.06
	R2	Residential	Unknown	W3	10.70	4.63	6.07	0.43
				W4	7.62	6.32	1.30	0.83
	R3	Residential	Unknown	W5	34.01	22.35	11.66	0.66
	R4	Residential	Unknown	W6	11.68	11.48	0.20	0.98
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	1.81	1.81	0.00	1.00
	R6	Residential	Unknown	W9	11.83	9.66	2.17	0.82
	R7	Residential	Unknown	W10	20.23	16.13	4.10	0.80
	R8	Residential	Unknown	W11	25.20	20.32	4.88	0.81
	R9	Residential	Unknown	W12	26.82	20.64	6.18	0.77

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R10	Residential	Unknown	W13	8.86	5.08	3.78	0.57
				W14	7.92	5.68	2.24	0.72
Seventh	R1	Residential	Unknown	W1	39.62	24.62	15.00	0.62
				W2	3.53	0.24	3.29	0.07
	R2	Residential	Unknown	W3	10.48	4.72	5.76	0.45
				W4	10.34	9.21	1.13	0.89
	R3	Residential	Unknown	W5	34.54	23.35	11.19	0.68
	R4	Residential	Unknown	W6	12.99	12.67	0.32	0.98
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	2.66	2.66	0.00	1.00
	R6	Residential	Unknown	W9	12.20	10.13	2.07	0.83
	R7	Residential	Unknown	W10	21.00	17.07	3.93	0.81
	R8	Residential	Unknown	W11	26.03	21.35	4.68	0.82
	R9	Residential	Unknown	W12	27.69	21.76	5.93	0.79
	R10	Residential	Unknown	W13	8.96	5.34	3.62	0.60
				W14	8.19	6.00	2.19	0.73
Eighth	R1	Residential	Unknown	W1	39.62	25.17	14.45	0.64
				W2	3.54	0.24	3.30	0.07
	R2	Residential	Unknown	W3	10.50	4.89	5.61	0.47
				W4	10.37	9.29	1.08	0.90
	R3	Residential	Unknown	W5	35.14	24.37	10.77	0.69
	R4	Residential	Unknown	W6	14.78	14.27	0.51	0.97
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	3.60	3.60	0.00	1.00
	R6	Residential	Unknown	W9	12.56	10.60	1.96	0.84
	R7	Residential	Unknown	W10	22.49	18.77	3.72	0.83
	R8	Residential	Unknown	W11	26.58	22.31	4.27	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R9	Residential	Unknown	W12	28.72	22.96	5.76	0.80
	R10	Residential	Unknown	W13	8.02	4.64	3.38	0.58
				W14	8.73	6.86	1.87	0.79
Ninth	R1	Residential	Unknown	W1	39.62	25.77	13.85	0.65
				W2	3.55	0.25	3.30	0.07
	R2	Residential	Unknown	W3	10.55	5.11	5.44	0.48
				W4	10.40	9.37	1.03	0.90
	R3	Residential	Unknown	W5	35.76	25.45	10.31	0.71
	R4	Residential	Unknown	W6	17.04	16.25	0.79	0.95
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	4.63	4.63	0.00	1.00
	R6	Residential	Unknown	W9	12.93	11.08	1.85	0.86
	R7	Residential	Unknown	W10	23.37	19.84	3.53	0.85
	R8	Residential	Unknown	W11	27.55	23.50	4.05	0.85
	R9	Residential	Unknown	W12	29.80	24.33	5.47	0.82
	R10	Residential	Unknown	W13	8.30	5.09	3.21	0.61
				W14	9.13	7.35	1.78	0.81
Tenth	R1	Residential	Unknown	W1	39.62	26.46	13.16	0.67
				W2	6.30	0.94	5.36	0.15
	R2	Residential	Unknown	W3	12.05	6.24	5.81	0.52
				W4	8.54	7.30	1.24	0.85
	R3	Residential	Unknown	W5	36.42	26.53	9.89	0.73
	R4	Residential	Unknown	W6	20.55	19.41	1.14	0.94
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	5.72	5.72	0.00	1.00
	R6	Residential	Unknown	W9	13.31	11.58	1.73	0.87

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R7	Residential	Unknown	W10	24.29	20.97	3.32	0.86
	R8	Residential	Unknown	W11	28.59	24.77	3.82	0.87
	R9	Residential	Unknown	W12	30.99	25.82	5.17	0.83
	R10	Residential	Unknown	W13	9.82	6.79	3.03	0.69
				W14	10.79	9.10	1.69	0.84
Eleventh	R1	Residential	Unknown	W1	39.62	27.23	12.39	0.69
				W2	6.34	1.15	5.19	0.18
	R2	Residential	Unknown	W3	12.14	6.61	5.53	0.54
				W4	8.60	7.40	1.20	0.86
	R3	Residential	Unknown	W5	37.09	27.78	9.31	0.75
	R4	Residential	Unknown	W6	25.10	23.57	1.53	0.94
				W7	0.00	0.00	0.00	1.00
	R5	Residential	Unknown	W8	6.97	6.97	0.00	1.00
	R6	Residential	Unknown	W9	13.72	12.13	1.59	0.88
	R7	Residential	Unknown	W10	24.60	21.49	3.11	0.87
	R8	Residential	Unknown	W11	30.15	26.44	3.71	0.88
	R9	Residential	Unknown	W12	32.27	27.52	4.75	0.85
	R10	Residential	Unknown	W13	10.01	7.12	2.89	0.71
				W14	9.25	7.43	1.82	0.80
Twelfth	R1	Residential	Unknown	W1	39.62	28.06	11.56	0.71
				W2	5.72	1.02	4.70	0.18
	R2	Residential	Unknown	W3	10.63	5.84	4.79	0.55
				W4	7.57	6.56	1.01	0.87
				W5	37.78	28.92	8.86	0.77
	R3	Residential	Unknown	W6	31.45	29.56	1.89	0.94
	R4	Residential	Unknown	W7	26.95	25.30	1.65	0.94
Thirteenth	R1	Residential	Unknown	W1	39.62	28.87	10.75	0.73

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W2	3.55	0.36	3.19	0.10
	R2	Residential	Unknown	W3	10.54	6.15	4.39	0.58
				W4	10.40	9.57	0.83	0.92
				W5	38.33	30.11	8.22	0.79
	R3	Residential	Unknown	W6	37.00	34.85	2.15	0.94
	R4	Residential	Unknown	W7	37.13	35.10	2.03	0.95
Fourteenth	R1	Residential	Unknown	W1	39.62	29.76	9.86	0.75
				W2	3.97	0.86	3.11	0.22
	R2	Residential	Unknown	W3	11.94	7.62	4.32	0.64
				W4	11.67	10.78	0.89	0.92
				W5	38.79	31.24	7.55	0.81
	R3	Residential	Unknown	W6	38.43	36.10	2.33	0.94
	R4	Residential	Unknown	W7	38.49	36.20	2.29	0.94
Fifteenth	R1	Residential	Unknown	W1	39.62	30.72	8.90	0.78
				W2	5.33	3.54	1.79	0.66
	R2	Residential	Unknown	W3	12.30	8.36	3.94	0.68
				W4	12.00	11.12	0.88	0.93
	R3	Residential	Unknown	W5	39.14	36.77	2.37	0.94
	R4	Residential	Unknown	W6	39.15	36.75	2.40	0.94
Barton Place								
First	R1	Residential	Unknown	W1	4.55	4.39	0.16	0.96
				W2	7.24	6.53	0.71	0.90
				W3	5.96	1.73	4.23	0.29
	R2	Residential	Unknown	W4	9.46	6.06	3.40	0.64
	R3	Residential	Unknown	W5	9.18	6.36	2.82	0.69
	R4	Residential	Unknown	W6	5.75	4.68	1.07	0.81
	R5	Residential	Unknown	W7	7.55	5.97	1.58	0.79
	R6	Residential	Unknown	W8	2.20	1.17	1.03	0.53

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R7	Residential	Unknown	W9	7.70	7.20	0.50	0.94
	R8	Residential	Unknown	W10	6.42	6.25	0.17	0.97
Second	R1	Residential	Unknown	W1	14.22	13.33	0.89	0.94
				W2	8.17	7.26	0.91	0.89
				W3	6.50	2.19	4.31	0.34
	R2	Residential	Unknown	W4	10.10	6.64	3.46	0.66
	R3	Residential	Unknown	W5	9.83	6.96	2.87	0.71
	R4	Residential	Unknown	W6	6.21	5.13	1.08	0.83
	R5	Residential	Unknown	W7	8.14	6.55	1.59	0.80
	R6	Residential	Unknown	W8	2.85	1.82	1.03	0.64
	R7	Residential	Unknown	W9	8.40	7.90	0.50	0.94
	R8	Residential	Unknown	W10	7.11	6.94	0.17	0.98
Third	R1	Residential	Unknown	W1	15.70	14.79	0.91	0.94
				W2	9.14	8.18	0.96	0.89
				W3	7.00	2.61	4.39	0.37
	R2	Residential	Unknown	W4	10.81	7.30	3.51	0.68
	R3	Residential	Unknown	W5	10.55	7.65	2.90	0.73
	R4	Residential	Unknown	W6	6.73	5.64	1.09	0.84
	R5	Residential	Unknown	W7	8.85	7.26	1.59	0.82
	R6	Residential	Unknown	W8	3.45	2.42	1.03	0.70
	R7	Residential	Unknown	W9	9.21	8.70	0.51	0.94
	R8	Residential	Unknown	W10	7.90	7.73	0.17	0.98
Fourth	R1	Residential	Unknown	W1	17.47	16.54	0.93	0.95
				W2	10.26	9.25	1.01	0.90
				W3	7.58	3.13	4.45	0.41

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Unknown	W4	11.58	8.03	3.55	0.69
	R3	Residential	Unknown	W5	11.34	8.41	2.93	0.74
	R4	Residential	Unknown	W6	7.32	6.23	1.09	0.85
	R5	Residential	Unknown	W7	9.64	8.05	1.59	0.84
	R6	Residential	Unknown	W8	4.15	3.12	1.03	0.75
	R7	Residential	Unknown	W9	10.12	9.61	0.51	0.95
	R8	Residential	Unknown	W10	8.81	8.64	0.17	0.98
Fifth	R1	Residential	Unknown	W1	19.73	18.80	0.93	0.95
				W2	11.66	10.59	1.07	0.91
				W3	8.21	3.72	4.49	0.45
	R2	Residential	Unknown	W4	12.43	8.86	3.57	0.71
	R3	Residential	Unknown	W5	12.21	9.27	2.94	0.76
	R4	Residential	Unknown	W6	7.98	6.90	1.08	0.86
	R5	Residential	Unknown	W7	10.55	8.96	1.59	0.85
	R6	Residential	Unknown	W8	4.93	3.91	1.02	0.79
	R7	Residential	Unknown	W9	11.15	10.65	0.50	0.96
	R8	Residential	Unknown	W10	9.85	9.68	0.17	0.98
Sixth	R1	Residential	Unknown	W1	22.49	21.55	0.94	0.96
				W2	13.36	12.24	1.12	0.92
				W3	8.86	4.38	4.48	0.49
	R2	Residential	Unknown	W4	13.35	9.79	3.56	0.73
	R3	Residential	Unknown	W5	13.17	10.24	2.93	0.78
	R4	Residential	Unknown	W6	8.70	7.63	1.07	0.88
	R5	Residential	Unknown	W7	11.54	9.97	1.57	0.86
	R6	Residential	Unknown	W8	5.89	4.87	1.02	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R7	Residential	Unknown	W9	12.33	11.83	0.50	0.96
	R8	Residential	Unknown	W10	11.04	10.88	0.16	0.99
Seventh	R1	Residential	Unknown	W1	25.65	24.72	0.93	0.96
				W2	15.32	14.17	1.15	0.92
				W3	9.54	5.13	4.41	0.54
	R2	Residential	Unknown	W4	14.32	10.82	3.50	0.76
	R3	Residential	Unknown	W5	14.19	11.31	2.88	0.80
	R4	Residential	Unknown	W6	9.51	8.47	1.04	0.89
	R5	Residential	Unknown	W7	12.66	11.12	1.54	0.88
	R6	Residential	Unknown	W8	7.02	6.02	1.00	0.86
	R7	Residential	Unknown	W9	13.71	13.23	0.48	0.96
	R8	Residential	Unknown	W10	12.48	12.32	0.16	0.99
Eighth	R1	Residential	Unknown	W1	28.73	27.82	0.91	0.97
				W2	17.43	16.26	1.17	0.93
				W3	10.45	6.13	4.32	0.59
	R2	Residential	Unknown	W4	15.44	12.01	3.43	0.78
	R3	Residential	Unknown	W5	15.36	12.56	2.80	0.82
	R4	Residential	Unknown	W6	10.32	9.30	1.02	0.90
	R5	Residential	Unknown	W7	13.84	12.34	1.50	0.89
	R6	Residential	Unknown	W8	9.30	8.34	0.96	0.90
	R7	Residential	Unknown	W9	15.44	15.02	0.42	0.97
	R8	Residential	Unknown	W10	16.06	15.93	0.13	0.99
Ninth	R1	Residential	Unknown	W1	30.93	30.04	0.89	0.97
				W2	18.70	17.55	1.15	0.94
				W3	11.15	6.93	4.22	0.62

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R2	Residential	Unknown	W4	16.82	13.47	3.35	0.80
	R3	Residential	Unknown	W5	16.65	13.92	2.73	0.84
	R4	Residential	Unknown	W6	10.83	9.83	1.00	0.91
	R5	Residential	Unknown	W7	14.87	13.42	1.45	0.90
	R6	Residential	Unknown	W8	10.35	9.40	0.95	0.91
	R7	Residential	Unknown	W9	17.24	16.83	0.41	0.98
	R8	Residential	Unknown	W10	17.90	17.76	0.14	0.99
Tenth	R1	Residential	Unknown	W1	24.73	23.61	1.12	0.95
				W2	18.70	14.58	4.12	0.78
	R2	Residential	Unknown	W3	17.97	14.70	3.27	0.82
	R3	Residential	Unknown	W4	17.49	14.83	2.66	0.85
	R4	Residential	Unknown	W5	9.35	8.37	0.98	0.90
	R5	Residential	Unknown	W6	13.04	11.61	1.43	0.89
	R6	Residential	Unknown	W7	15.36	14.43	0.93	0.94
Masson Place								
First	R1	Residential	Unknown	W1	2.20	1.40	0.80	0.64
				W2	3.85	3.55	0.30	0.92
				W3	3.32	3.23	0.09	0.97
Second	R1	Residential	Unknown	W1	2.69	1.87	0.82	0.70
				W2	3.14	2.76	0.38	0.88
				W3	12.53	12.21	0.32	0.97
Third	R1	Residential	Unknown	W1	3.14	2.32	0.82	0.74
				W2	4.33	3.95	0.38	0.91
				W3	13.87	13.54	0.33	0.98
Fourth	R1	Residential	Unknown	W1	3.89	3.05	0.84	0.78
				W2	6.11	5.72	0.39	0.94
				W3	15.51	15.18	0.33	0.98
Fifth	R1	Residential	Unknown	W1	4.84	3.99	0.85	0.82

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W2	8.28	7.88	0.40	0.95
				W3	17.53	17.20	0.33	0.98
Sixth	R1	Residential	Unknown	W1	5.90	5.05	0.85	0.86
				W2	10.88	10.48	0.40	0.96
				W3	19.96	19.62	0.34	0.98
Seventh	R1	Residential	Unknown	W1	7.10	6.24	0.86	0.88
				W2	13.89	13.49	0.40	0.97
				W3	22.84	22.51	0.33	0.99
Eighth	R1	Residential	Unknown	W1	9.13	8.27	0.86	0.91
				W2	17.30	16.91	0.39	0.98
				W3	26.13	25.80	0.33	0.99
Ninth	R1	Residential	Unknown	W1	11.44	10.60	0.84	0.93
				W2	20.23	19.85	0.38	0.98
				W3	29.71	29.38	0.33	0.99
Tenth	R1	Residential	Unknown	W1	21.78	20.95	0.83	0.96
				W2	28.47	28.10	0.37	0.99
				W3	33.23	32.91	0.32	0.99
Melia House								
First	R1	Residential	Unknown	W1	7.86	7.86	0.00	1.00
	R2	Residential	Unknown	W2	11.67	10.92	0.75	0.94
	R3	Residential	Unknown	W3	12.48	10.37	2.11	0.83
				W4	11.17	8.08	3.09	0.72
	R4	Residential	Unknown	W5	5.37	1.06	4.31	0.20
				W6	6.44	5.85	0.59	0.91
	R5	Residential	Unknown	W7	1.67	1.67	0.00	1.00
	R6	Residential	Unknown	W8	5.96	5.96	0.00	1.00
	R7	Residential	Unknown	W9	4.31	3.84	0.47	0.89
				W10	10.09	9.98	0.11	0.99
Second	R1	Residential	Unknown	W1	8.51	8.50	0.01	1.00
	R2	Residential	Unknown	W2	12.45	11.69	0.76	0.94

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R3	Residential	Unknown	W3	13.19	11.07	2.12	0.84
				W4	11.71	8.59	3.12	0.73
	R4	Residential	Unknown	W5	5.68	1.23	4.45	0.22
				W6	7.35	6.64	0.71	0.90
	R5	Residential	Unknown	W7	2.12	2.12	0.00	1.00
	R6	Residential	Unknown	W8	7.14	7.14	0.00	1.00
	R7	Residential	Unknown	W9	5.33	4.86	0.47	0.91
				W10	11.11	10.92	0.19	0.98
Third	R1	Residential	Unknown	W1	9.03	9.01	0.02	1.00
	R2	Residential	Unknown	W2	13.16	12.38	0.78	0.94
	R3	Residential	Unknown	W3	13.86	11.72	2.14	0.85
				W4	12.21	9.04	3.17	0.74
	R4	Residential	Unknown	W5	5.99	1.47	4.52	0.25
				W6	8.45	7.60	0.85	0.90
	R5	Residential	Unknown	W7	2.69	2.69	0.00	1.00
	R6	Residential	Unknown	W8	8.58	8.58	0.00	1.00
	R7	Residential	Unknown	W9	6.65	6.19	0.46	0.93
				W10	12.41	12.10	0.31	0.98
Fourth	R1	Residential	Unknown	W1	9.52	9.49	0.03	1.00
	R2	Residential	Unknown	W2	13.79	12.99	0.80	0.94
	R3	Residential	Unknown	W3	14.48	12.31	2.17	0.85
				W4	12.65	9.45	3.20	0.75
	R4	Residential	Unknown	W5	6.29	1.72	4.57	0.27
				W6	9.81	8.79	1.02	0.90
	R5	Residential	Unknown	W7	3.37	3.37	0.00	1.00
	R6	Residential	Unknown	W8	10.41	10.41	0.00	1.00
	R7	Residential	Unknown	W9	8.43	7.98	0.45	0.95

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
				W10	14.11	13.61	0.50	0.96
Fifth	R1	Residential	Unknown	W1	10.05	9.99	0.06	0.99
	R2	Residential	Unknown	W2	14.40	13.57	0.83	0.94
	R3	Residential	Unknown	W3	15.10	12.92	2.18	0.86
				W4	13.03	9.82	3.21	0.75
	R4	Residential	Unknown	W5	6.56	1.96	4.60	0.30
				W6	11.53	10.28	1.25	0.89
	R5	Residential	Unknown	W7	4.05	3.81	0.24	0.94
	R6	Residential	Unknown	W8	12.63	12.40	0.23	0.98
	R7	Residential	Unknown	W9	10.66	10.04	0.62	0.94
				W10	16.30	15.51	0.79	0.95
Sixth	R1	Residential	Unknown	W1	13.27	13.18	0.09	0.99
	R2	Residential	Unknown	W2	15.06	14.22	0.84	0.94
	R3	Residential	Unknown	W3	15.51	13.41	2.10	0.86
				W4	13.16	10.06	3.10	0.76
	R4	Residential	Unknown	W5	8.79	4.35	4.44	0.49
				W6	13.69	12.20	1.49	0.89
	R5	Residential	Unknown	W7	4.70	4.14	0.56	0.88
	R6	Residential	Unknown	W8	13.43	12.78	0.65	0.95
	R7	Residential	Unknown	W9	18.10	17.10	1.00	0.94
				W10	19.08	17.90	1.18	0.94
Seventh	R1	Residential	Unknown	W1	2.09	1.90	0.19	0.91
	R2	Residential	Unknown	W2	6.45	5.48	0.97	0.85
	R3	Residential	Unknown	W3	6.91	4.84	2.07	0.70
				W4	4.57	3.02	1.55	0.66
	R4	Residential	Unknown	W5	17.04	12.86	4.18	0.75
				W6	17.04	12.60	4.44	0.74

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5	Residential	Unknown	W7	5.81	4.80	1.01	0.83
	R6	Residential	Unknown	W8	9.36	8.15	1.21	0.87
	R7	Residential	Unknown	W9	17.01	15.57	1.44	0.92
Eighth	R1	Residential	Unknown	W1	6.57	5.33	1.24	0.81
	R2	Residential	Unknown	W2	13.04	11.57	1.47	0.89
	R3	Residential	Unknown	W3	20.75	19.11	1.64	0.92
Ninth	R1	Residential	Unknown	W1	6.77	5.51	1.26	0.81
	R2	Residential	Unknown	W2	14.97	13.49	1.48	0.90
	R3	Residential	Unknown	W3	20.83	19.22	1.61	0.92

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
St Chads Church											
Ground	R1	Pastoral	12.83	138.13	11.85	127.51	0.92	11.74	0.11	1.14	0.99
	R2	Pastoral	18.67	200.96	17.19	185.03	0.92	16.86	0.33	3.55	0.98
	R3	Pastoral	34.04	366.42	33.95	365.49	1.00	33.95	0.01	0.08	1.00
First	R1	Pastoral	23.49	252.88	23.49	252.87	1.00	23.49	0.00	0.00	1.00
	R2	Pastoral	12.83	138.13	12.83	138.13	1.00	12.83	0.00	0.00	1.00
	R3	Pastoral	18.67	200.96	18.31	197.09	0.98	18.31	0.00	0.00	1.00
Britton House											
Ground	R1	LKD	26.05	280.41	26.04	280.32	1.00	25.70	0.34	3.67	0.99
	R2	Bedroom	11.06	119.04	10.82	116.49	0.98	7.56	3.26	35.11	0.70
	R3	Bedroom	10.79	116.16	9.73	104.72	0.90	2.78	6.95	74.80	0.29
	R4	LKD	24.53	264.00	24.17	260.14	0.99	15.39	8.78	94.53	0.64
	R5	Bedroom	9.18	98.79	1.93	20.74	0.21	1.93	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.14	55.38	0.47	4.16	0.99	10.61	0.81
	R7	LKD	12.92	139.04	5.15	55.47	0.40	3.63	1.52	16.39	0.70
	R8	Bedroom	10.61	114.25	4.65	50.10	0.44	4.43	0.23	2.46	0.95
	R9	LKD	22.89	246.35	14.44	155.44	0.63	13.06	1.38	14.85	0.90
	R10	LKD	25.28	272.07	12.22	131.49	0.48	11.68	0.54	5.79	0.96
	R11	Bedroom	9.41	101.34	7.22	77.75	0.77	7.22	0.00	0.01	1.00
	R12	LKD	16.40	176.49	8.76	94.33	0.53	8.64	0.12	1.31	0.99
	R13	Bedroom	5.98	64.39	5.08	54.69	0.85	5.08	0.00	0.00	1.00
First	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.15	0.75	8.02	0.97
	R2	Bedroom	11.23	120.87	11.01	118.50	0.98	7.67	3.34	35.97	0.70
	R3	Bedroom	10.98	118.17	9.97	107.32	0.91	2.48	7.49	80.64	0.25
	R4	LKD	24.53	264.00	24.21	260.59	0.99	20.56	3.65	39.26	0.85
	R5	Bedroom	9.18	98.79	2.06	22.14	0.22	2.06	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.24	56.43	0.48	4.29	0.95	10.21	0.82
	R7	LKD	13.34	143.54	4.33	46.60	0.32	4.15	0.18	1.94	0.96
	R8	Bedroom	10.29	110.73	4.43	47.73	0.43	4.25	0.18	1.96	0.96
	R9	LKD	22.89	246.35	14.27	153.60	0.62	12.88	1.39	14.96	0.90
	R10	LKD	25.28	272.07	13.06	140.59	0.52	12.54	0.52	5.60	0.96
	R11	Bedroom	9.41	101.34	7.24	77.88	0.77	7.23	0.00	0.01	1.00
	R12	LKD	16.40	176.49	9.54	102.68	0.58	9.37	0.17	1.87	0.98
	R13	Bedroom	5.98	64.39	5.10	54.87	0.85	5.10	0.00	0.00	1.00
Second	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.15	0.74	8.01	0.97
	R2	Bedroom	11.24	120.94	11.02	118.65	0.98	7.67	3.35	36.05	0.70
	R3	Bedroom	10.98	118.17	9.97	107.35	0.91	2.27	7.70	82.89	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	20.56	3.67	39.47	0.85
	R5	Bedroom	9.18	98.79	2.16	23.28	0.24	2.16	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.35	57.60	0.49	4.47	0.88	9.53	0.83
	R7	LKD	13.34	143.54	4.52	48.62	0.34	4.34	0.18	1.91	0.96
	R8	Bedroom	10.29	110.73	4.50	48.47	0.44	4.35	0.15	1.66	0.97
	R9	LKD	22.89	246.35	14.41	155.13	0.63	13.08	1.33	14.32	0.91
	R10	LKD	25.28	272.07	14.45	155.49	0.57	13.94	0.51	5.49	0.96
	R11	Bedroom	9.41	101.34	7.29	78.48	0.77	7.29	0.00	0.05	1.00
	R12	LKD	16.40	176.49	10.42	112.19	0.64	10.17	0.25	2.72	0.98
	R13	Bedroom	5.98	64.39	5.13	55.19	0.86	5.13	0.00	0.00	1.00
Third	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.20	0.70	7.56	0.97
	R2	Bedroom	11.23	120.87	11.02	118.59	0.98	7.68	3.33	35.89	0.70
	R3	Bedroom	10.98	118.17	9.97	107.37	0.91	2.27	7.70	82.89	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	20.57	3.66	39.37	0.85
	R5	Bedroom	9.18	98.79	2.27	24.46	0.25	2.27	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.44	58.50	0.50	4.63	0.81	8.70	0.85
	R7	LKD	13.34	143.54	4.58	49.26	0.34	4.41	0.17	1.80	0.96
	R8	Bedroom	10.29	110.73	4.52	48.63	0.44	4.39	0.13	1.37	0.97
	R9	LKD	22.89	246.35	14.55	156.64	0.64	13.33	1.22	13.17	0.92
	R10	LKD	25.28	272.07	16.58	178.48	0.66	16.03	0.55	5.92	0.97
	R11	Bedroom	9.41	101.34	7.35	79.15	0.78	7.34	0.01	0.15	1.00
	R12	LKD	16.40	176.49	10.76	115.82	0.66	10.41	0.35	3.75	0.97
	R13	Bedroom	5.98	64.39	5.14	55.35	0.86	5.14	0.00	0.00	1.00
Fourth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.20	0.70	7.53	0.97
	R2	Bedroom	11.23	120.87	11.01	118.53	0.98	7.67	3.34	35.92	0.70

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.82	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	20.60	3.63	39.10	0.85
	R5	Bedroom	9.18	98.79	2.43	26.20	0.27	2.43	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.68	61.17	0.52	4.96	0.72	7.77	0.87
	R7	LKD	13.34	143.54	4.66	50.21	0.35	4.50	0.16	1.74	0.97
	R8	Bedroom	10.29	110.73	4.60	49.52	0.45	4.47	0.13	1.37	0.97
	R9	LKD	22.89	246.35	14.65	157.70	0.64	13.49	1.16	12.44	0.92
	R10	LKD	25.28	272.07	19.43	209.11	0.77	18.98	0.44	4.76	0.98
	R11	Bedroom	9.41	101.34	7.52	80.91	0.80	7.50	0.02	0.18	1.00
	R12	LKD	16.40	176.49	11.07	119.20	0.68	10.66	0.41	4.41	0.96
	R13	Bedroom	5.98	64.39	5.19	55.91	0.87	5.19	0.00	0.00	1.00
Fifth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.24	0.66	7.06	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.70	3.32	35.77	0.70
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.80	0.23
	R4	LKD	24.53	264.00	24.23	260.85	0.99	20.96	3.28	35.27	0.86
	R5	Bedroom	9.18	98.79	2.59	27.92	0.28	2.59	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	5.89	63.38	0.54	5.26	0.62	6.72	0.89
	R7	LKD	13.34	143.54	4.77	51.30	0.36	4.61	0.16	1.70	0.97
	R8	Bedroom	10.29	110.73	4.71	50.74	0.46	4.59	0.12	1.32	0.97
	R9	LKD	22.89	246.35	14.69	158.07	0.64	13.61	1.08	11.63	0.93
	R10	LKD	25.28	272.07	21.51	231.48	0.85	21.03	0.47	5.10	0.98
	R11	Bedroom	9.41	101.34	7.68	82.70	0.82	7.66	0.02	0.19	1.00
	R12	LKD	16.40	176.49	11.42	122.95	0.70	10.94	0.48	5.17	0.96
	R13	Bedroom	5.98	64.39	5.20	55.98	0.87	5.20	0.00	0.00	1.00
Sixth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.28	0.62	6.66	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.73	3.28	35.33	0.70
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.28	7.69	82.79	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	21.61	2.62	28.20	0.89
	R5	Bedroom	9.18	98.79	2.75	29.56	0.30	2.75	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	6.19	66.66	0.57	5.68	0.52	5.55	0.92
	R7	LKD	13.34	143.54	4.95	53.29	0.37	4.82	0.14	1.46	0.97
	R8	Bedroom	10.29	110.73	4.90	52.71	0.48	4.80	0.09	1.02	0.98
	R9	LKD	22.89	246.35	14.74	158.70	0.64	13.69	1.06	11.37	0.93
	R10	LKD	25.28	272.07	23.05	248.16	0.91	22.43	0.62	6.72	0.97
	R11	Bedroom	9.41	101.34	7.87	84.68	0.84	7.85	0.02	0.19	1.00
	R12	LKD	16.40	176.49	11.53	124.13	0.70	11.09	0.44	4.78	0.96
	R13	Bedroom	5.98	64.39	5.20	56.02	0.87	5.20	0.00	0.00	1.00
Seventh	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.29	0.61	6.58	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.79	3.23	34.80	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.70	0.23
	R4	LKD	24.53	264.00	24.23	260.79	0.99	23.09	1.13	12.20	0.95
	R5	Bedroom	9.18	98.79	3.05	32.79	0.33	3.05	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	6.69	72.02	0.62	6.26	0.43	4.58	0.94
	R7	LKD	13.34	143.54	5.23	56.28	0.39	5.09	0.13	1.44	0.97
	R8	Bedroom	10.29	110.73	5.18	55.74	0.50	5.10	0.08	0.89	0.98
	R9	LKD	22.89	246.35	14.76	158.89	0.64	13.79	0.97	10.48	0.93
	R10	LKD	25.28	272.07	23.55	253.52	0.93	22.98	0.57	6.17	0.98
	R11	Bedroom	9.41	101.34	8.07	86.81	0.86	8.05	0.02	0.19	1.00
	R12	LKD	16.40	176.49	11.56	124.48	0.71	11.13	0.44	4.69	0.96
	R13	Bedroom	5.98	64.39	5.21	56.11	0.87	5.21	0.00	0.00	1.00
Eighth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.49	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.81	3.20	34.47	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.68	0.23
	R4	LKD	24.53	264.00	24.23	260.80	0.99	23.92	0.31	3.32	0.99
	R5	Bedroom	9.18	98.79	3.60	38.79	0.39	3.60	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	7.46	80.34	0.69	7.15	0.31	3.39	0.96
	R7	LKD	13.34	143.54	5.68	61.12	0.43	5.55	0.13	1.43	0.98
	R8	Bedroom	10.29	110.73	5.71	61.44	0.55	5.64	0.07	0.76	0.99
	R9	LKD	22.89	246.35	15.06	162.11	0.66	14.26	0.80	8.60	0.95
	R10	LKD	25.28	272.07	23.65	254.56	0.94	23.12	0.53	5.67	0.98
	R11	Bedroom	9.41	101.34	8.16	87.82	0.87	8.14	0.02	0.19	1.00
	R12	LKD	16.40	176.49	11.60	124.86	0.71	11.17	0.43	4.66	0.96

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R13	Bedroom	5.98	64.39	5.22	56.15	0.87	5.22	0.00	0.00	1.00
Ninth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.48	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.81	3.20	34.43	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.29	7.68	82.68	0.23
	R4	LKD	24.53	264.00	24.24	260.88	0.99	23.98	0.25	2.72	0.99
	R5	Bedroom	9.18	98.79	4.17	44.93	0.45	4.17	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.50	91.48	0.78	8.23	0.27	2.93	0.97
	R7	LKD	13.34	143.54	6.35	68.35	0.48	6.22	0.13	1.40	0.98
	R8	Bedroom	10.29	110.73	6.52	70.18	0.63	6.45	0.07	0.75	0.99
	R9	LKD	22.89	246.35	16.43	176.90	0.72	16.12	0.32	3.40	0.98
	R10	LKD	25.28	272.07	23.72	255.30	0.94	23.21	0.51	5.50	0.98
	R11	Bedroom	9.41	101.34	8.25	88.85	0.88	8.23	0.02	0.24	1.00
	R12	LKD	16.40	176.49	11.64	125.29	0.71	11.21	0.43	4.61	0.96
	R13	Bedroom	5.98	64.39	5.22	56.16	0.87	5.22	0.00	0.00	1.00
Tenth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.45	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.83	3.19	34.36	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.31	7.67	82.55	0.23
	R4	LKD	24.53	264.00	24.39	262.53	0.99	24.36	0.03	0.29	1.00
	R5	Bedroom	9.18	98.79	4.60	49.54	0.50	4.60	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.71	93.75	0.80	8.53	0.18	1.92	0.98
	R7	LKD	13.34	143.54	7.14	76.84	0.54	7.01	0.13	1.36	0.98
	R8	Bedroom	10.29	110.73	6.81	73.33	0.66	6.74	0.07	0.75	0.99
	R9	LKD	22.89	246.35	19.65	211.54	0.86	19.65	0.00	0.02	1.00
	R10	LKD	25.28	272.07	23.99	258.19	0.95	23.45	0.53	5.74	0.98
	R11	Bedroom	9.41	101.34	8.36	90.04	0.89	8.35	0.02	0.20	1.00
	R12	LKD	16.40	176.49	11.65	125.42	0.71	11.23	0.42	4.57	0.96
	R13	Bedroom	5.98	64.39	5.22	56.17	0.87	5.22	0.00	0.00	1.00
Eleventh	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.30	0.60	6.43	0.98
	R2	Bedroom	11.23	120.87	11.01	118.54	0.98	7.82	3.19	34.37	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.31	7.66	82.49	0.23
	R4	LKD	24.53	264.00	24.51	263.82	1.00	24.51	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.54	48.92	0.50	4.54	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.71	93.75	0.80	8.51	0.20	2.15	0.98
	R7	LKD	13.34	143.54	7.39	79.59	0.55	7.27	0.12	1.31	0.98
	R8	Bedroom	10.29	110.73	6.95	74.77	0.68	6.88	0.07	0.71	0.99
	R9	LKD	22.89	246.35	21.22	228.41	0.93	21.22	0.00	0.02	1.00
	R10	LKD	25.28	272.07	24.15	259.97	0.96	23.65	0.50	5.35	0.98
	R11	Bedroom	9.41	101.34	8.40	90.39	0.89	8.38	0.02	0.19	1.00
	R12	LKD	16.40	176.49	11.66	125.56	0.71	11.24	0.42	4.56	0.96
	R13	Bedroom	5.98	64.39	5.23	56.30	0.87	5.23	0.00	0.00	1.00
Twelfth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.31	0.59	6.30	0.98
	R2	Bedroom	11.23	120.87	11.02	118.61	0.98	7.81	3.21	34.52	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.34	7.64	82.24	0.23
	R4	LKD	24.53	264.00	24.53	264.00	1.00	24.53	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	4.72	50.76	0.51	4.72	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.77	94.37	0.81	8.58	0.19	2.06	0.98
	R7	LKD	13.34	143.54	7.63	82.09	0.57	7.51	0.12	1.27	0.98
	R8	Bedroom	10.29	110.73	7.03	75.68	0.68	6.97	0.06	0.68	0.99
	R9	LKD	22.89	246.35	21.47	231.11	0.94	21.47	0.00	0.02	1.00
	R10	LKD	25.28	272.07	24.50	263.67	0.97	24.25	0.24	2.63	0.99
	R11	Bedroom	9.41	101.34	8.41	90.48	0.89	8.38	0.02	0.23	1.00
	R12	LKD	16.40	176.49	11.71	126.05	0.71	11.29	0.42	4.57	0.96
	R13	Bedroom	5.98	64.39	5.26	56.61	0.88	5.26	0.00	0.00	1.00
Thirteenth	R1	LKD	26.91	289.70	26.90	289.53	1.00	26.47	0.43	4.58	0.98
	R2	Bedroom	11.23	120.87	11.03	118.69	0.98	7.85	3.18	34.19	0.71
	R3	Bedroom	10.98	118.17	9.98	107.38	0.91	2.36	7.62	82.03	0.24
	R4	LKD	24.53	264.00	24.53	264.00	1.00	24.53	0.00	0.00	1.00
	R5	Bedroom	9.18	98.79	5.02	54.00	0.55	5.02	0.00	0.00	1.00
	R6	Bedroom	10.85	116.83	8.91	95.87	0.82	8.73	0.18	1.94	0.98
	R7	LKD	13.34	143.54	7.81	84.07	0.59	7.69	0.12	1.26	0.99
	R8	Bedroom	10.29	110.73	7.11	76.57	0.69	7.05	0.06	0.66	0.99
	R9	LKD	22.89	246.35	21.64	232.97	0.95	21.64	0.00	0.02	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R10	LKD	25.28	272.07	24.54	264.19	0.97	24.19	0.36	3.85	0.99
	R11	Bedroom	9.41	101.34	8.40	90.39	0.89	8.37	0.03	0.30	1.00
	R12	LKD	16.40	176.49	11.81	127.12	0.72	11.38	0.43	4.64	0.96
	R13	Bedroom	5.98	64.39	5.33	57.38	0.89	5.33	0.00	0.00	1.00
Fourteenth	R1	Unknown	19.59	210.85	19.59	210.85	1.00	19.21	0.37	4.02	0.98
	R2	LKD	24.14	259.88	23.59	253.93	0.98	23.19	0.40	4.34	0.98
	R3	Bedroom	8.18	88.03	8.09	87.06	0.99	7.89	0.20	2.11	0.98
	R4	LKD	10.55	113.59	9.89	106.48	0.94	9.87	0.02	0.26	1.00
	R5	Bedroom	9.71	104.52	9.16	98.61	0.94	9.15	0.01	0.14	1.00
	R6	LKD	20.82	224.06	18.16	195.49	0.87	18.16	0.00	0.01	1.00
	R7	LKD	12.93	139.21	10.73	115.50	0.83	10.60	0.13	1.39	0.99
	R8	Bedroom	8.08	87.00	7.83	84.26	0.97	7.79	0.03	0.37	1.00
Fifteenth	R1	Bedroom	8.08	87.00	7.86	84.60	0.97	7.81	0.05	0.49	0.99
Sixteenth	R1	Bedroom	8.08	87.00	7.86	84.60	0.97	7.81	0.04	0.48	0.99
Jefferson Pl											
Lower Ground	R1	Unknown	29.56	318.18	18.79	202.27	0.64	7.81	10.98	118.23	0.42
Ground	R1	Unknown	53.15	572.08	52.38	563.80	0.99	49.92	2.46	26.44	0.95
First	R1	Unknown	29.65	319.14	17.19	185.06	0.58	11.03	6.16	66.31	0.64
	R2	Unknown	28.95	311.65	22.40	241.06	0.77	17.30	5.09	54.84	0.77
	R3	Unknown	11.36	122.29	8.68	93.39	0.76	7.92	0.75	8.12	0.91
	R4	Unknown	5.50	59.18	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	R5	Unknown	39.67	426.97	39.64	426.66	1.00	39.53	0.11	1.21	1.00
	R6	Unknown	13.33	143.51	9.96	107.23	0.75	9.34	0.62	6.69	0.94
	R7	Unknown	8.13	87.51	7.16	77.12	0.88	6.30	0.86	9.29	0.88
	R8	Unknown	25.99	279.79	24.86	267.62	0.96	20.03	4.83	52.00	0.81
	R9	Unknown	11.67	125.61	9.81	105.64	0.84	8.08	1.74	18.69	0.82
	R10	Unknown	25.25	271.78	21.30	229.31	0.84	14.98	6.32	68.01	0.70
	R11	Unknown	27.56	296.70	24.25	261.00	0.88	18.42	5.83	62.76	0.76
	R12	Unknown	10.50	112.97	8.69	93.58	0.83	7.45	1.25	13.42	0.86
	R13	Unknown	10.08	108.52	9.40	101.22	0.93	7.56	1.85	19.87	0.80
	R14	Unknown	24.75	266.45	21.02	226.24	0.85	17.56	3.46	37.21	0.84
	R15	Unknown	26.36	283.70	23.57	253.73	0.89	17.29	6.29	67.65	0.73
	R16	Unknown	7.96	85.64	5.17	55.68	0.65	4.66	0.51	5.50	0.90
	R17	Unknown	12.80	137.75	10.15	109.29	0.79	7.73	2.42	26.07	0.76
	R18	Unknown	11.30	121.66	11.15	120.00	0.99	9.94	1.20	12.96	0.89
	R19	Unknown	7.90	85.02	5.63	60.59	0.71	4.71	0.92	9.86	0.84
	R20	Unknown	25.11	270.25	18.90	203.48	0.75	9.55	9.36	100.70	0.51
	R21	Unknown	12.36	133.02	3.69	39.72	0.30	2.71	0.98	10.56	0.73
	R22	Unknown	8.40	90.45	3.13	33.71	0.37	2.59	0.54	5.79	0.83
	R23	Unknown	25.06	269.76	17.96	193.36	0.72	17.96	0.00	0.00	1.00
Second	R1	Unknown	29.65	319.14	17.29	186.10	0.58	11.16	6.13	65.99	0.65
	R2	Unknown	28.39	305.58	22.50	242.16	0.79	17.16	5.33	57.41	0.76
	R3	Unknown	22.02	237.05	21.81	234.78	0.99	19.31	2.50	26.90	0.89
	R4	Unknown	11.03	118.78	9.72	104.66	0.88	7.33	2.39	25.73	0.75
	R5	Unknown	5.62	60.50	5.11	54.98	0.91	4.44	0.66	7.15	0.87
	R6	Unknown	20.46	220.27	20.28	218.28	0.99	20.25	0.03	0.30	1.00
	R7	Unknown	8.99	96.75	5.63	60.63	0.63	5.43	0.21	2.23	0.96
	R8	Unknown	10.69	115.09	7.02	75.58	0.66	6.25	0.77	8.27	0.89
	R9	Unknown	13.33	143.51	9.97	107.29	0.75	9.04	0.93	10.04	0.91
	R10	Unknown	8.13	87.51	7.17	77.15	0.88	6.31	0.86	9.27	0.88
	R11	Unknown	25.99	279.79	24.86	267.58	0.96	20.12	4.73	50.96	0.81
	R12	Unknown	11.67	125.61	9.83	105.78	0.84	8.10	1.72	18.56	0.82
	R13	Unknown	25.27	271.96	23.48	252.77	0.93	15.52	7.97	85.74	0.66
	R14	Unknown	27.56	296.70	26.18	281.79	0.95	18.73	7.45	80.17	0.72
	R15	Unknown	10.50	112.97	8.74	94.07	0.83	7.51	1.23	13.24	0.86
	R16	Unknown	10.08	108.52	9.44	101.58	0.94	7.61	1.83	19.66	0.81
	R17	Unknown	24.75	266.45	21.41	230.49	0.87	17.62	3.79	40.79	0.82
	R18	Unknown	26.36	283.70	24.76	266.53	0.94	17.50	7.26	78.16	0.71
	R19	Unknown	7.96	85.64	5.14	55.34	0.65	4.57	0.57	6.19	0.89
	R20	Unknown	12.80	137.75	10.28	110.68	0.80	7.99	2.29	24.65	0.78
	R21	Unknown	11.30	121.66	11.10	119.52	0.98	9.86	1.24	13.35	0.89
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	4.72	0.91	9.80	0.84

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R23	Unknown	25.11	270.25	18.86	203.04	0.75	9.76	9.10	97.94	0.52
	R24	Unknown	19.79	213.00	14.65	157.67	0.74	8.07	6.57	70.77	0.55
	R25	Unknown	12.36	133.02	3.64	39.17	0.29	2.68	0.96	10.37	0.74
	R26	Unknown	8.40	90.45	3.28	35.32	0.39	2.74	0.54	5.80	0.84
	R27	Unknown	25.06	269.76	19.97	214.96	0.80	19.97	0.00	0.00	1.00
Third	R1	Unknown	29.65	319.14	17.35	186.77	0.59	11.28	6.07	65.34	0.65
	R2	Unknown	28.39	305.58	22.57	242.93	0.79	17.17	5.40	58.07	0.76
	R3	Unknown	22.02	237.05	21.92	235.90	1.00	19.41	2.51	27.02	0.89
	R4	Unknown	11.03	118.78	9.75	104.95	0.88	7.41	2.34	25.19	0.76
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.47	0.64	6.90	0.87
	R6	Unknown	20.46	220.27	20.29	218.42	0.99	20.24	0.06	0.60	1.00
	R7	Unknown	8.99	96.75	5.74	61.75	0.64	5.55	0.19	2.01	0.97
	R8	Unknown	10.70	115.13	7.10	76.48	0.66	6.44	0.67	7.20	0.91
	R9	Unknown	13.33	143.51	10.01	107.78	0.75	9.12	0.89	9.58	0.91
	R10	Unknown	8.13	87.51	7.16	77.07	0.88	6.20	0.96	10.37	0.87
	R11	Unknown	25.99	279.79	24.78	266.78	0.95	19.99	4.80	51.66	0.81
	R12	Unknown	11.67	125.61	9.88	106.37	0.85	8.32	1.57	16.86	0.84
	R13	Unknown	25.73	276.94	24.12	259.63	0.94	16.36	7.76	83.57	0.68
	R14	Unknown	27.56	296.70	26.20	281.97	0.95	18.79	7.41	79.71	0.72
	R15	Unknown	10.50	112.97	8.73	94.01	0.83	7.50	1.24	13.31	0.86
	R16	Unknown	10.08	108.52	9.40	101.23	0.93	7.59	1.82	19.55	0.81
	R17	Unknown	24.75	266.45	21.59	232.41	0.87	17.91	3.69	39.67	0.83
	R18	Unknown	26.36	283.70	24.80	266.96	0.94	17.55	7.25	78.02	0.71
	R19	Unknown	7.96	85.64	5.23	56.33	0.66	4.73	0.50	5.42	0.90
	R20	Unknown	12.80	137.75	10.20	109.78	0.80	7.87	2.33	25.10	0.77
	R21	Unknown	11.30	121.66	11.15	120.05	0.99	9.98	1.17	12.60	0.90
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	4.60	0.99	10.71	0.82
	R23	Unknown	25.11	270.25	18.76	201.92	0.75	9.63	9.13	98.27	0.51
	R24	Unknown	19.90	214.20	14.81	159.44	0.74	8.30	6.51	70.10	0.56
	R25	Unknown	12.36	133.02	3.76	40.47	0.30	2.85	0.91	9.83	0.76
	R26	Unknown	8.40	90.45	3.18	34.26	0.38	2.68	0.51	5.46	0.84
	R27	Unknown	25.06	269.76	21.28	229.07	0.85	21.28	0.00	0.00	1.00
Fourth	R1	Unknown	29.65	319.14	17.38	187.04	0.59	11.37	6.00	64.61	0.65
	R2	Unknown	28.39	305.58	22.95	247.06	0.81	17.59	5.37	57.77	0.77
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.42	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	9.79	105.42	0.89	7.51	2.29	24.62	0.77
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.48	0.63	6.79	0.88
	R6	Unknown	20.46	220.27	20.30	218.52	0.99	20.25	0.05	0.52	1.00
	R7	Unknown	8.99	96.75	5.87	63.18	0.65	5.72	0.15	1.64	0.97
	R8	Unknown	10.70	115.13	7.20	77.49	0.67	6.62	0.58	6.28	0.92
	R9	Unknown	13.33	143.51	10.02	107.85	0.75	9.13	0.89	9.60	0.91
	R10	Unknown	8.13	87.51	7.16	77.08	0.88	6.22	0.94	10.16	0.87
	R11	Unknown	25.99	279.79	24.83	267.30	0.96	20.01	4.82	51.87	0.81
	R12	Unknown	11.67	125.61	9.90	106.52	0.85	8.35	1.55	16.65	0.84
	R13	Unknown	25.27	271.96	23.69	255.04	0.94	15.96	7.74	83.26	0.67
	R14	Unknown	27.56	296.70	26.20	281.99	0.95	18.79	7.41	79.76	0.72
	R15	Unknown	10.50	112.97	8.78	94.52	0.84	7.56	1.22	13.14	0.86
	R16	Unknown	10.08	108.52	9.42	101.43	0.93	7.64	1.78	19.16	0.81
	R17	Unknown	24.75	266.45	21.59	232.44	0.87	17.93	3.67	39.49	0.83
	R18	Unknown	26.36	283.70	24.80	266.99	0.94	17.57	7.24	77.91	0.71
	R19	Unknown	7.96	85.64	5.26	56.59	0.66	4.75	0.50	5.41	0.90
	R20	Unknown	12.80	137.75	10.22	110.05	0.80	7.96	2.26	24.35	0.78
	R21	Unknown	11.30	121.66	11.16	120.10	0.99	9.99	1.17	12.54	0.90
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	4.63	0.96	10.33	0.83
	R23	Unknown	25.11	270.25	18.77	202.09	0.75	9.69	9.08	97.76	0.52
	R24	Unknown	19.90	214.20	14.85	159.87	0.75	8.41	6.44	69.33	0.57
	R25	Unknown	12.36	133.02	3.80	40.88	0.31	2.94	0.86	9.25	0.77
	R26	Unknown	8.40	90.45	3.20	34.47	0.38	2.72	0.48	5.16	0.85
	R27	Unknown	25.06	269.76	22.68	244.11	0.90	22.68	0.00	0.01	1.00
Fifth	R1	Unknown	29.65	319.14	17.42	187.56	0.59	11.45	5.97	64.28	0.66
	R2	Unknown	28.39	305.58	23.26	250.35	0.82	18.01	5.24	56.45	0.77
	R3	Unknown	22.02	237.05	21.84	235.10	0.99	19.31	2.53	27.23	0.88

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R4	Unknown	11.03	118.78	9.84	105.96	0.89	7.64	2.20	23.68	0.78
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.50	0.61	6.57	0.88
	R6	Unknown	20.46	220.27	20.33	218.81	0.99	20.29	0.03	0.36	1.00
	R7	Unknown	8.99	96.75	6.03	64.89	0.67	5.89	0.14	1.52	0.98
	R8	Unknown	10.70	115.13	7.35	79.09	0.69	6.82	0.53	5.67	0.93
	R9	Unknown	13.33	143.51	10.02	107.88	0.75	9.13	0.89	9.62	0.91
	R10	Unknown	8.13	87.51	7.16	77.08	0.88	6.25	0.91	9.78	0.87
	R11	Unknown	25.99	279.79	24.95	268.55	0.96	20.14	4.81	51.73	0.81
	R12	Unknown	11.67	125.61	9.92	106.78	0.85	8.45	1.47	15.87	0.85
	R13	Unknown	25.27	271.96	23.71	255.18	0.94	15.96	7.75	83.40	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.80	7.40	79.69	0.72
	R15	Unknown	10.50	112.97	8.90	95.80	0.85	7.70	1.20	12.93	0.86
	R16	Unknown	10.08	108.52	9.51	102.41	0.94	7.78	1.73	18.62	0.82
	R17	Unknown	24.75	266.45	21.43	230.66	0.87	17.67	3.76	40.46	0.82
	R18	Unknown	26.36	283.70	24.81	267.05	0.94	17.56	7.25	78.07	0.71
	R19	Unknown	7.96	85.64	5.27	56.70	0.66	4.75	0.52	5.62	0.90
	R20	Unknown	12.80	137.75	10.48	112.77	0.82	8.31	2.16	23.30	0.79
	R21	Unknown	11.30	121.66	11.12	119.71	0.98	9.93	1.19	12.85	0.89
	R22	Unknown	7.90	85.02	5.59	60.21	0.71	4.67	0.93	9.97	0.83
	R23	Unknown	25.11	270.25	18.86	203.01	0.75	9.81	9.05	97.46	0.52
	R24	Unknown	19.90	214.20	14.86	159.97	0.75	8.51	6.35	68.37	0.57
	R25	Unknown	12.36	133.02	3.82	41.10	0.31	2.99	0.83	8.88	0.78
	R26	Unknown	8.40	90.45	3.33	35.80	0.40	2.86	0.47	5.04	0.86
	R27	Unknown	25.06	269.76	23.13	248.92	0.92	23.13	0.00	0.00	1.00
Sixth	R1	Unknown	29.65	319.14	17.57	189.16	0.59	11.68	5.89	63.44	0.66
	R2	Unknown	28.39	305.58	23.35	251.33	0.82	18.09	5.26	56.66	0.77
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	9.97	107.27	0.90	7.81	2.16	23.23	0.78
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.51	0.60	6.42	0.88
	R6	Unknown	20.46	220.27	20.38	219.37	1.00	20.37	0.01	0.06	1.00
	R7	Unknown	8.99	96.75	6.13	65.97	0.68	6.04	0.08	0.91	0.99
	R8	Unknown	10.70	115.13	7.42	79.88	0.69	6.94	0.48	5.14	0.94
	R9	Unknown	13.33	143.51	9.99	107.54	0.75	9.04	0.95	10.22	0.90
	R10	Unknown	8.13	87.51	7.17	77.20	0.88	6.47	0.70	7.52	0.90
	R11	Unknown	25.99	279.79	25.06	269.78	0.96	20.41	4.65	50.07	0.81
	R12	Unknown	11.67	125.61	9.91	106.68	0.85	8.36	1.55	16.67	0.84
	R13	Unknown	25.27	271.96	23.53	253.32	0.93	15.70	7.84	84.37	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.83	7.38	79.40	0.72
	R15	Unknown	10.50	112.97	9.08	97.79	0.87	7.93	1.15	12.40	0.87
	R16	Unknown	10.08	108.52	9.58	103.14	0.95	7.99	1.59	17.14	0.83
	R17	Unknown	24.75	266.45	21.46	231.00	0.87	17.68	3.78	40.68	0.82
	R18	Unknown	26.36	283.70	24.83	267.30	0.94	17.66	7.17	77.19	0.71
	R19	Unknown	7.96	85.64	5.51	59.36	0.69	5.09	0.42	4.54	0.92
	R20	Unknown	12.80	137.75	10.40	111.92	0.81	8.20	2.20	23.66	0.79
	R21	Unknown	11.30	121.66	11.17	120.24	0.99	10.05	1.12	12.10	0.90
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	4.86	0.77	8.24	0.86
	R23	Unknown	25.11	270.25	18.78	202.13	0.75	9.80	8.98	96.68	0.52
	R24	Unknown	19.90	214.20	14.87	160.04	0.75	8.62	6.25	67.27	0.58
	R25	Unknown	12.36	133.02	3.96	42.64	0.32	3.19	0.77	8.32	0.80
	R26	Unknown	8.40	90.45	3.21	34.57	0.38	2.78	0.43	4.67	0.86
	R27	Unknown	25.06	269.76	23.41	252.03	0.93	23.41	0.00	0.00	1.00
Seventh	R1	Unknown	29.65	319.14	17.64	189.90	0.60	11.87	5.77	62.09	0.67
	R2	Unknown	28.39	305.58	23.47	252.61	0.83	18.26	5.21	56.04	0.78
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.06	108.28	0.91	7.98	2.08	22.37	0.79
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.59	0.52	5.55	0.90
	R6	Unknown	20.46	220.27	20.38	219.38	1.00	20.38	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	6.42	69.07	0.71	6.34	0.08	0.85	0.99
	R8	Unknown	10.70	115.13	7.67	82.55	0.72	7.24	0.43	4.59	0.94
	R9	Unknown	13.33	143.51	9.99	107.55	0.75	9.05	0.94	10.13	0.91
	R10	Unknown	8.13	87.51	7.18	77.27	0.88	6.52	0.66	7.14	0.91
	R11	Unknown	25.99	279.79	25.06	269.80	0.96	20.42	4.65	50.04	0.81

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R12	Unknown	11.67	125.61	9.96	107.23	0.85	8.52	1.44	15.50	0.86
	R13	Unknown	25.27	271.96	23.55	253.49	0.93	15.75	7.80	83.94	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.84	7.36	79.24	0.72
	R15	Unknown	10.50	112.97	9.21	99.12	0.88	8.12	1.09	11.70	0.88
	R16	Unknown	10.08	108.52	9.62	103.53	0.95	8.13	1.49	16.01	0.85
	R17	Unknown	24.75	266.45	21.45	230.91	0.87	17.72	3.73	40.20	0.83
	R18	Unknown	26.36	283.70	24.85	267.49	0.94	17.63	7.22	77.74	0.71
	R19	Unknown	7.96	85.64	5.61	60.43	0.71	5.21	0.40	4.35	0.93
	R20	Unknown	12.80	137.75	10.51	113.12	0.82	8.40	2.11	22.74	0.80
	R21	Unknown	11.30	121.66	11.17	120.26	0.99	10.09	1.09	11.70	0.90
	R22	Unknown	7.90	85.02	5.63	60.59	0.71	4.92	0.71	7.62	0.87
	R23	Unknown	25.11	270.25	18.78	202.13	0.75	9.81	8.96	96.49	0.52
	R24	Unknown	19.90	214.20	14.86	159.95	0.75	8.75	6.11	65.79	0.59
	R25	Unknown	12.36	133.02	4.06	43.67	0.33	3.32	0.74	7.95	0.82
	R26	Unknown	8.40	90.45	3.22	34.67	0.38	2.84	0.38	4.10	0.88
	R27	Unknown	25.06	269.76	23.58	253.82	0.94	23.57	0.01	0.10	1.00
Eighth	R1	Unknown	29.65	319.14	17.78	191.34	0.60	12.15	5.62	60.51	0.68
	R2	Unknown	28.39	305.58	23.62	254.29	0.83	18.52	5.10	54.95	0.78
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.15	109.25	0.92	8.20	1.95	21.02	0.81
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.61	0.50	5.38	0.90
	R6	Unknown	20.46	220.27	20.44	219.97	1.00	20.44	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	6.84	73.58	0.76	6.78	0.06	0.65	0.99
	R8	Unknown	10.70	115.13	7.83	84.30	0.73	7.44	0.39	4.25	0.95
	R9	Unknown	13.33	143.51	10.00	107.59	0.75	9.05	0.95	10.21	0.91
	R10	Unknown	8.13	87.51	7.21	77.61	0.89	6.62	0.59	6.30	0.92
	R11	Unknown	25.99	279.79	25.07	269.82	0.96	20.44	4.63	49.85	0.82
	R12	Unknown	11.67	125.61	10.02	107.90	0.86	8.73	1.30	13.94	0.87
	R13	Unknown	25.27	271.96	23.58	253.80	0.93	15.74	7.84	84.35	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.86	7.34	79.01	0.72
	R15	Unknown	10.50	112.97	9.43	101.55	0.90	8.43	1.01	10.82	0.89
	R16	Unknown	10.08	108.52	9.63	103.69	0.96	8.22	1.41	15.23	0.85
	R17	Unknown	24.75	266.45	21.49	231.27	0.87	17.76	3.73	40.10	0.83
	R18	Unknown	26.36	283.70	24.85	267.49	0.94	17.64	7.21	77.65	0.71
	R19	Unknown	7.96	85.64	5.80	62.47	0.73	5.44	0.36	3.87	0.94
	R20	Unknown	12.80	137.75	10.73	115.46	0.84	8.69	2.03	21.90	0.81
	R21	Unknown	11.30	121.66	11.17	120.27	0.99	10.11	1.07	11.50	0.90
	R22	Unknown	7.90	85.02	5.64	60.70	0.71	5.01	0.63	6.80	0.89
	R23	Unknown	25.11	270.25	18.80	202.40	0.75	9.98	8.83	95.01	0.53
	R24	Unknown	19.90	214.20	14.87	160.02	0.75	8.91	5.96	64.15	0.60
	R25	Unknown	12.36	133.02	4.13	44.44	0.33	3.43	0.70	7.52	0.83
	R26	Unknown	8.40	90.45	3.28	35.26	0.39	2.93	0.34	3.68	0.90
	R27	Unknown	25.06	269.76	23.75	255.69	0.95	23.71	0.04	0.45	1.00
Ninth	R1	Unknown	29.65	319.14	17.93	193.03	0.60	12.56	5.38	57.87	0.70
	R2	Unknown	28.39	305.58	23.84	256.57	0.84	18.95	4.88	52.54	0.80
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.43	2.49	26.82	0.89
	R4	Unknown	11.03	118.78	10.20	109.74	0.92	8.40	1.79	19.31	0.82
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.63	0.48	5.19	0.91
	R6	Unknown	20.46	220.27	20.46	220.22	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.30	78.56	0.81	7.21	0.09	0.98	0.99
	R8	Unknown	10.70	115.13	8.07	86.85	0.75	7.76	0.31	3.33	0.96
	R9	Unknown	13.33	143.51	10.01	107.75	0.75	9.11	0.90	9.72	0.91
	R10	Unknown	8.13	87.51	7.24	77.95	0.89	6.81	0.43	4.59	0.94
	R11	Unknown	25.99	279.79	25.07	269.83	0.96	20.48	4.59	49.37	0.82
	R12	Unknown	11.67	125.61	10.12	108.95	0.87	8.92	1.20	12.96	0.88
	R13	Unknown	25.27	271.96	23.65	254.57	0.94	15.81	7.84	84.34	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.92	7.28	78.38	0.72
	R15	Unknown	10.50	112.97	9.62	103.50	0.92	8.69	0.93	9.97	0.90
	R16	Unknown	10.08	108.52	9.63	103.70	0.96	8.32	1.32	14.16	0.86
	R17	Unknown	24.75	266.45	21.54	231.81	0.87	17.81	3.72	40.05	0.83
	R18	Unknown	26.36	283.70	24.85	267.44	0.94	17.69	7.15	76.98	0.71
	R19	Unknown	7.96	85.64	6.06	65.28	0.76	5.78	0.29	3.11	0.95

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R20	Unknown	12.80	137.75	10.91	117.42	0.85	8.97	1.94	20.85	0.82
	R21	Unknown	11.30	121.66	11.17	120.27	0.99	10.19	0.98	10.58	0.91
	R22	Unknown	7.90	85.02	5.67	61.08	0.72	5.10	0.57	6.18	0.90
	R23	Unknown	25.11	270.25	18.78	202.16	0.75	10.12	8.66	93.26	0.54
	R24	Unknown	19.90	214.20	14.86	160.00	0.75	9.11	5.76	61.98	0.61
	R25	Unknown	12.36	133.02	4.28	46.07	0.35	3.64	0.64	6.92	0.85
	R26	Unknown	8.40	90.45	3.38	36.35	0.40	3.08	0.29	3.16	0.91
	R27	Unknown	25.06	269.76	23.84	256.65	0.95	23.73	0.12	1.27	1.00
Tenth	R1	Unknown	29.65	319.14	18.29	196.85	0.62	13.37	4.92	52.92	0.73
	R2	Unknown	28.39	305.58	24.16	260.10	0.85	19.67	4.50	48.39	0.81
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.41	2.51	27.01	0.89
	R4	Unknown	11.03	118.78	10.21	109.89	0.93	8.56	1.65	17.72	0.84
	R5	Unknown	5.62	60.50	5.11	54.99	0.91	4.65	0.46	4.99	0.91
	R6	Unknown	20.46	220.27	20.46	220.24	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.62	82.03	0.85	7.57	0.05	0.50	0.99
	R8	Unknown	10.69	115.09	8.33	89.68	0.78	8.07	0.26	2.85	0.97
	R9	Unknown	13.33	143.51	10.03	108.01	0.75	9.17	0.86	9.31	0.91
	R10	Unknown	8.13	87.51	7.34	78.96	0.90	7.00	0.34	3.64	0.95
	R11	Unknown	25.99	279.79	25.09	270.03	0.97	20.55	4.54	48.87	0.82
	R12	Unknown	11.67	125.61	10.18	109.54	0.87	9.14	1.03	11.11	0.90
	R13	Unknown	25.27	271.96	23.73	255.40	0.94	15.89	7.84	84.36	0.67
	R14	Unknown	27.56	296.70	26.20	282.04	0.95	18.94	7.26	78.13	0.72
	R15	Unknown	10.50	112.97	9.77	105.13	0.93	8.95	0.82	8.80	0.92
	R16	Unknown	10.08	108.52	9.64	103.72	0.96	8.46	1.17	12.61	0.88
	R17	Unknown	24.75	266.45	21.69	233.42	0.88	17.96	3.73	40.14	0.83
	R18	Unknown	26.36	283.70	24.84	267.33	0.94	17.71	7.12	76.67	0.71
	R19	Unknown	7.96	85.64	6.37	68.61	0.80	6.13	0.24	2.63	0.96
	R20	Unknown	12.80	137.75	11.10	119.44	0.87	9.28	1.82	19.59	0.84
	R21	Unknown	11.30	121.66	11.17	120.28	0.99	10.25	0.93	9.98	0.92
	R22	Unknown	7.90	85.02	5.78	62.23	0.73	5.28	0.50	5.37	0.91
	R23	Unknown	25.11	270.25	18.81	202.42	0.75	10.30	8.50	91.51	0.55
	R24	Unknown	19.90	214.20	14.93	160.73	0.75	9.38	5.56	59.80	0.63
	R25	Unknown	12.36	133.02	4.59	49.41	0.37	3.99	0.60	6.42	0.87
	R26	Unknown	8.40	90.45	3.68	39.64	0.44	3.45	0.24	2.54	0.94
	R27	Unknown	25.06	269.76	24.02	258.50	0.96	23.77	0.25	2.69	0.99
Eleventh	R1	Unknown	29.65	319.14	18.78	202.16	0.63	14.60	4.18	45.00	0.78
	R2	Unknown	28.39	305.58	24.73	266.19	0.87	20.93	3.80	40.86	0.85
	R3	Unknown	22.02	237.05	21.92	235.91	1.00	19.97	1.95	21.00	0.91
	R4	Unknown	11.03	118.78	10.21	109.92	0.93	8.72	1.49	16.08	0.85
	R5	Unknown	5.62	60.50	5.11	55.01	0.91	4.71	0.40	4.31	0.92
	R6	Unknown	20.46	220.27	20.46	220.25	1.00	20.46	0.00	0.00	1.00
	R7	Unknown	8.99	96.75	7.96	85.63	0.89	7.92	0.03	0.34	1.00
	R8	Unknown	10.69	115.09	8.54	91.95	0.80	8.26	0.28	3.06	0.97
	R9	Unknown	13.33	143.51	10.14	109.13	0.76	9.34	0.79	8.55	0.92
	R10	Unknown	8.13	87.51	7.27	78.27	0.89	6.57	0.70	7.54	0.90
	R11	Unknown	25.99	279.79	25.23	271.60	0.97	20.63	4.60	49.52	0.82
	R12	Unknown	11.67	125.61	11.11	119.56	0.95	10.63	0.47	5.10	0.96
	R13	Unknown	25.27	271.96	24.01	258.42	0.95	16.19	7.82	84.14	0.67
	R14	Unknown	27.56	296.70	26.36	283.72	0.96	19.19	7.17	77.13	0.73
	R15	Unknown	10.50	112.97	10.27	110.58	0.98	10.03	0.24	2.64	0.98
	R16	Unknown	10.08	108.52	9.82	105.71	0.97	9.67	0.15	1.65	0.98
	R17	Unknown	24.75	266.45	22.27	239.77	0.90	18.55	3.73	40.11	0.83
	R18	Unknown	26.36	283.70	25.02	269.33	0.95	18.03	6.99	75.27	0.72
	R19	Unknown	7.96	85.64	6.66	71.69	0.84	6.41	0.25	2.70	0.96
	R20	Unknown	12.80	137.75	11.30	121.60	0.88	9.59	1.71	18.38	0.85
	R21	Unknown	11.30	121.66	11.17	120.28	0.99	10.40	0.77	8.32	0.93
	R22	Unknown	7.90	85.02	6.15	66.18	0.78	5.71	0.44	4.76	0.93
	R23	Unknown	25.11	270.25	18.77	202.06	0.75	10.59	8.18	88.09	0.56
	R24	Unknown	19.90	214.20	15.10	162.49	0.76	9.76	5.34	57.46	0.65
	R25	Unknown	12.36	133.02	5.38	57.88	0.44	4.77	0.61	6.58	0.89
	R26	Unknown	8.40	90.45	4.28	46.07	0.51	4.07	0.21	2.28	0.95
	R27	Unknown	25.06	269.76	24.44	263.06	0.98	24.44	0.00	0.03	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
Twelfth	R1	Unknown	29.65	319.14	19.90	214.21	0.67	17.02	2.88	31.02	0.86
	R2	Unknown	28.39	305.58	25.86	278.36	0.91	22.98	2.88	31.03	0.89
	R3	Unknown	22.02	237.05	21.85	235.14	0.99	20.88	0.97	10.40	0.96
	R4	Unknown	11.03	118.78	10.21	109.94	0.93	8.85	1.37	14.70	0.87
	R5	Unknown	5.62	60.50	5.21	56.10	0.93	4.86	0.35	3.81	0.93
	R6	Unknown	20.46	220.27	20.44	219.97	1.00	20.43	0.01	0.07	1.00
	R7	Unknown	8.99	96.75	8.33	89.68	0.93	8.31	0.03	0.29	1.00
	R8	Unknown	10.69	115.09	8.75	94.16	0.82	8.57	0.18	1.96	0.98
	R9	Unknown	13.33	143.51	11.34	122.06	0.85	10.43	0.91	9.76	0.92
	R10	Unknown	27.10	291.65	26.86	289.12	0.99	22.49	4.37	46.99	0.84
	R11	Unknown	8.91	95.96	8.63	92.91	0.97	7.88	0.76	8.14	0.91
	R12	Unknown	13.70	147.44	13.15	141.58	0.96	11.73	1.42	15.31	0.89
	R13	Unknown	22.45	241.61	21.83	234.92	0.97	17.47	4.35	46.85	0.80
	R14	Unknown	24.70	265.89	24.15	259.94	0.98	18.66	5.49	59.11	0.77
	R15	Unknown	12.30	132.40	11.86	127.69	0.96	10.49	1.37	14.76	0.88
	R16	Unknown	11.83	127.36	11.40	122.67	0.96	9.72	1.68	18.10	0.85
	R17	Unknown	21.97	236.46	20.41	219.66	0.93	17.73	2.68	28.84	0.87
	R18	Unknown	23.60	254.00	22.61	243.35	0.96	18.33	4.28	46.03	0.81
	R19	Unknown	7.96	85.64	6.86	73.82	0.86	6.62	0.24	2.57	0.97
	R20	Unknown	12.80	137.75	11.19	120.44	0.87	9.86	1.33	14.30	0.88
	R21	Unknown	11.30	121.66	10.53	113.36	0.93	8.96	1.57	16.95	0.85
	R22	Unknown	7.90	85.02	6.95	74.85	0.88	6.49	0.47	5.03	0.93
	R23	Unknown	25.11	270.25	19.69	211.95	0.78	11.97	7.72	83.13	0.61
	R24	Unknown	19.90	214.20	15.40	165.73	0.77	10.21	5.18	55.79	0.66
	R25	Unknown	21.49	231.34	21.41	230.41	1.00	21.41	0.00	0.00	1.00
Thirteenth	R1	Unknown	15.36	165.35	5.22	56.20	0.34	5.20	0.02	0.18	1.00
	R2	Unknown	15.71	169.15	13.95	150.19	0.89	13.95	0.00	0.04	1.00
	R3	Unknown	13.00	139.88	12.66	136.24	0.97	11.35	1.31	14.12	0.90
	R4	Unknown	5.50	59.23	4.97	53.46	0.90	4.32	0.65	6.97	0.87
	R5	Unknown	22.20	238.94	21.62	232.68	0.97	19.84	1.78	19.15	0.92
	R6	Unknown	11.33	122.00	10.99	118.27	0.97	10.36	0.63	6.74	0.94
	R7	Unknown	20.60	221.74	19.93	214.53	0.97	17.46	2.47	26.56	0.88
	R8	Unknown	22.87	246.18	22.17	238.67	0.97	18.36	3.81	41.06	0.83
	R9	Unknown	10.50	112.97	10.05	108.20	0.96	9.36	0.69	7.47	0.93
	R10	Unknown	10.08	108.52	9.64	103.72	0.96	8.52	1.12	12.00	0.88
	R11	Unknown	20.15	216.92	19.20	206.63	0.95	17.36	1.84	19.81	0.90
	R12	Unknown	21.47	231.15	20.59	221.59	0.96	17.70	2.88	31.02	0.86
	R13	Unknown	6.48	69.78	5.99	64.43	0.92	5.87	0.11	1.24	0.98
	R14	Unknown	11.07	119.11	10.17	109.51	0.92	9.37	0.80	8.60	0.92
	R15	Unknown	7.70	82.91	7.13	76.74	0.93	6.96	0.17	1.78	0.98
	R16	Unknown	4.36	46.96	4.27	45.98	0.98	4.26	0.01	0.08	1.00
	R17	Unknown	17.27	185.94	16.56	178.25	0.96	14.10	2.46	26.52	0.85
	R18	Unknown	19.90	214.20	15.80	170.04	0.79	11.36	4.43	47.72	0.72
	R19	Unknown	21.49	231.34	21.35	229.81	0.99	21.35	0.00	0.02	1.00
Fourteenth	R1	Unknown	15.36	165.35	6.70	72.07	0.44	6.70	0.00	0.01	1.00
	R2	Unknown	15.71	169.15	14.32	154.14	0.91	14.31	0.01	0.10	1.00
	R3	Unknown	26.73	287.73	25.84	278.10	0.97	24.34	1.49	16.08	0.94
	R4	Unknown	6.54	70.42	6.45	69.41	0.99	6.44	0.01	0.06	1.00
	R5	Unknown	16.73	180.12	13.12	141.19	0.78	12.68	0.43	4.65	0.97
	R6	Unknown	5.56	59.87	5.01	53.92	0.90	4.65	0.36	3.86	0.93
	R7	Unknown	17.44	187.78	17.08	183.86	0.98	16.47	0.61	6.54	0.96
	R8	Unknown	8.08	86.94	7.75	83.43	0.96	7.59	0.16	1.73	0.98
	R9	Unknown	18.85	202.95	18.43	198.42	0.98	16.97	1.46	15.74	0.92
	R10	Unknown	16.19	174.24	15.84	170.53	0.98	13.52	2.32	25.01	0.85
	R11	Unknown	9.48	102.06	8.79	94.59	0.93	8.62	0.16	1.75	0.98
	R12	Unknown	9.31	100.22	8.89	95.69	0.95	8.77	0.12	1.35	0.99
	R13	Unknown	18.39	197.90	17.97	193.46	0.98	16.57	1.40	15.05	0.92
	R14	Unknown	17.91	192.75	17.73	190.87	0.99	15.93	1.81	19.43	0.90
	R15	Unknown	5.08	54.69	4.63	49.89	0.91	4.63	0.00	0.00	1.00
	R16	Unknown	8.93	96.12	8.59	92.48	0.96	8.42	0.17	1.84	0.98
	R17	Unknown	10.55	113.58	9.93	106.87	0.94	9.60	0.33	3.54	0.97
	R18	Unknown	22.22	239.21	21.92	236.00	0.99	19.57	2.36	25.36	0.89

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R19	Unknown	19.78	212.93	16.59	178.54	0.84	13.65	2.94	31.65	0.82
	R20	Unknown	21.49	231.34	21.38	230.18	0.99	21.38	0.00	0.02	1.00
Fifteenth	R1	Unknown	21.54	231.89	21.51	231.48	1.00	21.45	0.05	0.56	1.00
	R2	Unknown	7.96	85.71	7.61	81.96	0.96	4.91	2.70	29.09	0.65
	R3	Unknown	14.51	156.21	13.73	147.81	0.95	10.26	3.47	37.38	0.75
	R4	Unknown	6.54	70.42	6.54	70.42	1.00	6.54	0.00	0.00	1.00
	R5	Unknown	16.73	180.12	13.12	141.20	0.78	12.90	0.22	2.37	0.98
	R6	Unknown	5.56	59.87	5.05	54.38	0.91	4.87	0.18	1.96	0.96
	R7	Unknown	17.44	187.78	16.99	182.84	0.97	16.58	0.41	4.37	0.98
	R8	Unknown	8.08	86.94	7.73	83.20	0.96	7.59	0.14	1.46	0.98
	R9	Unknown	18.85	202.95	18.40	198.04	0.98	17.26	1.14	12.24	0.94
	R10	Unknown	16.19	174.24	15.92	171.41	0.98	14.26	1.67	17.93	0.90
	R11	Unknown	9.48	102.06	8.82	94.89	0.93	8.69	0.12	1.31	0.99
	R12	Unknown	9.31	100.22	8.85	95.31	0.95	8.69	0.16	1.74	0.98
	R13	Unknown	18.37	197.71	17.89	192.58	0.97	16.78	1.11	11.94	0.94
	R14	Unknown	17.91	192.75	17.70	190.56	0.99	16.33	1.38	14.81	0.92
	R15	Unknown	5.08	54.69	4.58	49.34	0.90	4.57	0.01	0.14	1.00
	R16	Unknown	8.93	96.12	8.52	91.74	0.95	8.29	0.23	2.46	0.97
	R17	Unknown	10.55	113.58	9.92	106.81	0.94	9.68	0.24	2.61	0.98
	R18	Unknown	19.98	215.11	19.40	208.86	0.97	13.43	5.97	64.28	0.69
	R19	Unknown	15.97	171.92	15.90	171.13	1.00	15.71	0.18	1.98	0.99
Sixteenth	R1	Unknown	21.54	231.89	21.41	230.40	0.99	21.36	0.05	0.53	1.00
	R2	Unknown	7.96	85.71	7.55	81.30	0.95	4.87	2.68	28.88	0.64
	R3	Unknown	14.51	156.21	13.79	148.42	0.95	10.40	3.39	36.47	0.75
	R4	Unknown	6.54	70.42	6.45	69.45	0.99	6.45	0.01	0.06	1.00
	R5	Unknown	16.73	180.12	13.13	141.30	0.78	12.93	0.20	2.15	0.98
	R6	Unknown	5.56	59.87	5.06	54.45	0.91	4.95	0.11	1.13	0.98
	R7	Unknown	17.44	187.78	16.99	182.93	0.97	16.71	0.28	3.01	0.98
	R8	Unknown	10.70	115.22	10.19	109.70	0.95	10.03	0.16	1.74	0.98
	R9	Unknown	8.17	87.95	7.87	84.70	0.96	7.87	0.00	0.02	1.00
	R10	Unknown	27.80	299.20	27.76	298.85	1.00	27.76	0.00	0.03	1.00
	R11	Unknown	15.97	171.92	15.92	171.40	1.00	15.92	0.01	0.08	1.00
Seventeenth	R1	Unknown	21.54	231.89	21.39	230.21	0.99	21.33	0.06	0.60	1.00
	R2	Unknown	7.96	85.71	7.55	81.31	0.95	5.00	2.56	27.51	0.66
	R3	Unknown	14.51	156.21	13.79	148.44	0.95	10.49	3.30	35.52	0.76
	R4	Unknown	6.54	70.42	6.44	69.35	0.98	6.44	0.01	0.07	1.00
	R5	Unknown	13.57	146.08	13.06	140.55	0.96	12.73	0.33	3.56	0.97
Eighteenth	R1	Unknown	21.54	231.89	21.47	231.12	1.00	21.44	0.03	0.34	1.00
	R2	Unknown	7.98	85.94	7.63	82.13	0.96	5.27	2.36	25.42	0.69
	R3	Unknown	13.83	148.82	13.53	145.64	0.98	13.32	0.21	2.23	0.98
	R4	Unknown	10.46	112.59	10.27	110.53	0.98	10.01	0.25	2.73	0.98
	R5	Unknown	10.68	114.94	10.28	110.61	0.96	9.26	1.01	10.89	0.90
	R6	Unknown	13.21	142.15	11.53	124.10	0.87	8.74	2.79	30.03	0.76
	R7	Unknown	13.57	146.08	13.06	140.62	0.96	12.74	0.33	3.53	0.97
The Hallmark											
Ground	R1	Unknown	71.71	771.91	66.89	720.00	0.93	60.84	6.05	65.14	0.91
First	R1	Unknown	8.23	88.63	8.07	86.87	0.98	7.68	0.39	4.17	0.95
	R2	Unknown	20.56	221.26	20.19	217.30	0.98	19.02	1.17	12.58	0.94
	R3	Unknown	9.36	100.73	6.88	74.04	0.74	6.40	0.48	5.13	0.93
	R4	Unknown	24.63	265.08	2.47	26.55	0.10	2.47	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.20	2.15	0.02	0.20	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	5.98	64.36	0.62	5.02	0.96	10.32	0.84
	R7	Unknown	19.80	213.16	18.04	194.19	0.91	15.31	2.73	29.36	0.85
	R8	Unknown	11.26	121.21	10.45	112.48	0.93	9.57	0.88	9.46	0.92
	R9	Unknown	9.58	103.09	8.94	96.18	0.93	8.37	0.56	6.06	0.94
	R10	Unknown	19.05	205.00	18.60	200.18	0.98	17.68	0.92	9.92	0.95
Second	R1	Unknown	8.23	88.63	8.07	86.87	0.98	7.72	0.35	3.81	0.96
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	19.02	1.17	12.55	0.94
	R3	Unknown	9.36	100.73	7.23	77.79	0.77	6.75	0.48	5.12	0.93
	R4	Unknown	24.63	265.08	2.50	26.89	0.10	2.50	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.34	3.68	0.03	0.34	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	5.98	64.42	0.62	5.00	0.99	10.64	0.83

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R7	Unknown	19.80	213.16	18.48	198.95	0.93	15.72	2.76	29.74	0.85
	R8	Unknown	11.26	121.21	10.08	108.53	0.90	9.17	0.91	9.78	0.91
	R9	Unknown	9.58	103.09	8.86	95.39	0.93	8.46	0.40	4.34	0.95
	R10	Unknown	19.05	205.00	18.58	199.98	0.98	17.37	1.21	13.05	0.93
Third	R1	Unknown	8.23	88.63	8.07	86.87	0.98	7.74	0.33	3.51	0.96
	R2	Unknown	20.56	221.26	20.18	217.26	0.98	19.02	1.17	12.56	0.94
	R3	Unknown	9.36	100.73	7.55	81.28	0.81	7.07	0.48	5.17	0.94
	R4	Unknown	24.63	265.08	2.89	31.13	0.12	2.89	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.50	5.40	0.04	0.50	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.24	67.21	0.65	5.28	0.96	10.35	0.85
	R7	Unknown	19.80	213.16	18.56	199.74	0.94	15.80	2.76	29.67	0.85
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.18	0.90	9.70	0.91
	R9	Unknown	9.58	103.09	8.96	96.49	0.94	8.57	0.39	4.22	0.96
	R10	Unknown	19.05	205.00	18.58	199.99	0.98	17.37	1.21	12.98	0.94
Fourth	R1	Unknown	8.23	88.63	8.01	86.17	0.97	7.39	0.62	6.65	0.92
	R2	Unknown	20.56	221.26	20.18	217.24	0.98	19.02	1.16	12.50	0.94
	R3	Unknown	9.36	100.73	8.62	92.75	0.92	8.11	0.51	5.47	0.94
	R4	Unknown	24.63	265.08	3.77	40.58	0.15	3.77	0.00	0.00	1.00
	R5	Unknown	12.48	134.29	0.76	8.21	0.06	0.76	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.53	70.27	0.68	5.65	0.88	9.46	0.87
	R7	Unknown	19.80	213.16	18.61	200.34	0.94	15.86	2.75	29.65	0.85
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.20	0.89	9.55	0.91
	R9	Unknown	9.58	103.09	9.04	97.29	0.94	8.67	0.37	4.00	0.96
	R10	Unknown	19.05	205.00	18.58	200.00	0.98	17.38	1.20	12.89	0.94
Fifth	R1	Unknown	8.23	88.63	8.02	86.29	0.97	7.43	0.59	6.30	0.93
	R2	Unknown	20.56	221.26	20.18	217.25	0.98	19.03	1.16	12.45	0.94
	R3	Unknown	9.36	100.73	8.77	94.42	0.94	8.32	0.45	4.85	0.95
	R4	Unknown	24.63	265.08	4.44	47.84	0.18	4.41	0.04	0.41	0.99
	R5	Unknown	12.48	134.29	1.19	12.78	0.10	1.19	0.00	0.00	1.00
	R6	Unknown	9.66	103.99	6.77	72.88	0.70	5.97	0.80	8.62	0.88
	R7	Unknown	19.80	213.16	18.08	194.64	0.91	15.33	2.75	29.62	0.85
	R8	Unknown	11.26	121.21	10.46	112.62	0.93	9.64	0.82	8.81	0.92
	R9	Unknown	9.58	103.09	8.93	96.09	0.93	8.50	0.43	4.61	0.95
	R10	Unknown	19.05	205.00	18.60	200.20	0.98	17.66	0.94	10.14	0.95
Sixth	R1	Unknown	8.23	88.63	8.02	86.28	0.97	7.50	0.51	5.52	0.94
	R2	Unknown	20.56	221.26	20.18	217.24	0.98	19.04	1.15	12.34	0.94
	R3	Unknown	9.36	100.73	8.90	95.79	0.95	8.48	0.42	4.52	0.95
	R4	Unknown	24.63	265.08	5.35	57.62	0.22	5.23	0.12	1.34	0.98
	R5	Unknown	12.48	134.29	1.75	18.88	0.14	1.75	0.00	0.05	1.00
	R6	Unknown	9.66	103.99	6.95	74.78	0.72	6.19	0.76	8.17	0.89
	R7	Unknown	19.80	213.16	18.11	194.89	0.91	15.36	2.75	29.60	0.85
	R8	Unknown	11.26	121.21	10.47	112.70	0.93	9.69	0.78	8.45	0.93
	R9	Unknown	9.58	103.09	8.94	96.22	0.93	8.52	0.42	4.52	0.95
	R10	Unknown	19.05	205.00	18.61	200.29	0.98	17.67	0.94	10.12	0.95
Seventh	R1	Unknown	8.23	88.63	8.07	86.87	0.98	7.88	0.19	2.05	0.98
	R2	Unknown	20.56	221.26	20.18	217.27	0.98	19.06	1.12	12.06	0.94
	R3	Unknown	9.36	100.73	8.63	92.90	0.92	8.31	0.32	3.50	0.96
	R4	Unknown	24.63	265.08	5.90	63.50	0.24	5.66	0.24	2.61	0.96
	R5	Unknown	12.48	134.29	2.58	27.72	0.21	2.57	0.00	0.02	1.00
	R6	Unknown	9.66	103.99	7.18	77.29	0.74	6.50	0.68	7.27	0.91
	R7	Unknown	19.80	213.16	18.13	195.11	0.92	15.38	2.74	29.53	0.85
	R8	Unknown	11.26	121.21	10.47	112.65	0.93	9.75	0.72	7.74	0.93
	R9	Unknown	9.58	103.09	8.93	96.11	0.93	8.55	0.38	4.13	0.96
	R10	Unknown	19.05	205.00	18.64	200.62	0.98	17.70	0.94	10.12	0.95
Eighth	R1	Unknown	8.23	88.63	8.07	86.87	0.98	7.89	0.18	1.94	0.98
	R2	Unknown	20.56	221.26	20.18	217.27	0.98	19.08	1.10	11.85	0.95
	R3	Unknown	9.36	100.73	8.77	94.44	0.94	8.50	0.27	2.92	0.97
	R4	Unknown	24.63	265.08	7.41	79.74	0.30	7.05	0.36	3.89	0.95
	R5	Unknown	12.48	134.29	3.64	39.18	0.29	3.64	0.00	0.04	1.00
	R6	Unknown	9.66	103.99	7.45	80.14	0.77	6.78	0.66	7.12	0.91
	R7	Unknown	19.80	213.16	18.78	202.19	0.95	16.08	2.71	29.16	0.86
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.34	0.75	8.02	0.93

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R9	Unknown	9.58	103.09	9.11	98.09	0.95	8.88	0.23	2.46	0.97
	R10	Unknown	19.05	205.00	18.64	200.64	0.98	17.44	1.20	12.92	0.94
Ninth	R1	Unknown	8.23	88.63	8.07	86.92	0.98	7.92	0.15	1.66	0.98
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	19.11	1.08	11.60	0.95
	R3	Unknown	9.36	100.73	8.84	95.10	0.94	8.60	0.23	2.49	0.97
	R4	Unknown	24.63	265.08	9.91	106.66	0.40	9.37	0.54	5.80	0.95
	R5	Unknown	12.48	134.29	5.63	60.55	0.45	5.62	0.00	0.03	1.00
	R6	Unknown	9.66	103.99	7.74	83.33	0.80	7.14	0.61	6.52	0.92
	R7	Unknown	19.80	213.16	18.79	202.29	0.95	16.19	2.60	28.03	0.86
	R8	Unknown	11.26	121.21	10.08	108.54	0.90	9.44	0.65	6.96	0.94
	R9	Unknown	9.58	103.09	9.11	98.07	0.95	8.95	0.16	1.76	0.98
	R10	Unknown	19.05	205.00	18.67	201.01	0.98	17.47	1.20	12.93	0.94
Tenth	R1	Unknown	8.23	88.63	8.02	86.32	0.97	7.68	0.34	3.68	0.96
	R2	Unknown	20.56	221.26	20.18	217.21	0.98	19.17	1.01	10.88	0.95
	R3	Unknown	9.36	100.73	9.00	96.88	0.96	8.74	0.26	2.83	0.97
	R4	Unknown	24.63	265.08	15.27	164.42	0.62	14.40	0.87	9.39	0.94
	R5	Unknown	12.48	134.29	9.28	99.85	0.74	9.27	0.00	0.03	1.00
	R6	Unknown	9.66	103.99	8.02	86.38	0.83	7.49	0.53	5.73	0.93
	R7	Unknown	19.80	213.16	18.81	202.42	0.95	16.40	2.40	25.88	0.87
	R8	Unknown	11.26	121.21	10.08	108.55	0.90	9.52	0.56	6.08	0.94
	R9	Unknown	9.58	103.09	9.12	98.18	0.95	9.01	0.12	1.24	0.99
	R10	Unknown	19.05	205.00	18.69	201.14	0.98	17.50	1.18	12.75	0.94
Eleventh	R1	Unknown	8.23	88.63	8.02	86.28	0.97	7.96	0.06	0.62	0.99
	R2	Unknown	20.56	221.26	20.19	217.27	0.98	19.24	0.95	10.20	0.95
	R3	Unknown	9.36	100.73	9.00	96.91	0.96	8.75	0.25	2.74	0.97
	R4	Unknown	24.63	265.08	23.80	256.13	0.97	22.73	1.06	11.44	0.96
	R5	Unknown	12.48	134.29	11.93	128.39	0.96	11.93	0.00	0.02	1.00
	R6	Unknown	9.66	103.99	8.22	88.47	0.85	7.79	0.43	4.58	0.95
	R7	Unknown	19.80	213.16	18.13	195.18	0.92	15.82	2.32	24.92	0.87
	R8	Unknown	11.26	121.21	10.47	112.70	0.93	9.98	0.49	5.27	0.95
	R9	Unknown	9.58	103.09	8.93	96.15	0.93	8.77	0.16	1.74	0.98
	R10	Unknown	19.05	205.00	18.70	201.29	0.98	17.79	0.91	9.81	0.95
Twelfth	R1	Unknown	8.99	96.75	8.63	92.94	0.96	8.47	0.16	1.75	0.98
	R2	Unknown	28.91	311.15	28.62	308.04	0.99	28.17	0.44	4.78	0.98
	R3	Unknown	9.54	102.73	9.37	100.87	0.98	9.36	0.01	0.13	1.00
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Thirteenth	R1	Unknown	8.23	88.63	8.02	86.38	0.97	8.02	0.00	0.02	1.00
	R2	Unknown	28.91	311.15	28.74	309.36	0.99	28.44	0.30	3.22	0.99
	R3	Unknown	9.54	102.73	9.22	99.27	0.97	9.17	0.05	0.59	0.99
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Fourteenth	R1	Unknown	8.23	88.63	8.07	86.82	0.98	8.06	0.00	0.02	1.00
	R2	Unknown	28.91	311.15	28.77	309.71	1.00	28.50	0.27	2.94	0.99
	R3	Unknown	9.54	102.73	9.23	99.31	0.97	9.17	0.05	0.56	0.99
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Fifteenth	R1	Unknown	11.32	121.89	10.96	117.98	0.97	10.87	0.09	1.00	0.99
	R2	Unknown	12.33	132.74	12.19	131.19	0.99	11.96	0.23	2.48	0.98
	R3	Unknown	9.54	102.73	9.23	99.33	0.97	9.18	0.05	0.55	0.99
	R4	Unknown	7.21	77.58	7.04	75.79	0.98	7.04	0.00	0.00	1.00
Barton Place											
First	R1	Unknown	20.56	221.34	19.53	210.26	0.95	12.35	7.18	77.28	0.63
	R2	Unknown	11.14	119.96	5.05	54.39	0.45	1.76	3.29	35.42	0.35
	R3	Unknown	14.85	159.82	6.22	66.98	0.42	1.73	4.50	48.39	0.28
	R4	Unknown	11.29	121.48	3.22	34.71	0.29	1.60	1.62	17.45	0.50
	R5	Unknown	9.12	98.20	2.35	25.31	0.26	1.78	0.57	6.18	0.76
	R6	Unknown	24.62	264.97	6.41	68.98	0.26	1.90	4.51	48.52	0.30
	R7	Unknown	9.13	98.32	1.97	21.22	0.22	1.75	0.22	2.34	0.89
	R8	Unknown	9.13	98.32	1.67	18.03	0.18	1.62	0.06	0.62	0.97
Second	R1	Unknown	25.18	271.02	22.37	240.80	0.89	13.58	8.79	94.58	0.61
	R2	Unknown	11.14	119.96	5.17	55.60	0.46	1.99	3.18	34.23	0.38
	R3	Unknown	14.85	159.82	6.33	68.10	0.43	1.92	4.40	47.40	0.30
	R4	Unknown	11.29	121.48	3.32	35.73	0.29	1.74	1.58	17.03	0.52
	R5	Unknown	9.12	98.20	2.43	26.20	0.27	1.89	0.54	5.83	0.78

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R6	Unknown	24.62	264.97	6.61	71.17	0.27	2.48	4.13	44.48	0.38
	R7	Unknown	9.13	98.32	2.05	22.12	0.22	1.87	0.18	1.94	0.91
	R8	Unknown	9.13	98.32	1.78	19.15	0.19	1.73	0.05	0.52	0.97
Third	R1	Unknown	25.18	271.02	22.71	244.40	0.90	14.13	8.57	92.26	0.62
	R2	Unknown	11.14	119.96	5.28	56.88	0.47	2.17	3.11	33.47	0.41
	R3	Unknown	14.85	159.82	6.45	69.44	0.43	2.22	4.24	45.59	0.34
	R4	Unknown	11.29	121.48	3.44	37.05	0.30	1.91	1.53	16.48	0.56
	R5	Unknown	9.12	98.20	2.54	27.30	0.28	2.04	0.50	5.39	0.80
	R6	Unknown	24.62	264.97	6.79	73.06	0.28	3.01	3.78	40.71	0.44
	R7	Unknown	9.13	98.32	2.17	23.35	0.24	2.01	0.16	1.70	0.93
	R8	Unknown	9.13	98.32	1.91	20.53	0.21	1.86	0.04	0.47	0.98
Fourth	R1	Unknown	25.18	271.02	23.02	247.75	0.91	14.85	8.17	87.92	0.65
	R2	Unknown	11.14	119.96	5.43	58.46	0.49	2.46	2.97	31.95	0.45
	R3	Unknown	14.85	159.82	6.61	71.20	0.45	2.48	4.13	44.47	0.38
	R4	Unknown	11.29	121.48	3.56	38.32	0.32	2.09	1.47	15.81	0.59
	R5	Unknown	9.12	98.20	2.64	28.42	0.29	2.17	0.47	5.11	0.82
	R6	Unknown	24.62	264.97	6.92	74.47	0.28	3.51	3.41	36.70	0.51
	R7	Unknown	9.13	98.32	2.29	24.60	0.25	2.14	0.15	1.58	0.94
	R8	Unknown	9.13	98.32	2.04	21.96	0.22	2.00	0.04	0.43	0.98
Fifth	R1	Unknown	25.18	271.02	23.19	249.62	0.92	16.24	6.95	74.85	0.70
	R2	Unknown	11.14	119.96	5.57	59.94	0.50	2.73	2.84	30.55	0.49
	R3	Unknown	14.85	159.82	6.79	73.05	0.46	2.80	3.98	42.87	0.41
	R4	Unknown	11.29	121.48	3.77	40.54	0.33	2.35	1.41	15.19	0.63
	R5	Unknown	9.12	98.20	2.82	30.32	0.31	2.37	0.45	4.81	0.84
	R6	Unknown	24.62	264.97	7.20	77.46	0.29	4.22	2.98	32.08	0.59
	R7	Unknown	9.13	98.32	2.44	26.26	0.27	2.30	0.14	1.47	0.94
	R8	Unknown	9.13	98.32	2.22	23.92	0.24	2.19	0.04	0.39	0.98
Sixth	R1	Unknown	25.18	271.02	23.31	250.88	0.93	19.06	4.24	45.67	0.82
	R2	Unknown	11.14	119.96	5.73	61.65	0.51	3.04	2.69	28.93	0.53
	R3	Unknown	14.85	159.82	7.01	75.45	0.47	3.18	3.83	41.25	0.45
	R4	Unknown	11.29	121.48	3.94	42.40	0.35	2.62	1.32	14.23	0.66
	R5	Unknown	9.12	98.20	2.98	32.05	0.33	2.57	0.41	4.41	0.86
	R6	Unknown	24.62	264.97	7.51	80.87	0.31	4.93	2.59	27.86	0.66
	R7	Unknown	9.13	98.32	2.64	28.42	0.29	2.52	0.13	1.35	0.95
	R8	Unknown	9.13	98.32	2.48	26.69	0.27	2.45	0.03	0.32	0.99
Seventh	R1	Unknown	25.18	271.02	23.35	251.30	0.93	23.29	0.06	0.61	1.00
	R2	Unknown	11.14	119.96	5.89	63.43	0.53	3.31	2.58	27.79	0.56
	R3	Unknown	14.85	159.82	7.29	78.52	0.49	3.68	3.61	38.89	0.50
	R4	Unknown	11.29	121.48	4.17	44.92	0.37	2.93	1.24	13.37	0.70
	R5	Unknown	9.12	98.20	3.19	34.36	0.35	2.82	0.37	3.97	0.88
	R6	Unknown	24.62	264.97	7.91	85.18	0.32	5.72	2.20	23.64	0.72
	R7	Unknown	9.13	98.32	2.90	31.22	0.32	2.79	0.11	1.23	0.96
	R8	Unknown	9.13	98.32	2.75	29.62	0.30	2.73	0.02	0.20	0.99
Eighth	R1	Unknown	25.18	271.02	23.37	251.60	0.93	23.35	0.02	0.26	1.00
	R2	Unknown	11.14	119.96	6.12	65.83	0.55	3.64	2.48	26.68	0.59
	R3	Unknown	14.85	159.82	7.67	82.60	0.52	4.29	3.38	36.41	0.56
	R4	Unknown	11.29	121.48	4.47	48.15	0.40	3.30	1.17	12.61	0.74
	R5	Unknown	9.12	98.20	3.49	37.53	0.38	3.15	0.33	3.59	0.90
	R6	Unknown	24.62	264.97	8.61	92.62	0.35	6.78	1.82	19.60	0.79
	R7	Unknown	13.53	145.62	4.54	48.86	0.34	4.53	0.01	0.09	1.00
	R8	Unknown	9.13	98.32	3.19	34.31	0.35	3.18	0.01	0.09	1.00
Ninth	R1	Unknown	25.18	271.02	23.40	251.91	0.93	23.38	0.03	0.30	1.00
	R2	Unknown	11.14	119.96	6.37	68.59	0.57	3.97	2.40	25.88	0.62
	R3	Unknown	14.85	159.82	8.18	88.03	0.55	5.09	3.09	33.27	0.62
	R4	Unknown	11.29	121.48	4.82	51.92	0.43	3.74	1.08	11.67	0.78
	R5	Unknown	9.12	98.20	3.80	40.90	0.42	3.51	0.29	3.10	0.92
	R6	Unknown	24.62	264.97	9.03	97.15	0.37	7.37	1.66	17.87	0.82
	R7	Unknown	13.53	145.62	5.29	56.94	0.39	5.28	0.01	0.15	1.00
	R8	Unknown	9.13	98.32	3.64	39.22	0.40	3.64	0.01	0.09	1.00
Tenth	R1	Unknown	25.18	271.02	18.92	203.68	0.75	8.16	10.76	115.81	0.43
	R2	Unknown	11.14	119.96	6.70	72.15	0.60	4.37	2.33	25.09	0.65
	R3	Unknown	14.85	159.82	8.76	94.32	0.59	6.04	2.72	29.31	0.69

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R4	Unknown	11.29	121.48	5.27	56.71	0.47	4.21	1.06	11.44	0.80
	R5	Unknown	9.12	98.20	4.18	45.02	0.46	3.92	0.26	2.82	0.94
	R6	Unknown	24.62	264.97	10.36	111.49	0.42	8.95	1.41	15.18	0.86
Masson Place											
First	R1	Unknown	20.56	221.34	18.80	202.41	0.91	10.29	8.52	91.66	0.55
Second	R1	Unknown	25.18	271.02	21.42	230.55	0.85	12.70	8.72	93.83	0.59
Third	R1	Unknown	25.18	271.02	22.01	236.92	0.87	13.19	8.82	94.95	0.60
Fourth	R1	Unknown	25.18	271.02	22.27	239.74	0.88	13.73	8.54	91.92	0.62
Fifth	R1	Unknown	25.18	271.02	22.48	242.02	0.89	14.78	7.71	82.98	0.66
Sixth	R1	Unknown	25.18	271.02	23.09	248.51	0.92	16.53	6.55	70.55	0.72
Seventh	R1	Unknown	25.18	271.02	23.59	253.91	0.94	19.08	4.51	48.54	0.81
Eighth	R1	Unknown	25.18	271.02	23.60	253.99	0.94	20.99	2.61	28.08	0.89
Ninth	R1	Unknown	25.18	271.02	23.60	253.99	0.94	22.89	0.71	7.61	0.97
Tenth	R1	Unknown	25.18	271.02	23.68	254.93	0.94	23.68	0.00	0.00	1.00
Melia House											
First	R1	Unknown	17.61	189.55	8.47	91.12	0.48	8.43	0.04	0.39	1.00
	R2	Unknown	11.74	126.32	5.88	63.33	0.50	4.36	1.52	16.36	0.74
	R3	Unknown	14.45	155.59	12.85	138.30	0.89	6.02	6.83	73.49	0.47
	R4	Unknown	38.36	412.91	21.54	231.84	0.56	11.23	10.31	110.92	0.52
	R5	Unknown	11.74	126.32	1.34	14.41	0.11	1.34	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.03	21.87	0.17	2.03	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	14.49	156.00	0.66	12.94	1.55	16.67	0.89
Second	R1	Unknown	17.61	189.55	8.81	94.81	0.50	8.67	0.14	1.52	0.98
	R2	Unknown	11.74	126.32	5.96	64.14	0.51	4.55	1.40	15.12	0.76
	R3	Unknown	14.45	155.59	12.94	139.28	0.90	6.34	6.60	71.02	0.49
	R4	Unknown	38.36	412.91	22.35	240.63	0.58	12.09	10.27	110.49	0.54
	R5	Unknown	11.74	126.32	1.66	17.91	0.14	1.66	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.35	25.26	0.20	2.35	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	15.25	164.18	0.70	13.70	1.55	16.68	0.90
Third	R1	Unknown	17.61	189.55	9.02	97.10	0.51	8.81	0.21	2.26	0.98
	R2	Unknown	11.74	126.32	5.99	64.51	0.51	4.68	1.31	14.13	0.78
	R3	Unknown	14.45	155.59	13.07	140.71	0.90	6.60	6.47	69.69	0.50
	R4	Unknown	38.36	412.91	23.22	249.95	0.61	12.86	10.36	111.51	0.55
	R5	Unknown	11.74	126.32	2.22	23.91	0.19	2.22	0.00	0.00	1.00
	R6	Unknown	11.74	126.32	2.94	31.64	0.25	2.94	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	16.18	174.18	0.74	14.77	1.41	15.18	0.91
Fourth	R1	Unknown	17.61	189.55	9.14	98.42	0.52	8.89	0.25	2.71	0.97
	R2	Unknown	11.74	126.32	6.01	64.71	0.51	4.81	1.20	12.92	0.80
	R3	Unknown	14.45	155.59	13.17	141.71	0.91	7.13	6.04	64.96	0.54
	R4	Unknown	38.36	412.91	23.98	258.16	0.63	13.61	10.37	111.61	0.57
	R5	Unknown	11.74	126.32	3.01	32.41	0.26	2.93	0.08	0.85	0.97
	R6	Unknown	11.74	126.32	3.80	40.95	0.32	3.80	0.00	0.00	1.00
	R7	Unknown	21.80	234.68	16.78	180.64	0.77	15.47	1.32	14.17	0.92
Fifth	R1	Unknown	17.61	189.55	9.30	100.08	0.53	8.95	0.34	3.70	0.96
	R2	Unknown	11.74	126.32	6.01	64.66	0.51	4.93	1.08	11.61	0.82
	R3	Unknown	14.45	155.59	13.25	142.58	0.92	7.59	5.65	60.86	0.57
	R4	Unknown	38.36	412.91	25.37	273.04	0.66	14.75	10.62	114.26	0.58
	R5	Unknown	11.74	126.32	4.50	48.44	0.38	4.14	0.36	3.87	0.92
	R6	Unknown	11.74	126.32	5.72	61.54	0.49	5.40	0.31	3.37	0.95
	R7	Unknown	21.80	234.68	17.65	189.95	0.81	16.45	1.20	12.93	0.93
Sixth	R1	Unknown	17.61	189.55	9.35	100.67	0.53	9.06	0.29	3.13	0.97
	R2	Unknown	11.74	126.32	6.04	64.98	0.51	5.11	0.93	9.99	0.85
	R3	Unknown	14.45	155.59	13.27	142.88	0.92	8.18	5.10	54.87	0.62
	R4	Unknown	38.36	412.91	26.70	287.39	0.70	16.41	10.29	110.79	0.61
	R5	Unknown	11.74	126.32	6.27	67.46	0.53	5.18	1.09	11.70	0.83
	R6	Unknown	11.74	126.32	8.95	96.38	0.76	7.94	1.01	10.92	0.89
	R7	Unknown	21.80	234.68	18.71	201.44	0.86	17.14	1.58	16.98	0.92
Seventh	R1	Unknown	17.61	189.55	6.95	74.82	0.39	5.91	1.04	11.18	0.85
	R2	Unknown	11.74	126.32	6.09	65.59	0.52	4.53	1.57	16.85	0.74
	R3	Unknown	14.45	155.59	12.12	130.42	0.84	5.94	6.18	66.49	0.49
	R4	Unknown	50.02	538.41	50.00	538.18	1.00	39.39	10.61	114.23	0.79
	R5	Unknown	11.74	126.32	6.79	73.03	0.58	5.81	0.98	10.54	0.86

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight Distribution - Neighbour Analysis - Cumulative Conditon

Floor Ref.	Room Ref.	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr+Cu/Ex
	R6	Unknown	11.74	126.32	9.47	101.96	0.81	8.52	0.95	10.28	0.90
	R7	Unknown	21.80	234.68	18.77	201.99	0.86	16.54	2.23	24.00	0.88
Eighth	R1	Unknown	11.74	126.32	7.24	77.91	0.62	6.38	0.86	9.25	0.88
	R2	Unknown	11.74	126.32	10.29	110.74	0.88	9.44	0.84	9.09	0.92
	R3	Unknown	21.80	234.68	19.72	212.22	0.90	17.58	2.13	22.96	0.89
Ninth	R1	Unknown	11.74	126.32	7.45	80.22	0.64	6.42	1.03	11.10	0.86
	R2	Unknown	11.74	126.32	10.26	110.47	0.87	9.49	0.78	8.36	0.92
	R3	Unknown	21.80	234.68	20.37	219.24	0.93	18.39	1.98	21.34	0.90

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-07	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

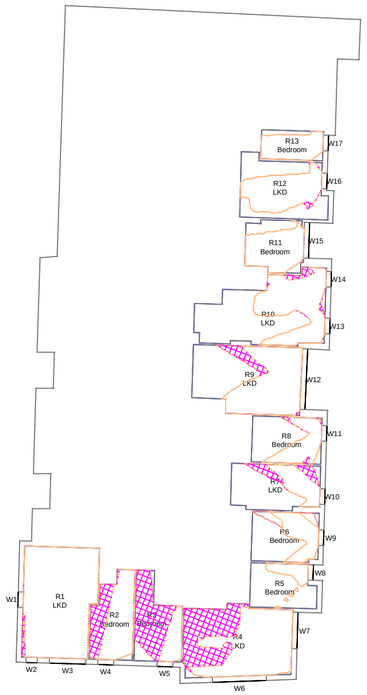
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

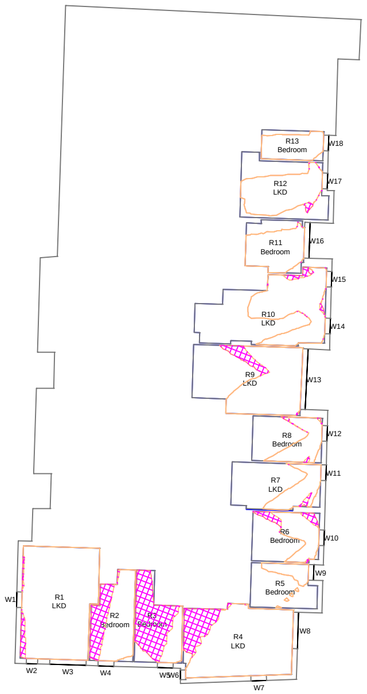
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Ground Floor



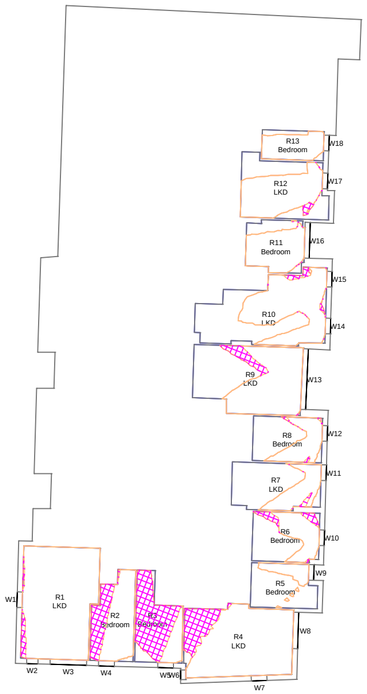
1:250

Britton House
First Floor



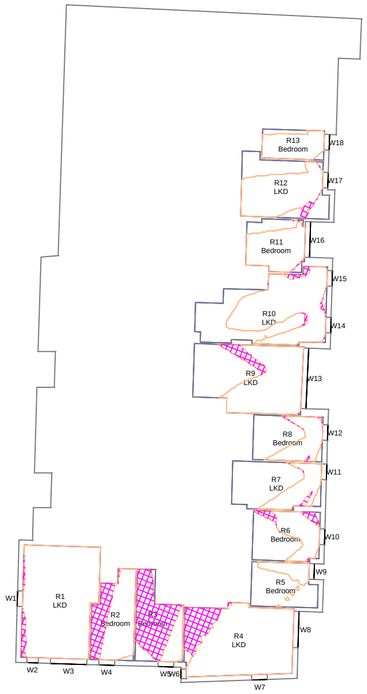
1:250

Britton House
Second Floor



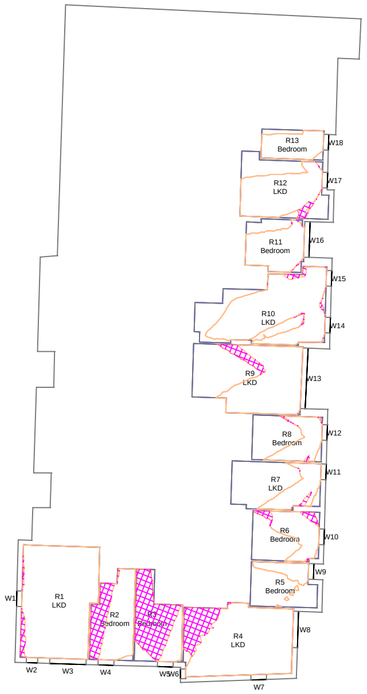
1:250

Britton House
Third Floor



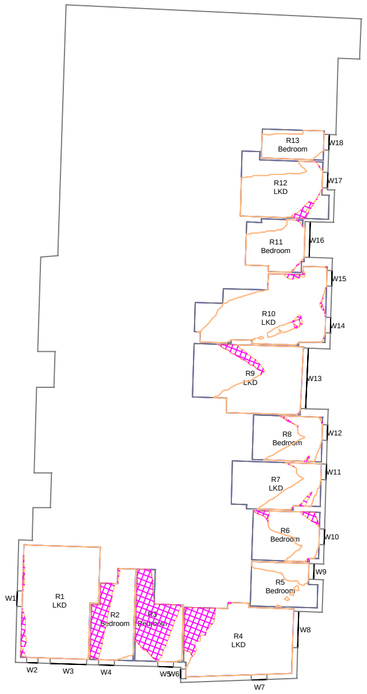
1:250

Britton House
Fourth Floor



1:250

Britton House
Fifth Floor



1:250

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-08	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

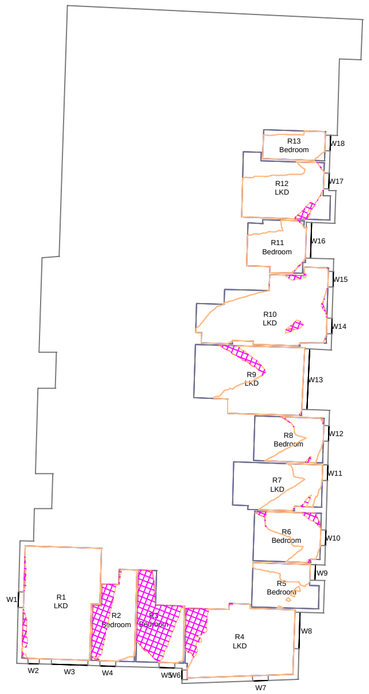
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

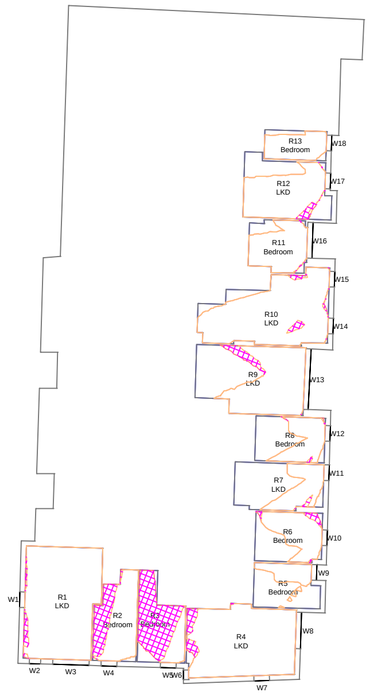
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Sixth Floor



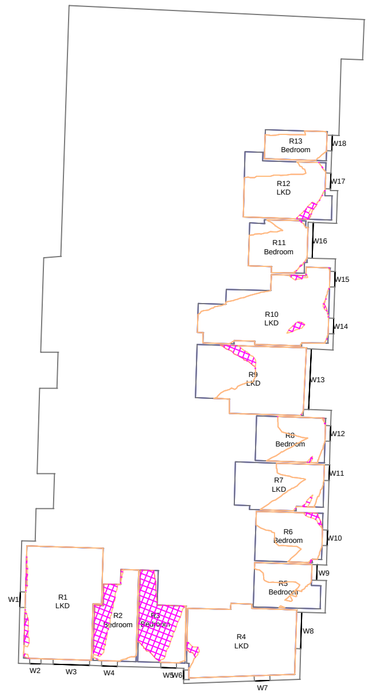
1:250

Britton House
Seventh Floor



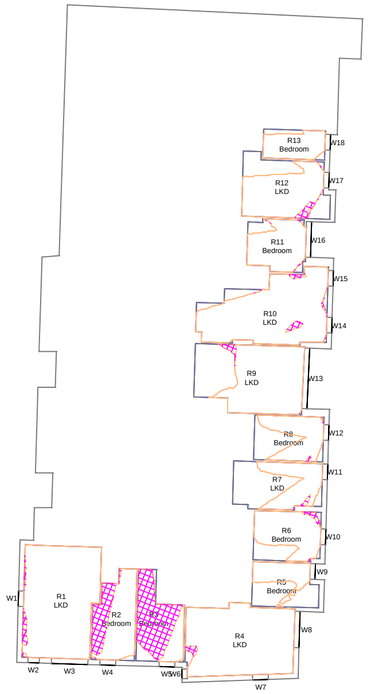
1:250

Britton House
Eighth Floor



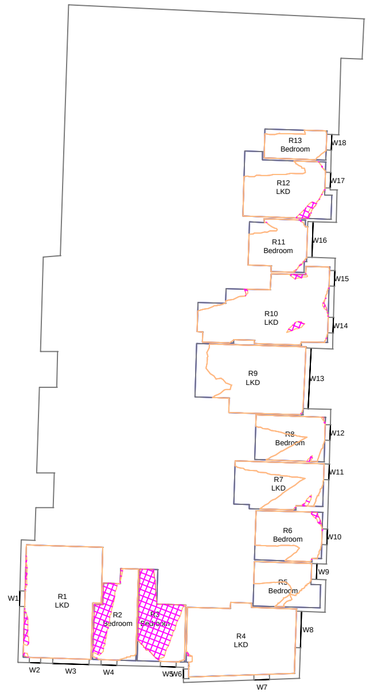
1:250

Britton House
Ninth Floor



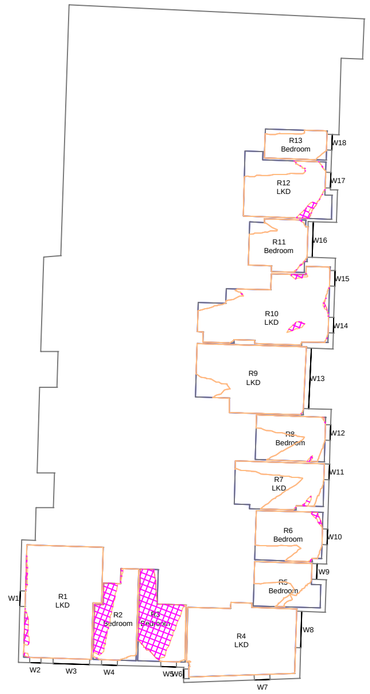
1:250

Britton House
Tenth Floor



1:250

Britton House
Eleventh Floor



1:250

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200/250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-09	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

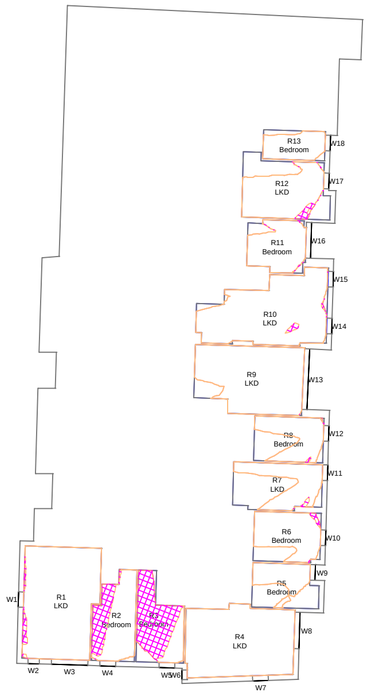
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

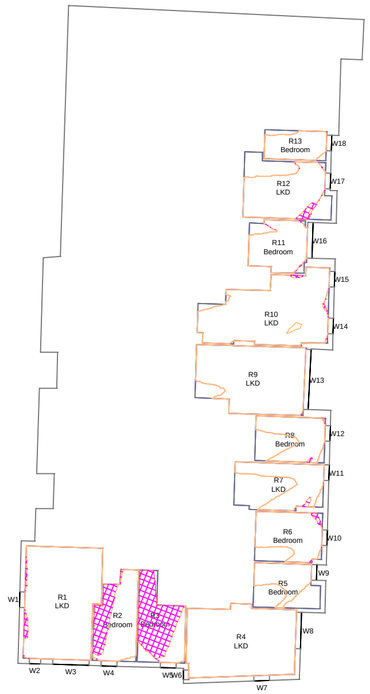
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Britton House
Twelfth Floor



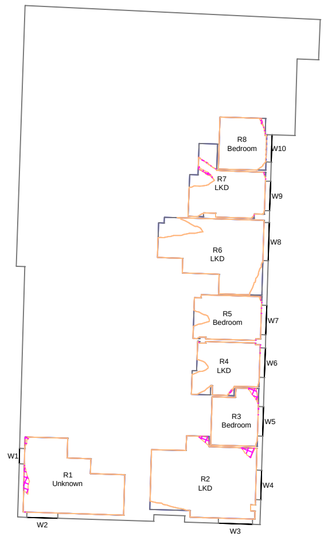
1:250

Britton House
Thirteenth Floor



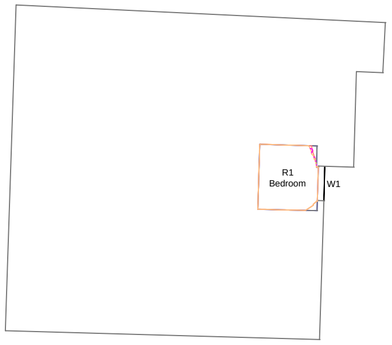
1:250

Britton House
Fourteenth Floor



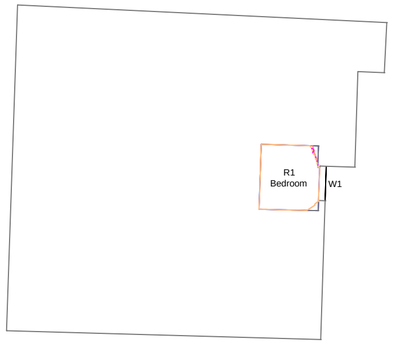
1:250

Britton House
Fifteenth Floor



1:200

Britton House
Sixteenth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-10	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

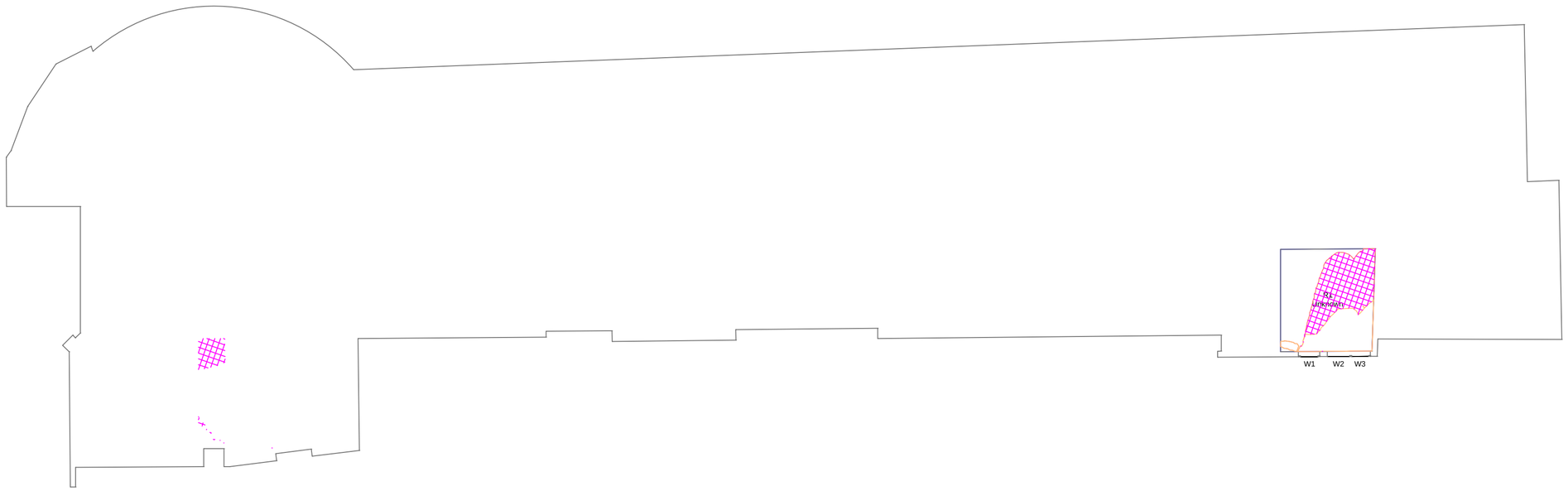
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

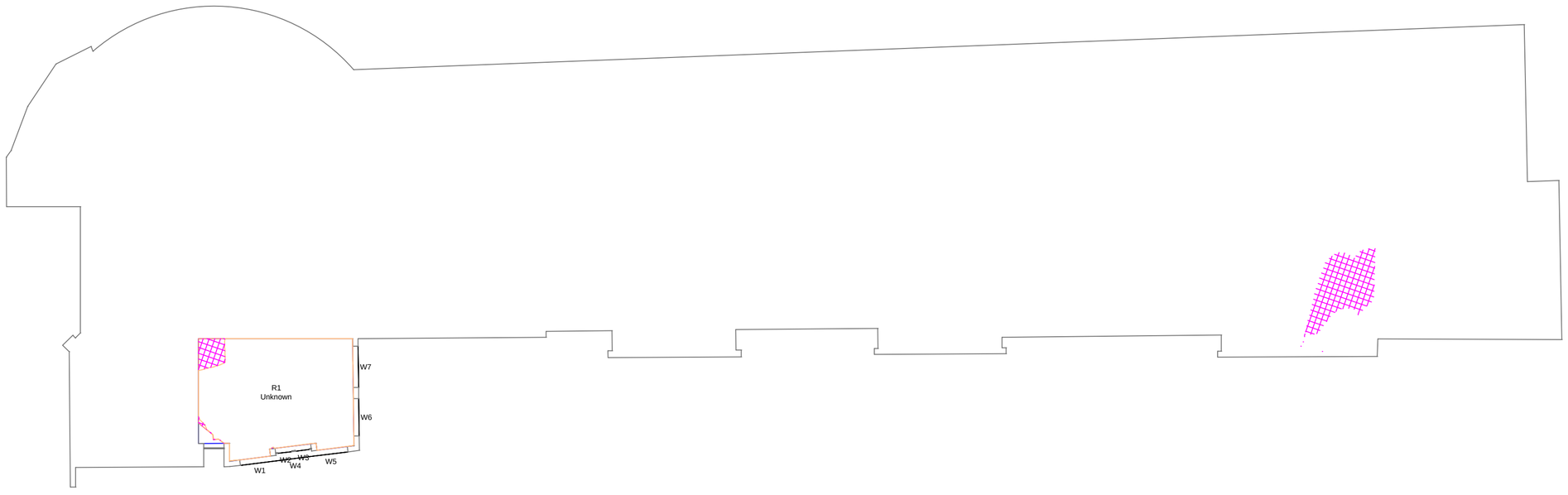
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Lower Ground Floor



1:200

Jefferson Place
Ground Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-11	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

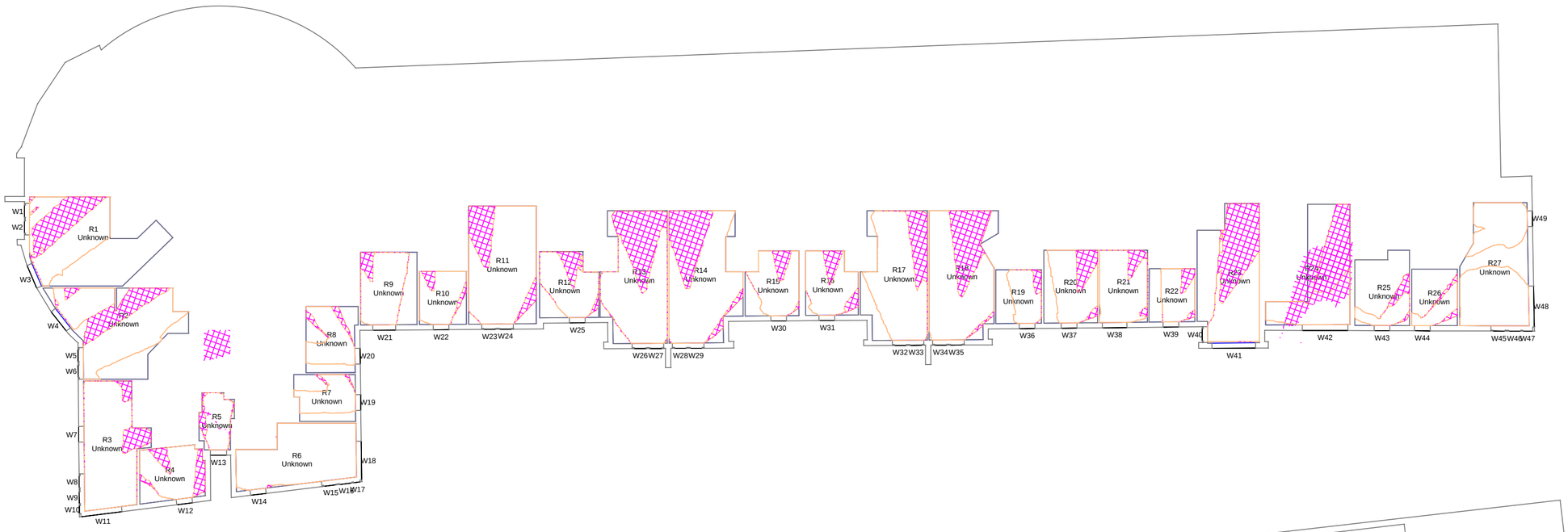
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
First Floor



1:200

Jefferson Place
Second Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-12	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

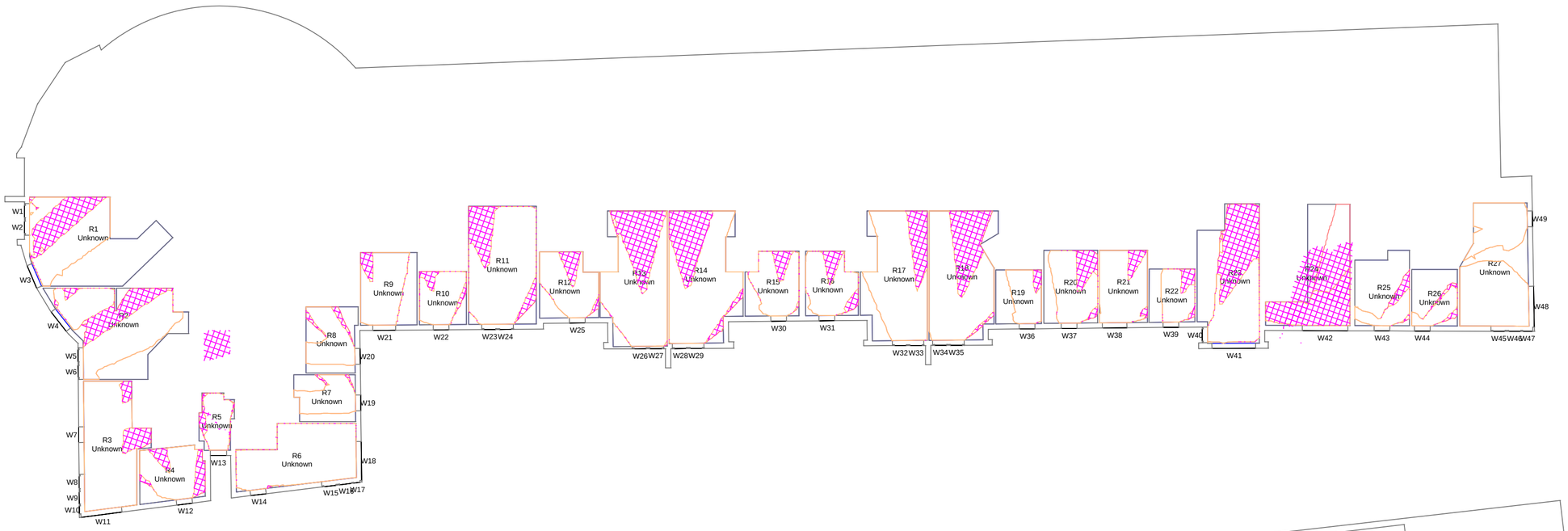
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

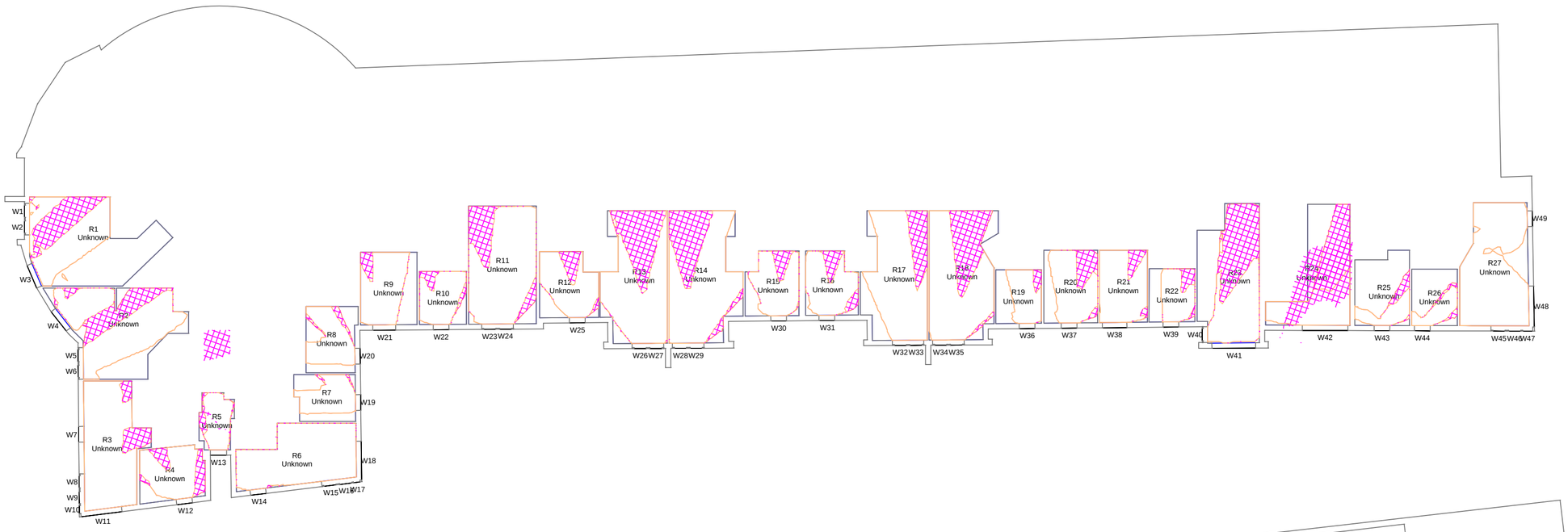
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Third Floor



1:200

Jefferson Place
Fourth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-13	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

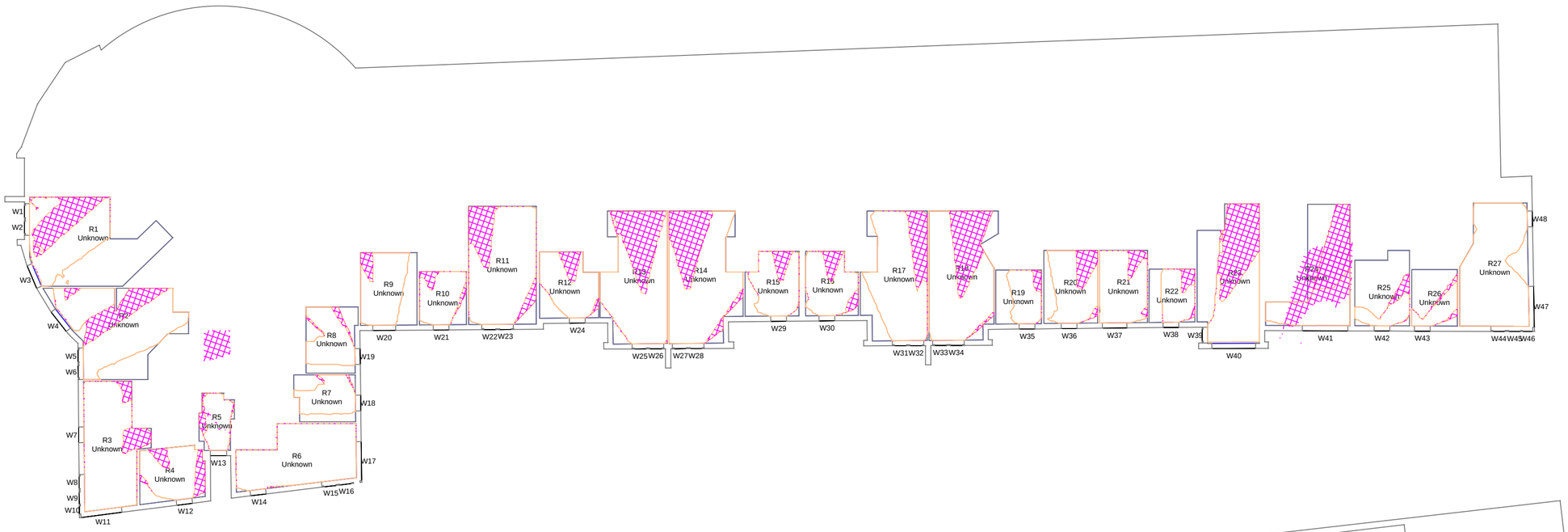
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

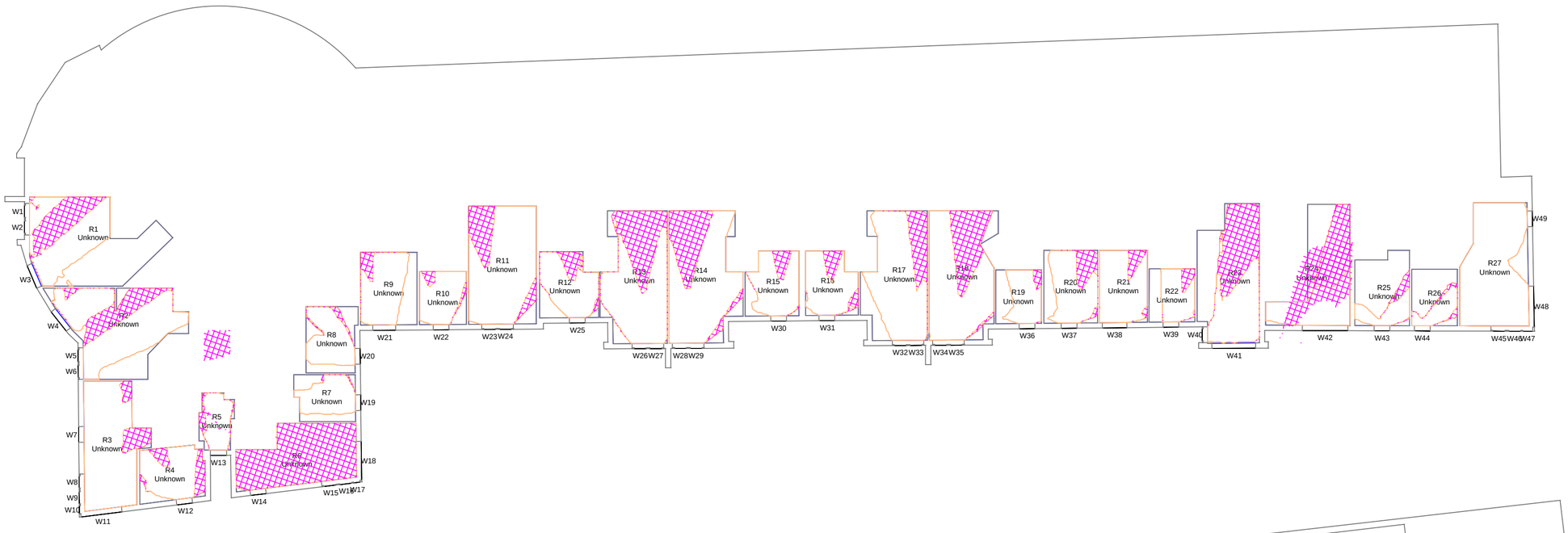
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Fifth Floor



1:200

Jefferson Place
Sixth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-14	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

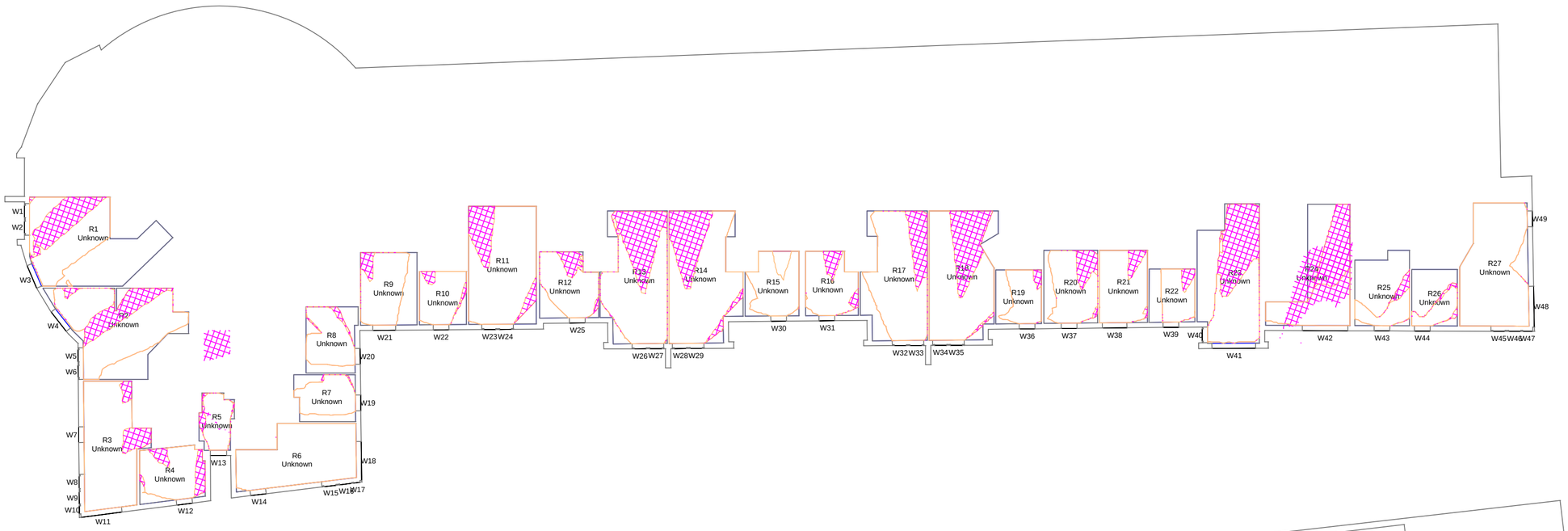
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

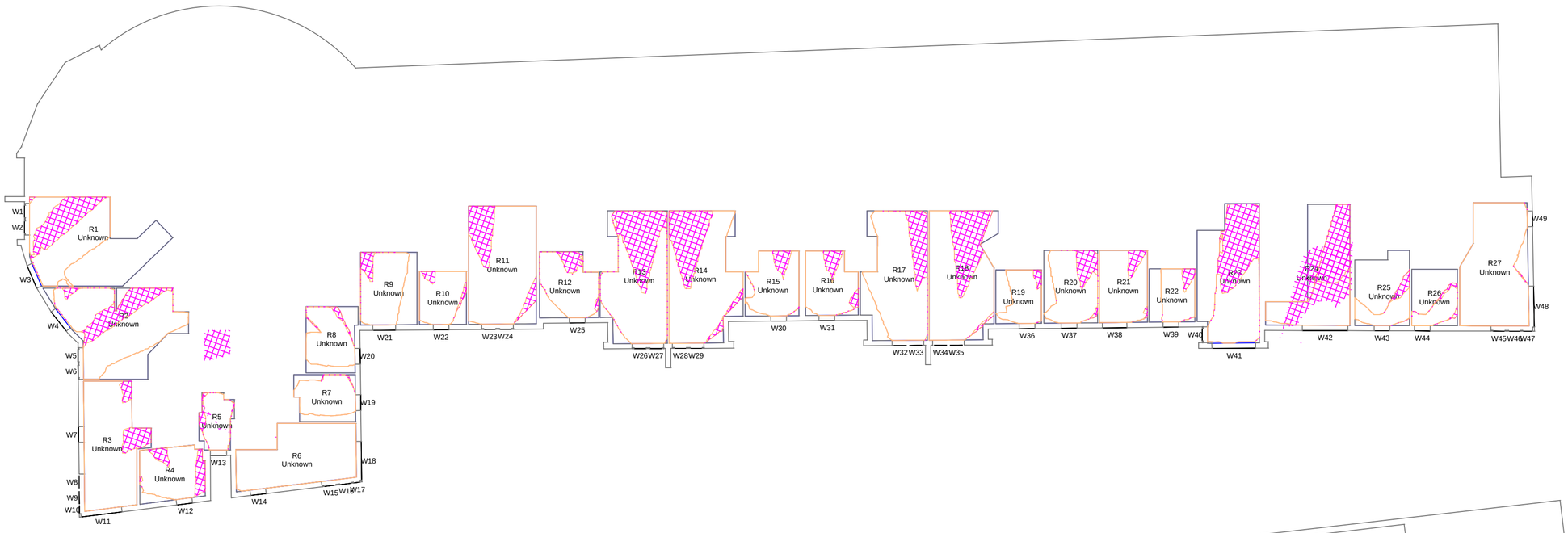
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Seventh Floor



1:200

Jefferson Place
Eighth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-15	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

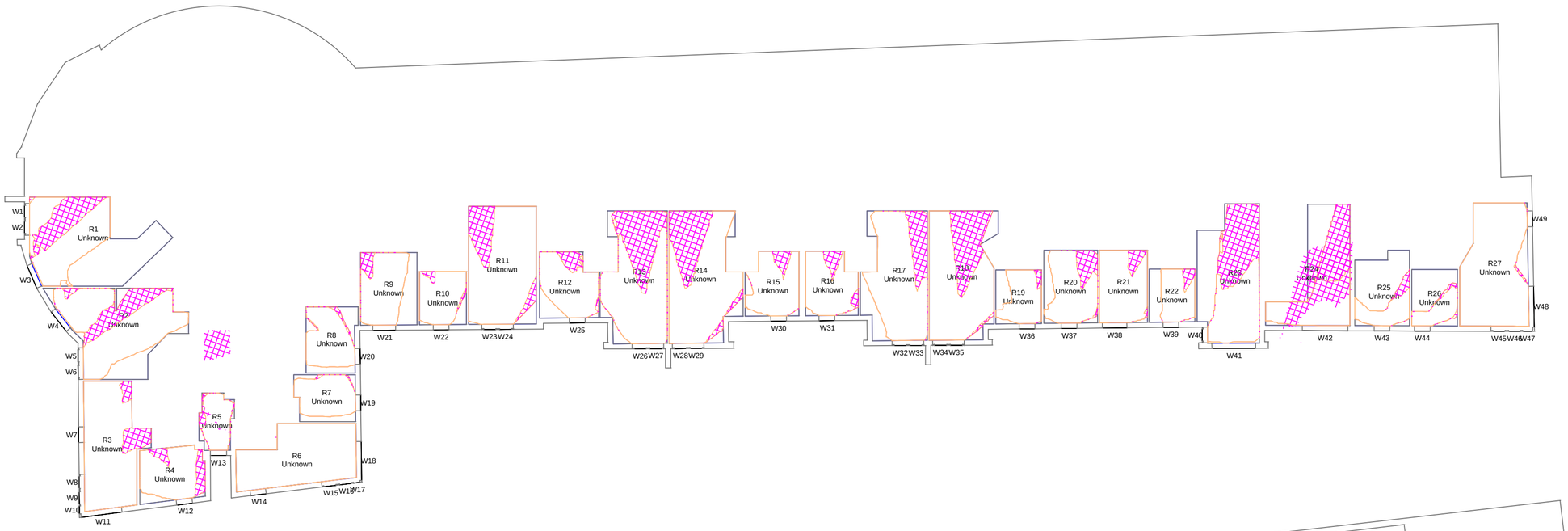
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

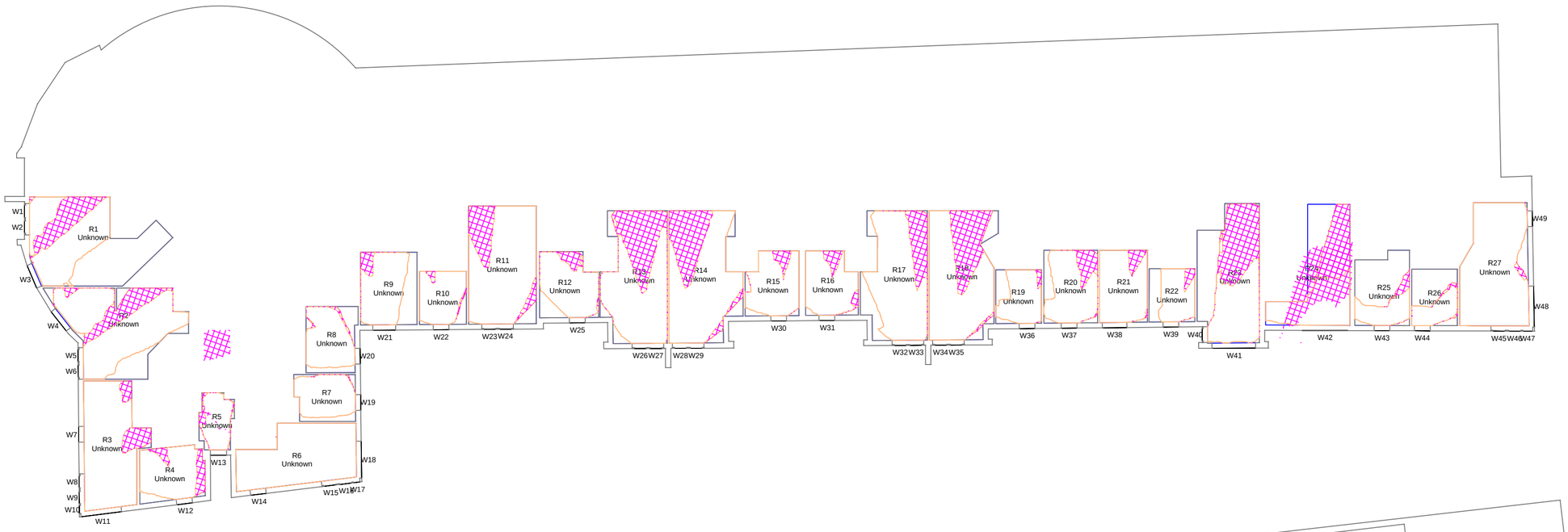
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Ninth Floor



1:200

Jefferson Place
Tenth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-16	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

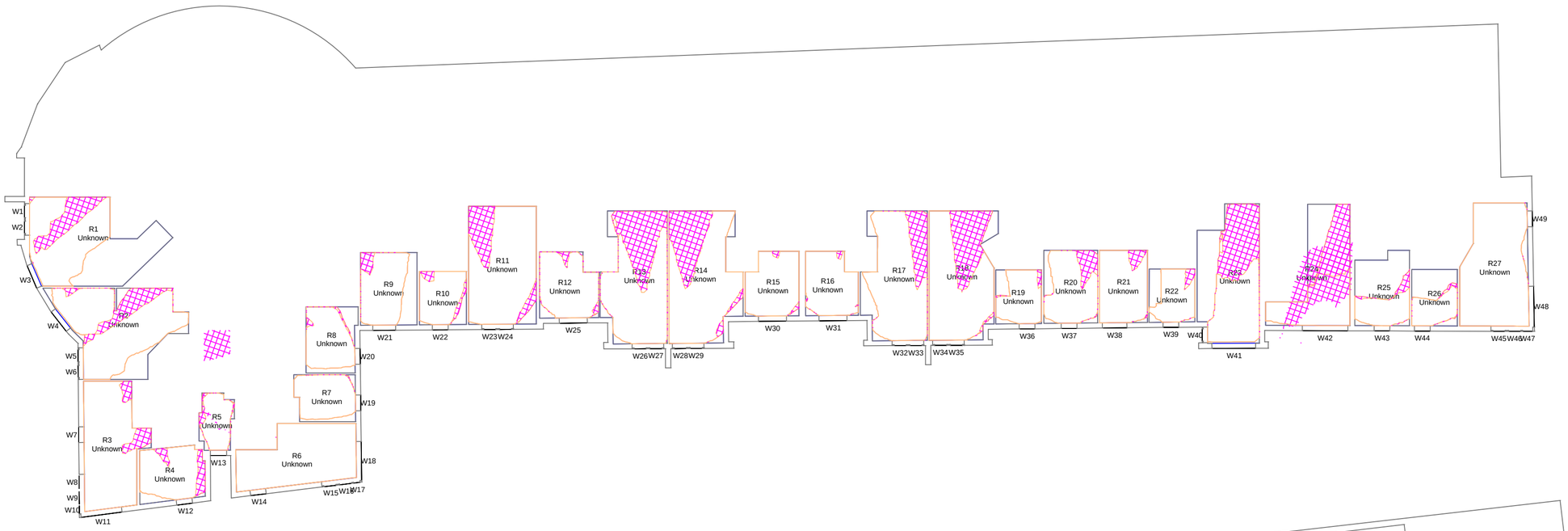
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Eleventh Floor



1:200

Jefferson Place
Twelfth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-17	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

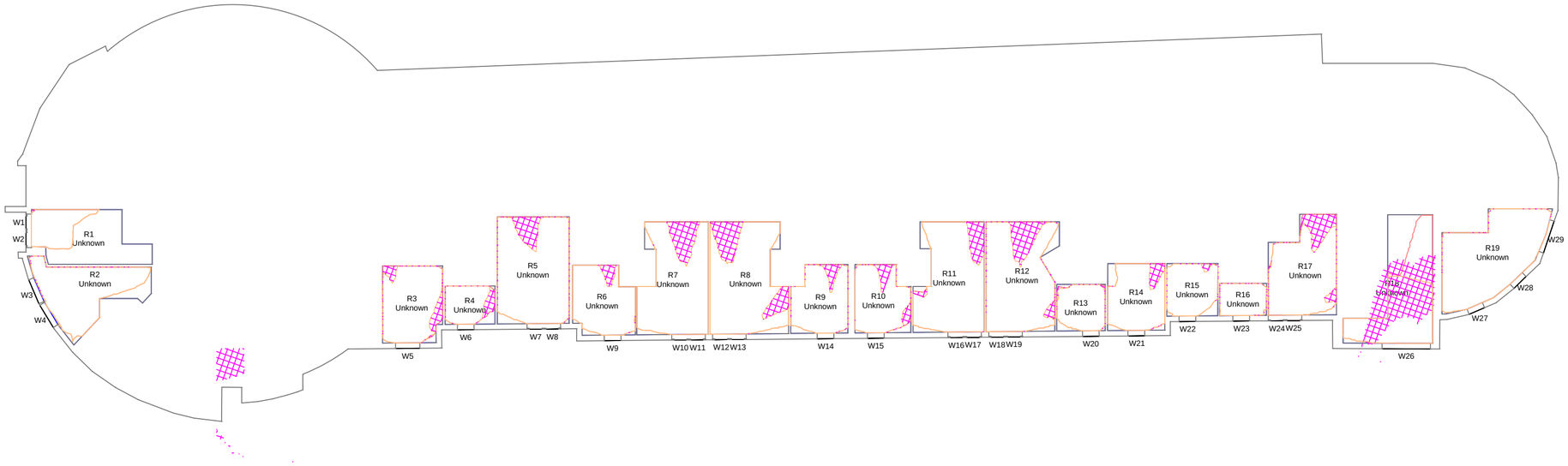
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

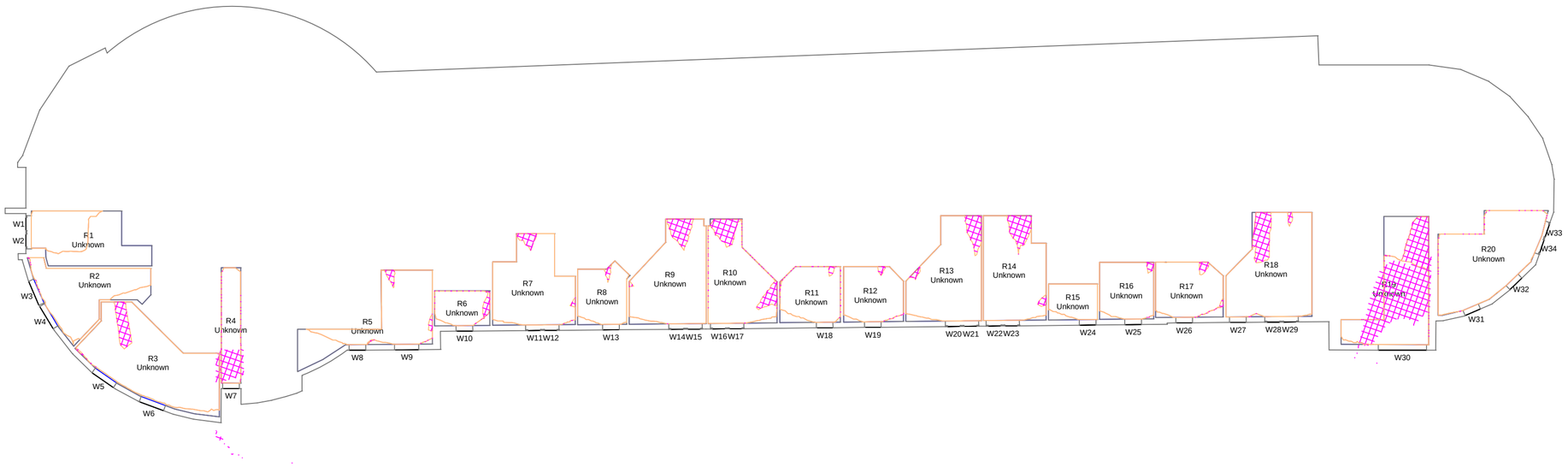
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Thirteenth Floor



1:200

Jefferson Place
Fourteenth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-18	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

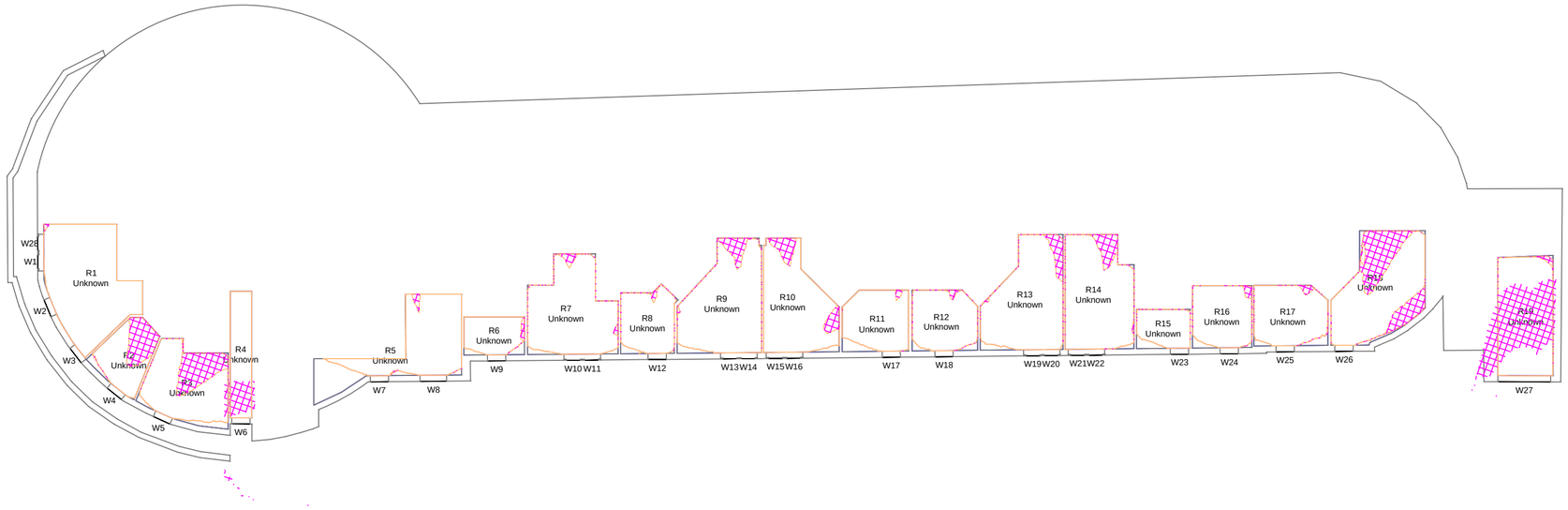
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

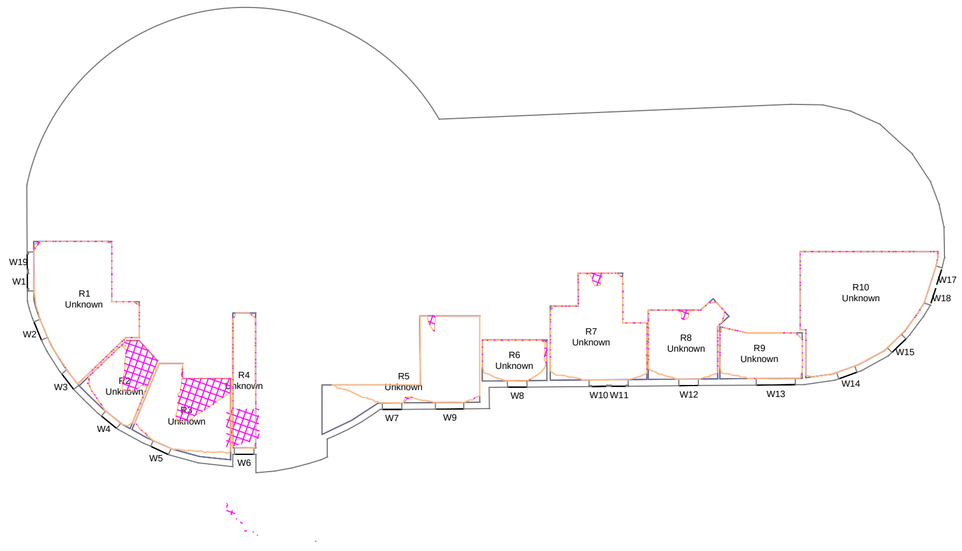
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Fifteenth Floor



1:200

Jefferson Place
Sixteenth Floor



1:200

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:100	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-19	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

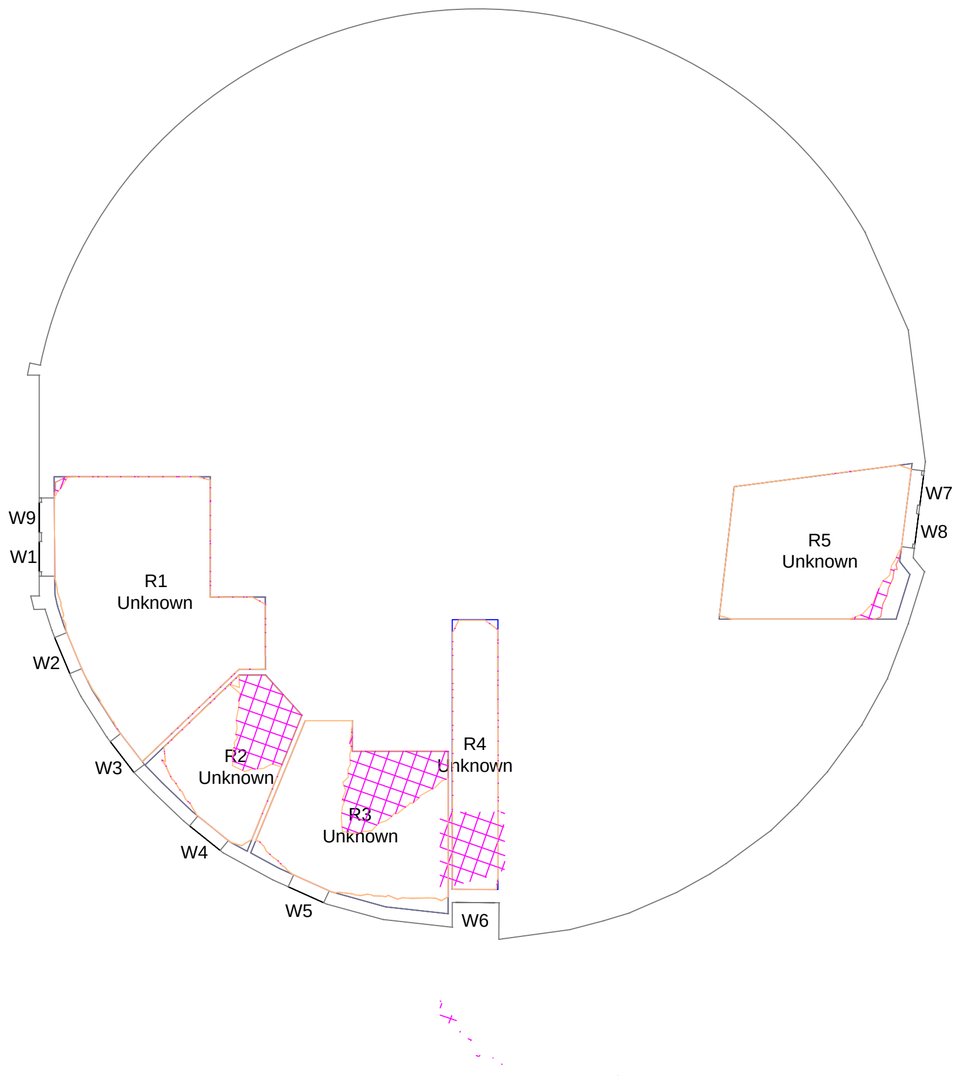
All heights in m AOD

DD Legend

Room Area (Measured Layout)
Existing No Sky Area
Proposed No Sky Area
Area of Loss/Gain

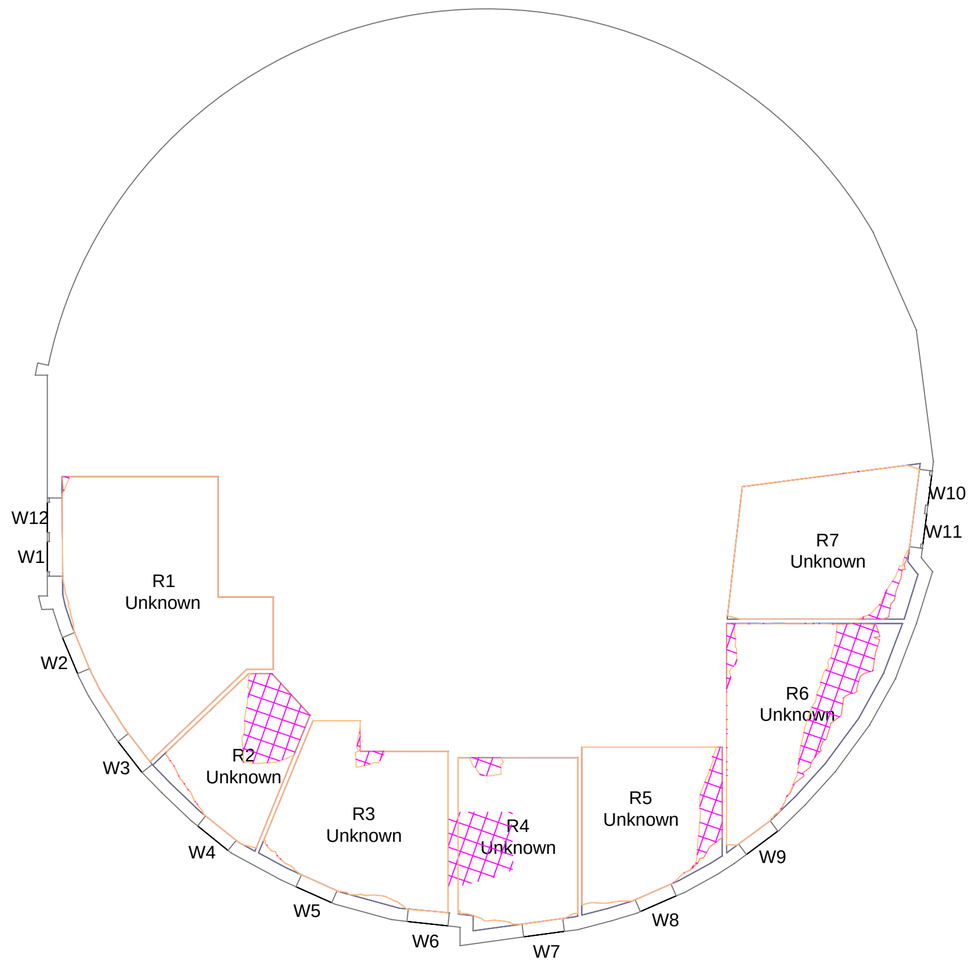
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Jefferson Place
Seventeenth Floor



1:100

Jefferson Place
Eighteenth Floor



1:100

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-20	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

Existing
Proposed

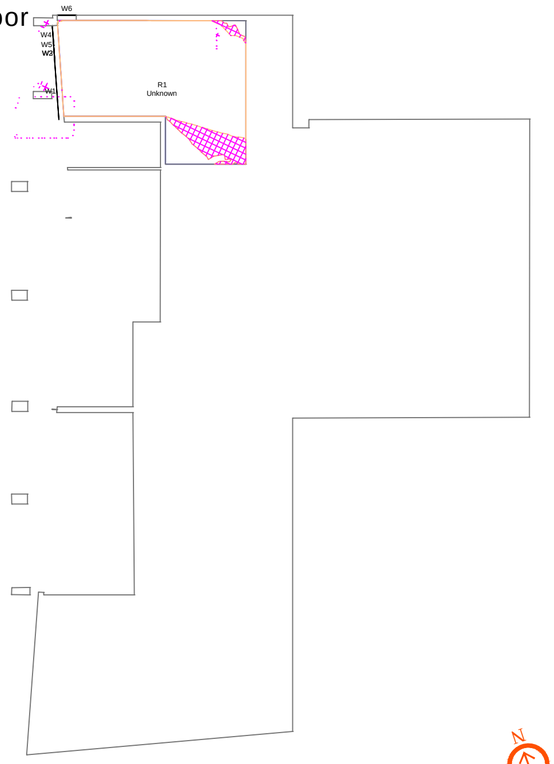
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

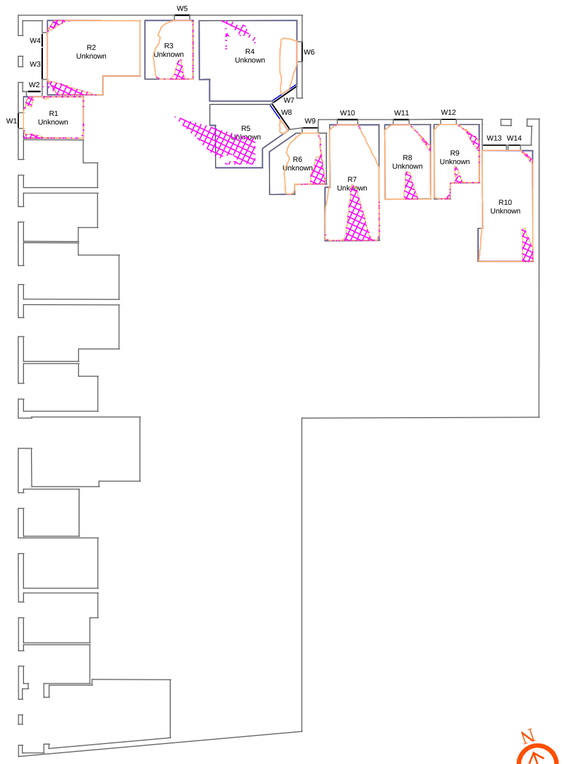
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Ground Floor



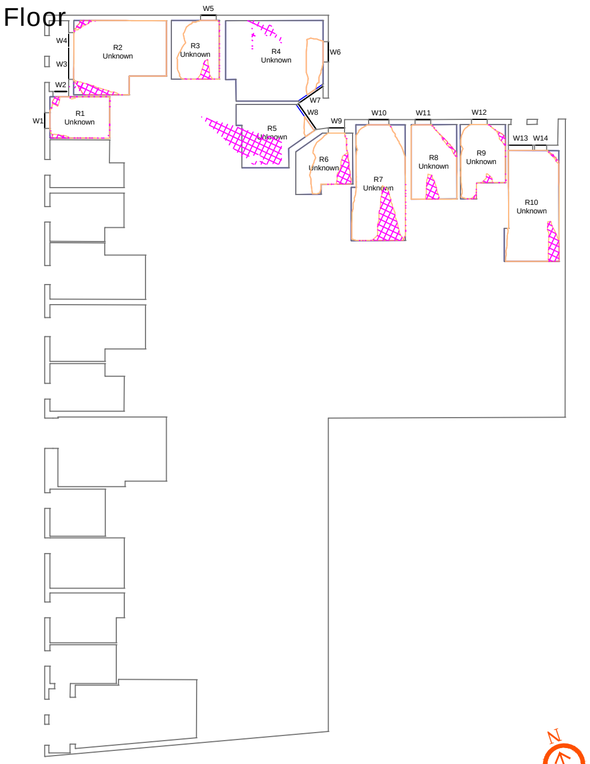
1:250

The Hallmark
First Floor



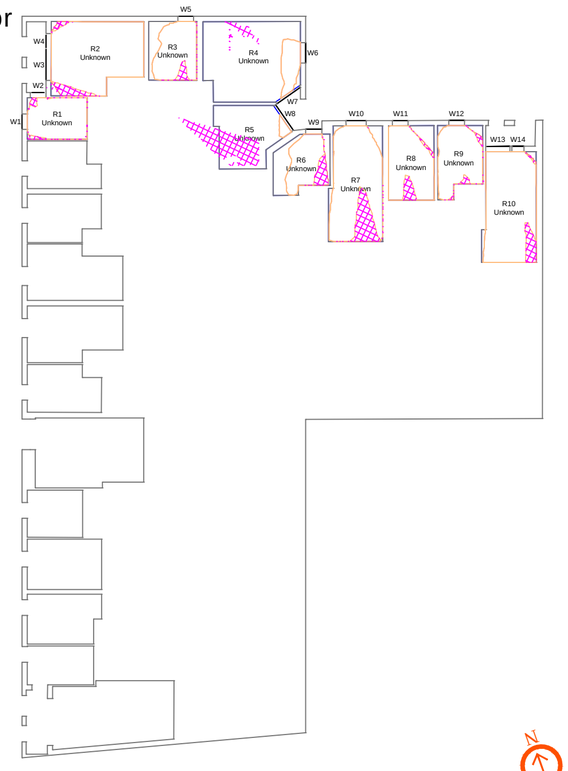
1:250

The Hallmark
Second Floor



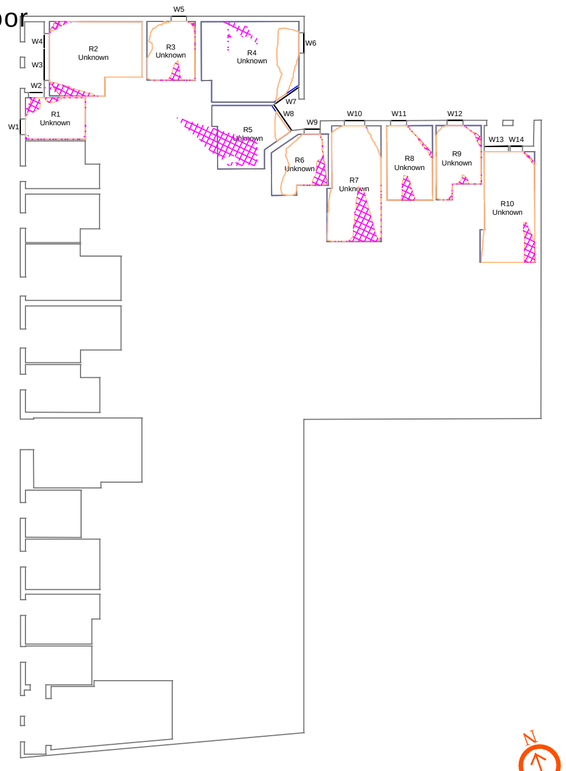
1:250

The Hallmark
Third Floor



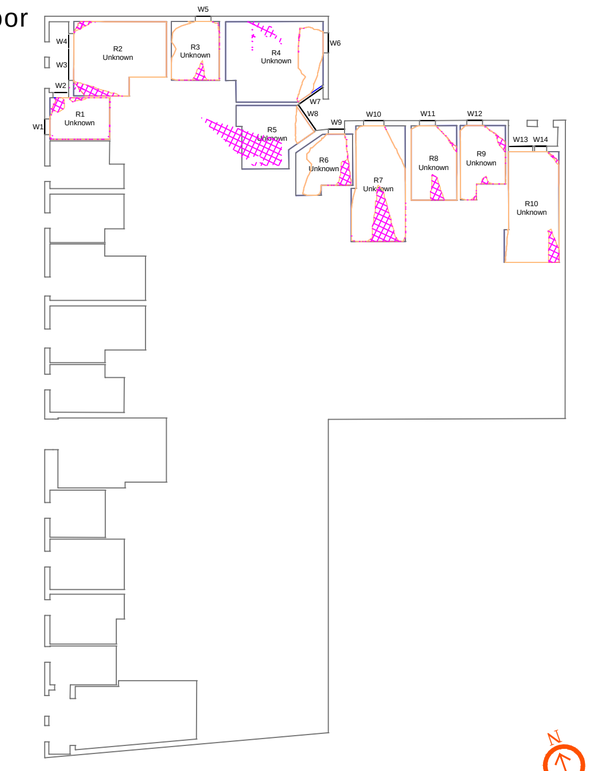
1:250

The Hallmark
Fourth Floor



1:250

The Hallmark
Fifth Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:250	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-21	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

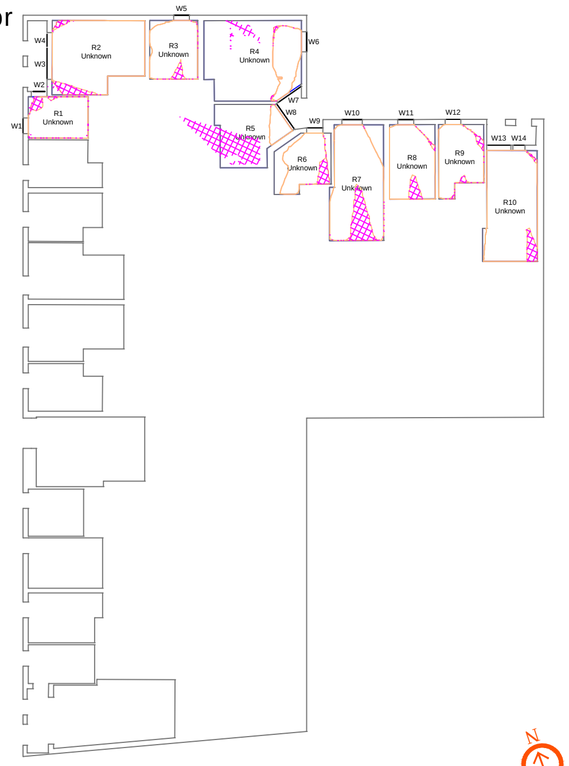
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

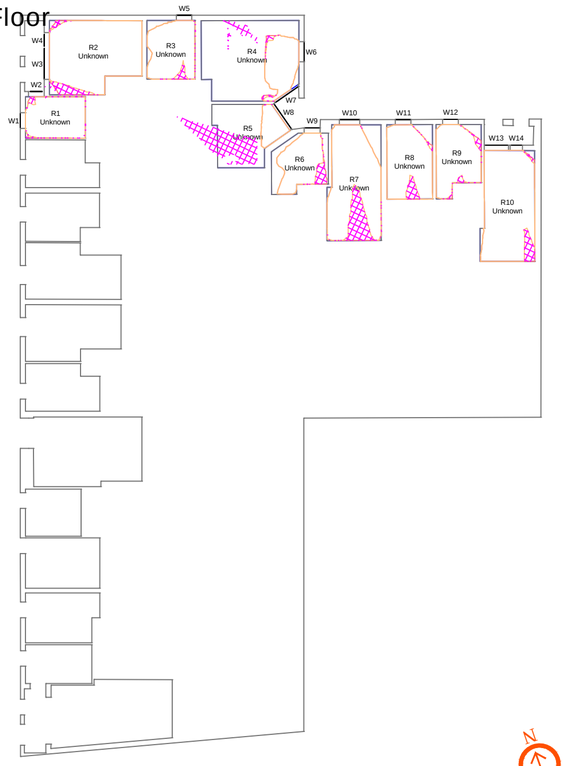
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Sixth Floor



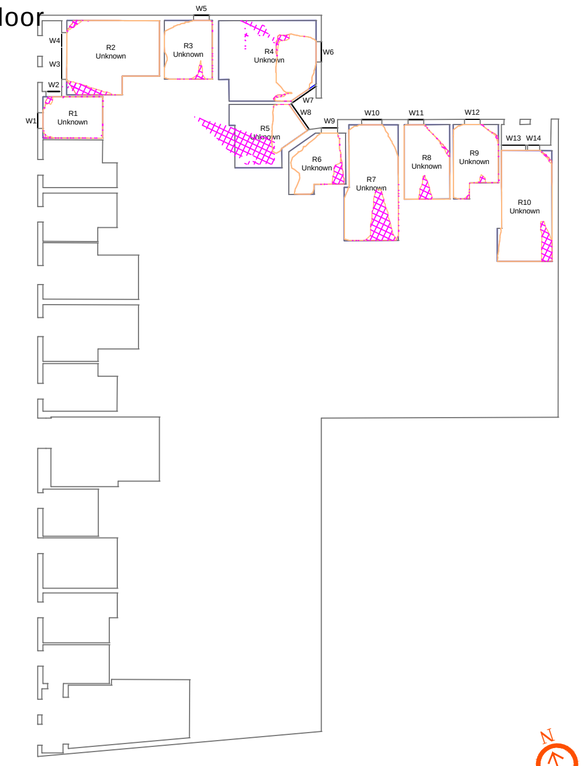
1:250

The Hallmark
Seventh Floor



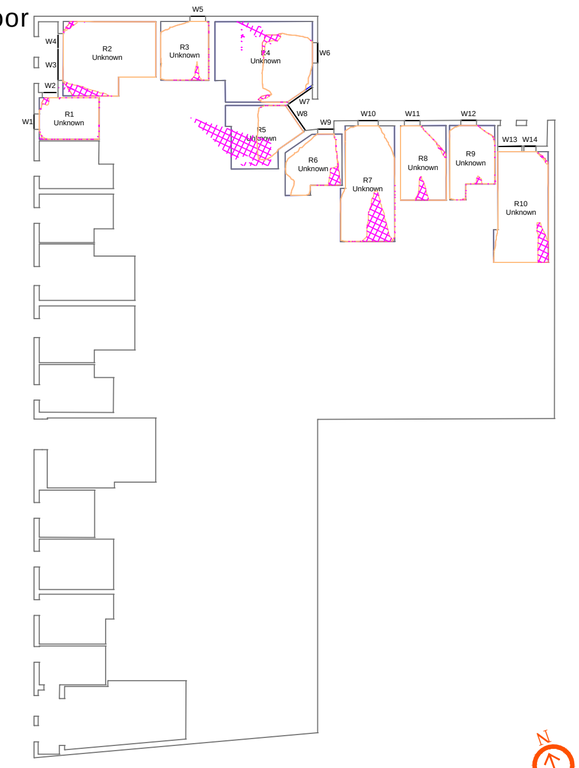
1:250

The Hallmark
Eighth Floor



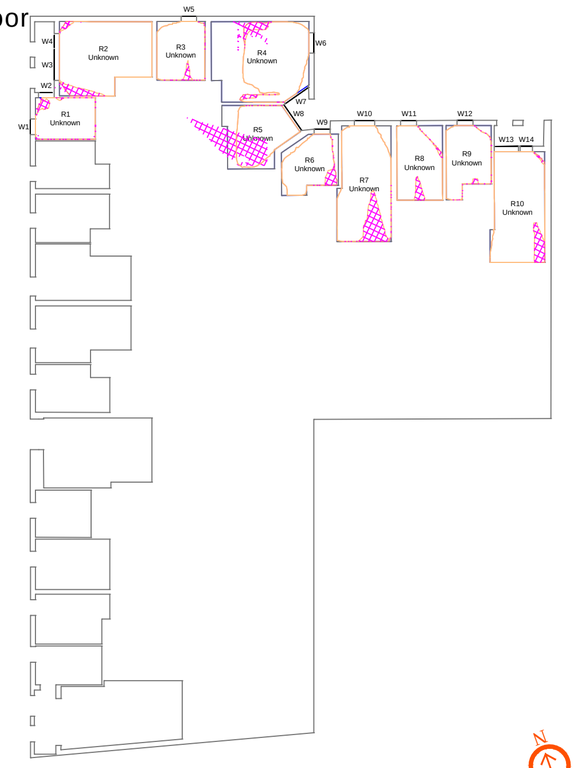
1:250

The Hallmark
Ninth Floor



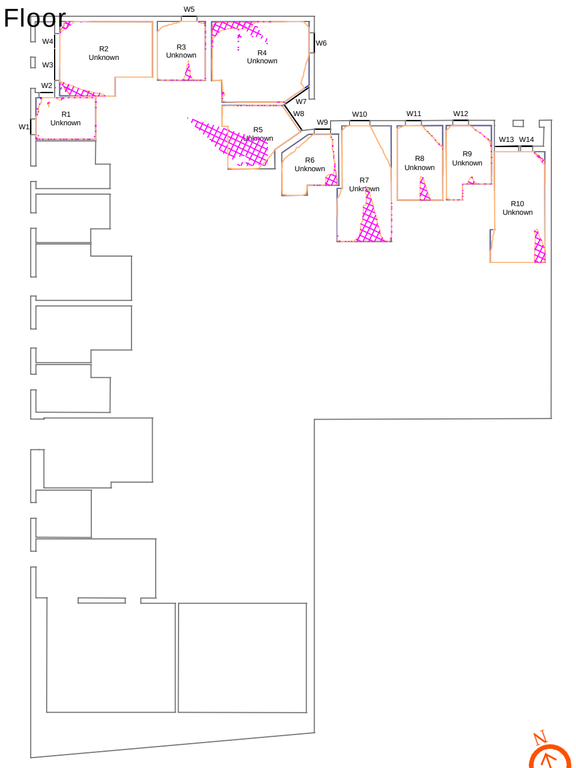
1:250

The Hallmark
Tenth Floor



1:250

The Hallmark
Eleventh Floor



1:250

Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
1:200	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-22	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

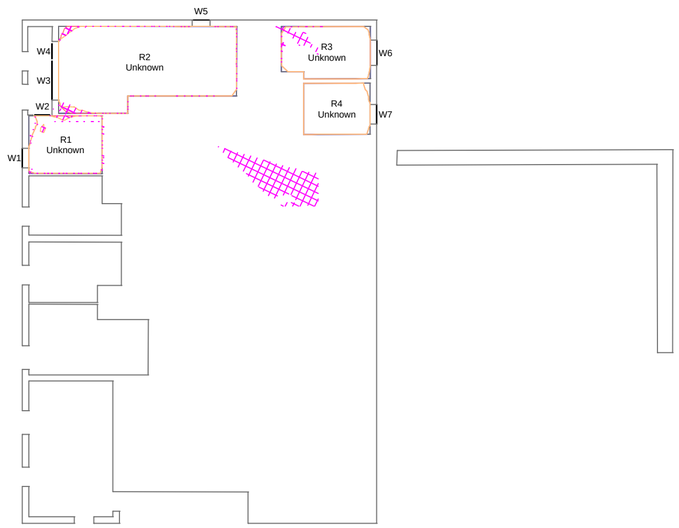
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

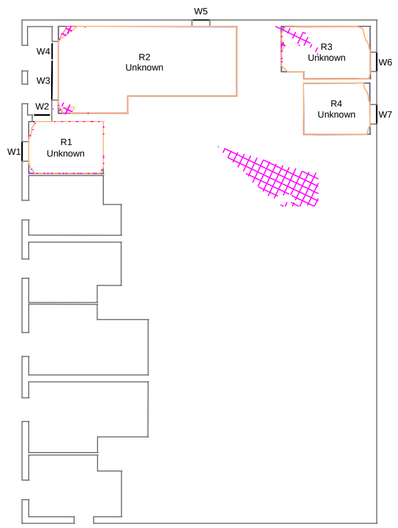
NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

The Hallmark
Twelfth Floor



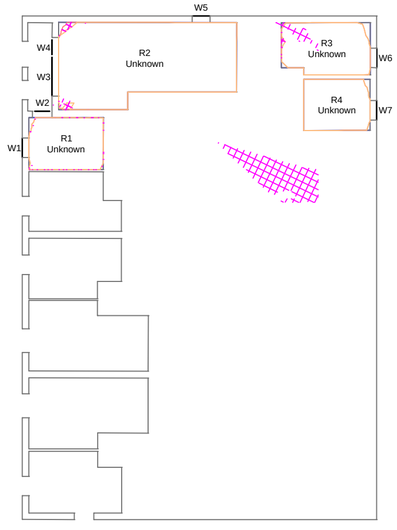
1:200

The Hallmark
Thirteenth Floor



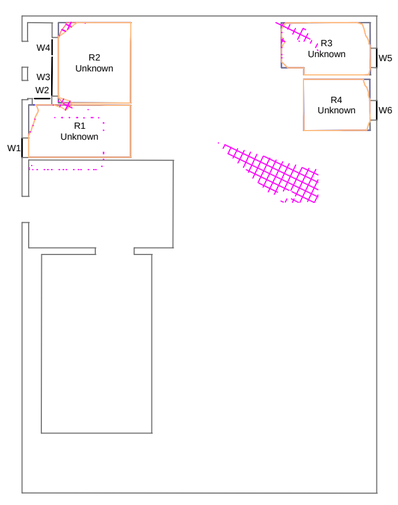
1:200

The Hallmark
Fourteenth Floor



1:200

The Hallmark
Fifteenth Floor



1:200

Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-23	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

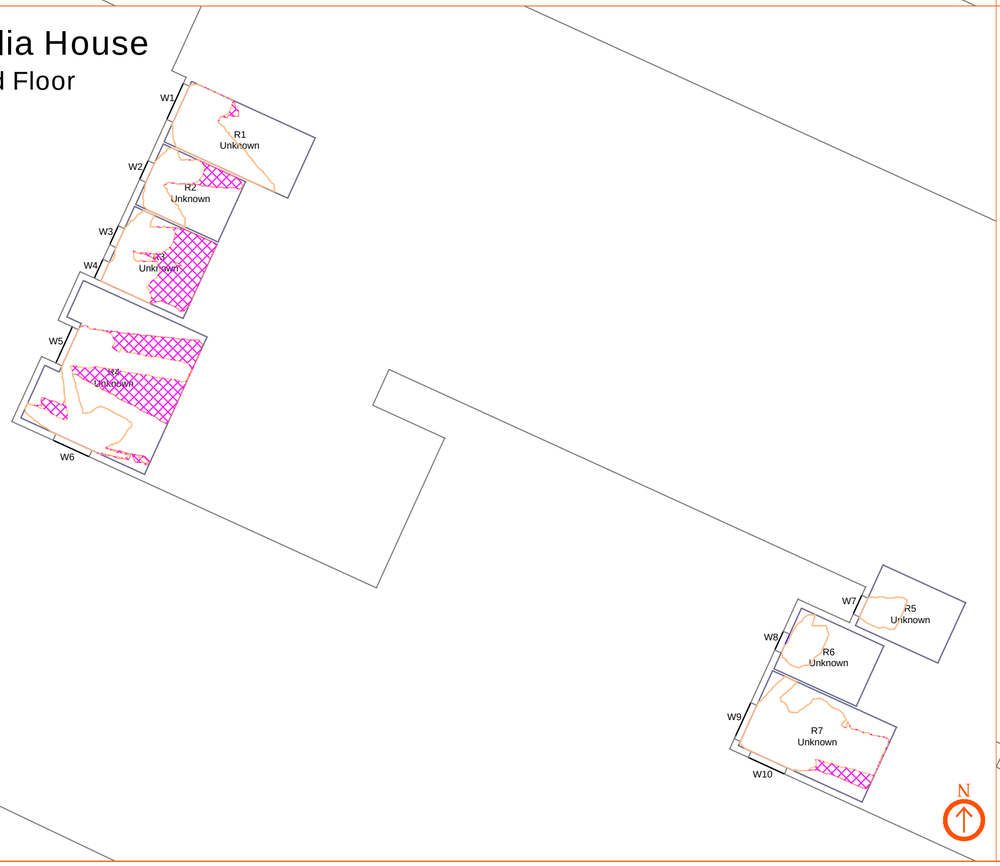
Melia House
First Floor



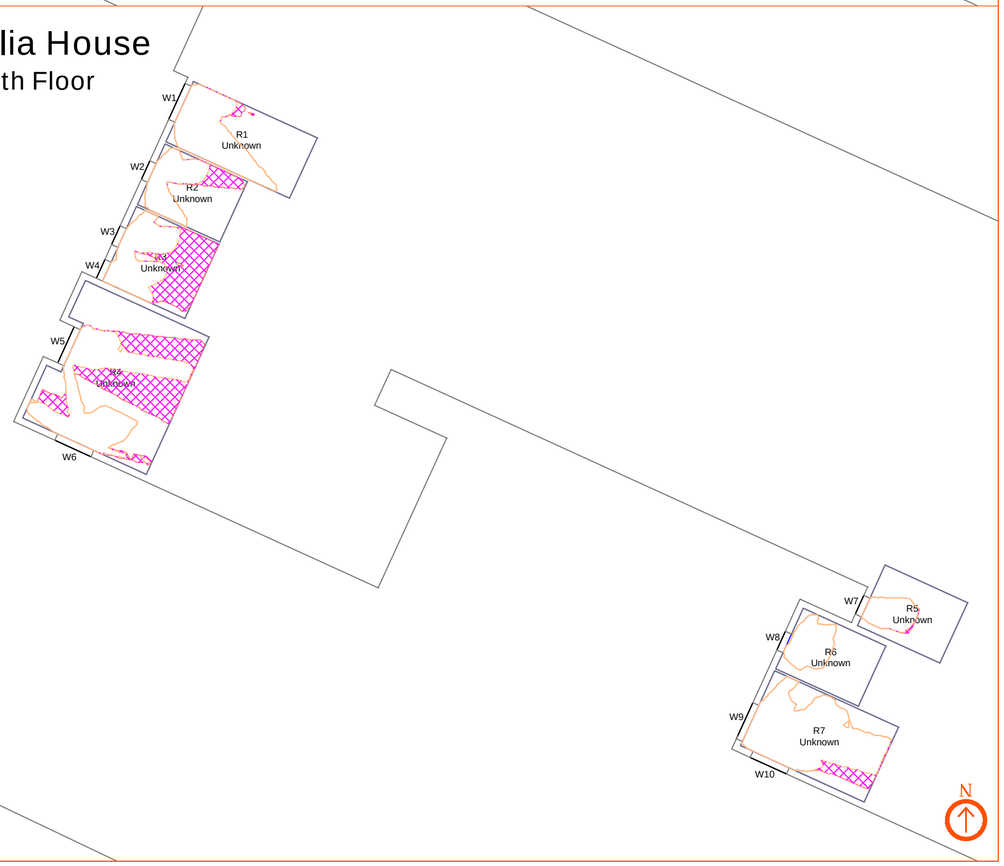
Melia House
Second Floor



Melia House
Third Floor



Melia House
Fourth Floor



Proximity
Kennedy House. 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-24	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

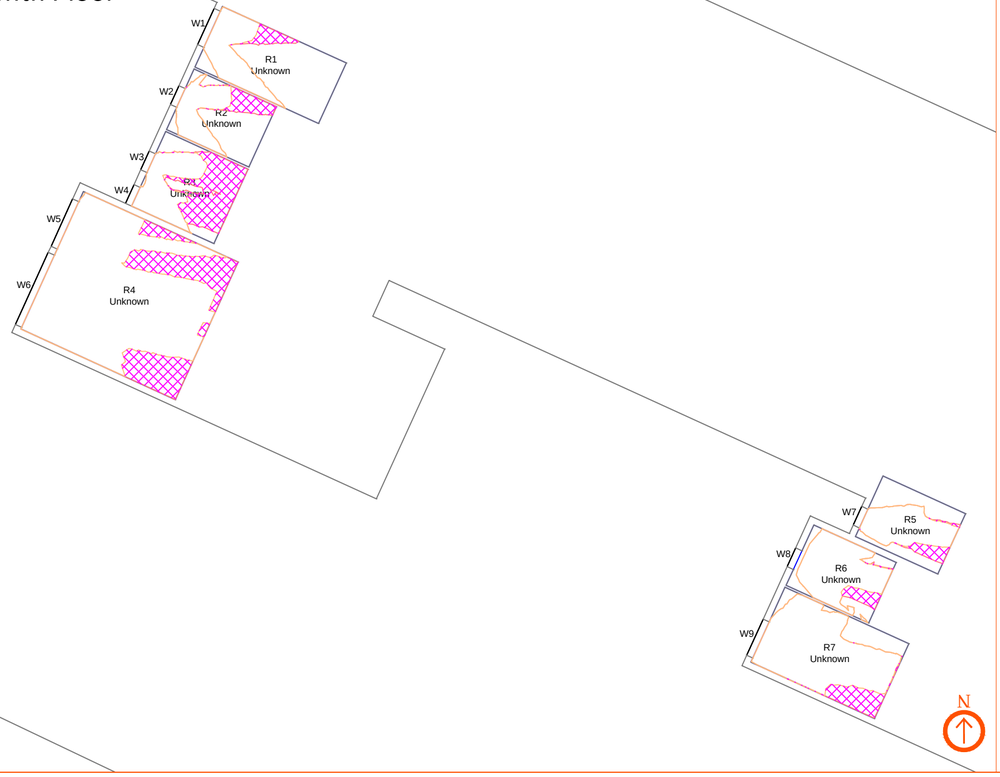
Melia House
Fifth Floor



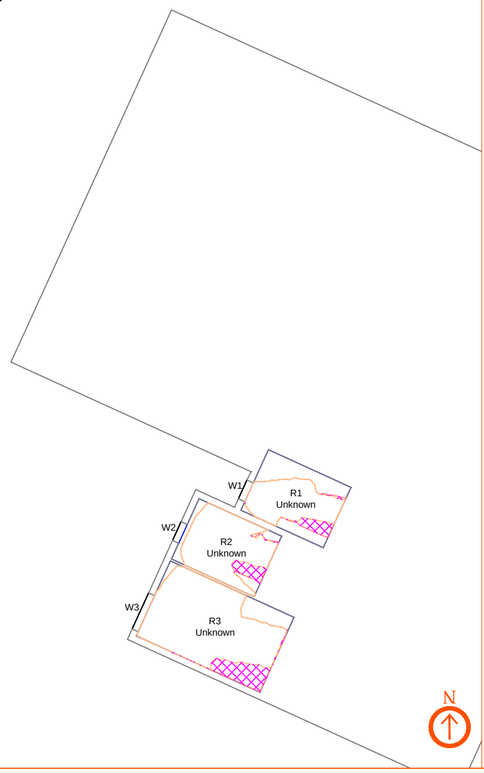
Melia House
Sixth Floor



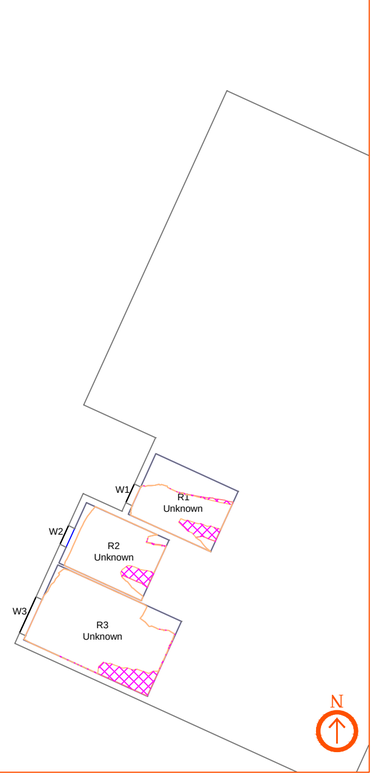
Melia House
Seventh Floor



Melia House
Eighth Floor



Melia House
Ninth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-25	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

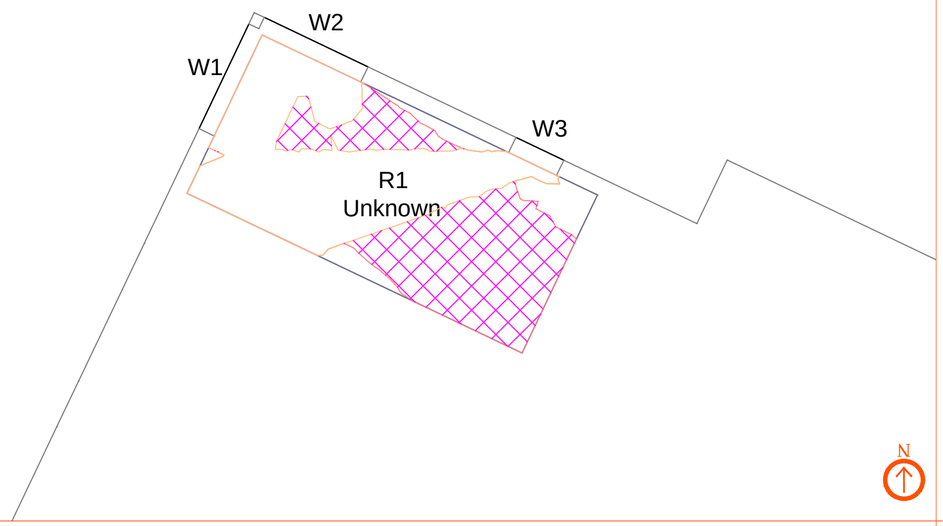
All heights in m AOD

DD Legend

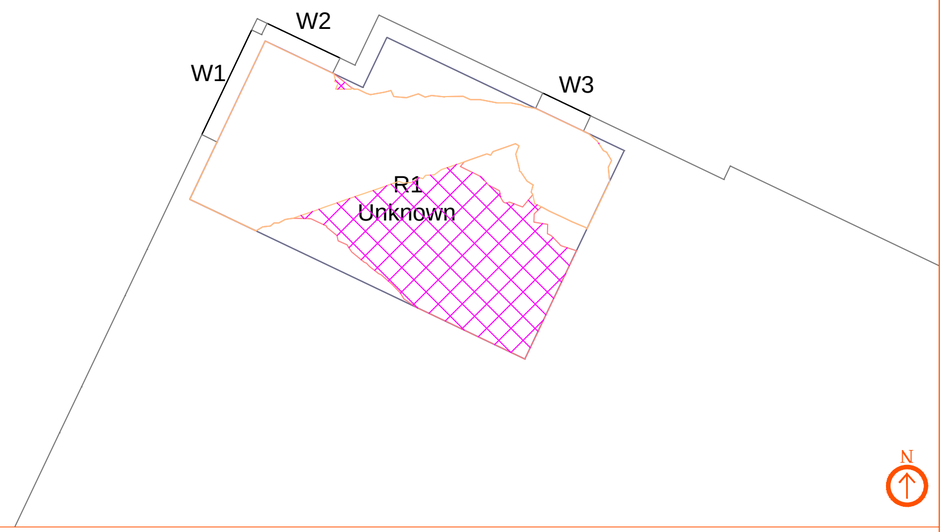
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

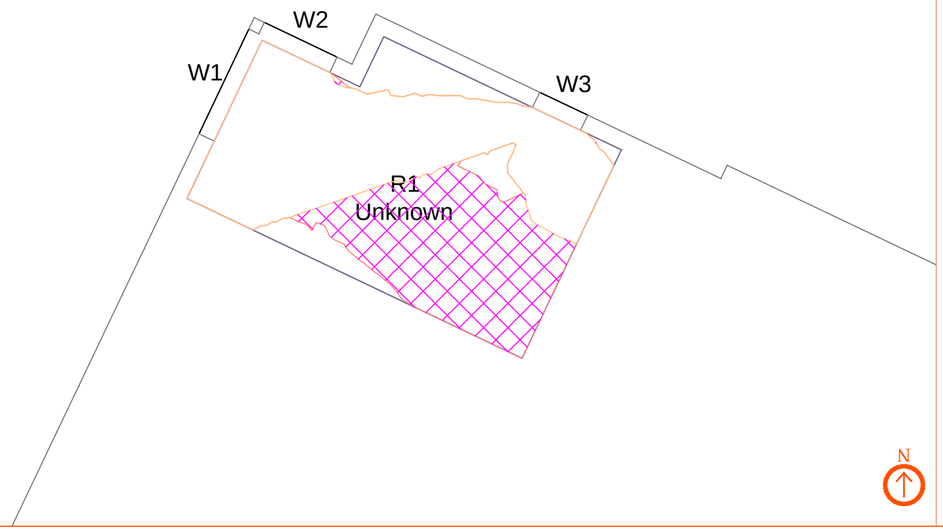
Masson Place
First Floor



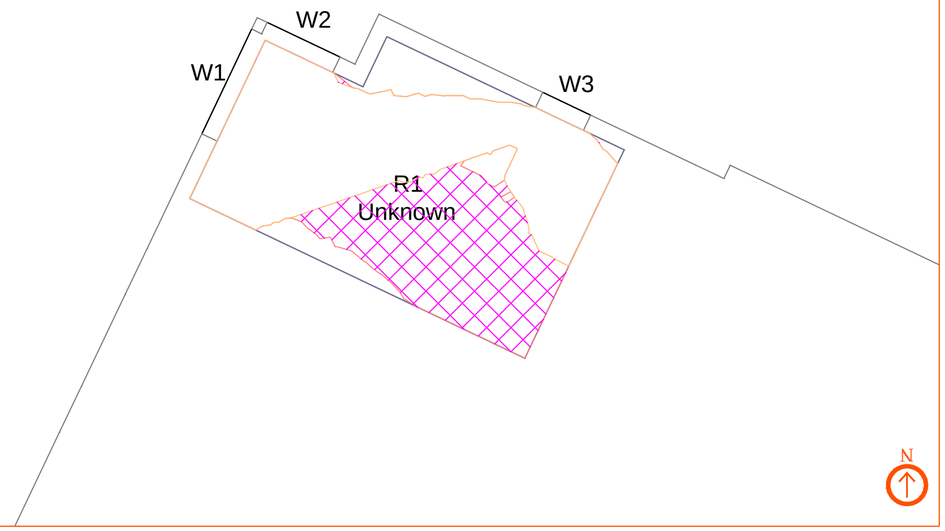
Masson Place
Second Floor



Masson Place
Third Floor



Masson Place
Fourth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-26	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

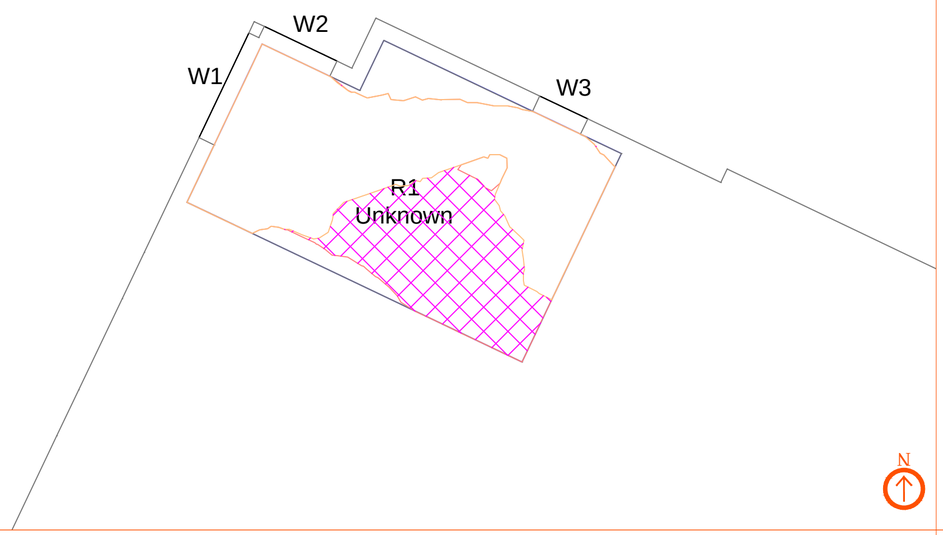
All heights in m AOD

DD Legend

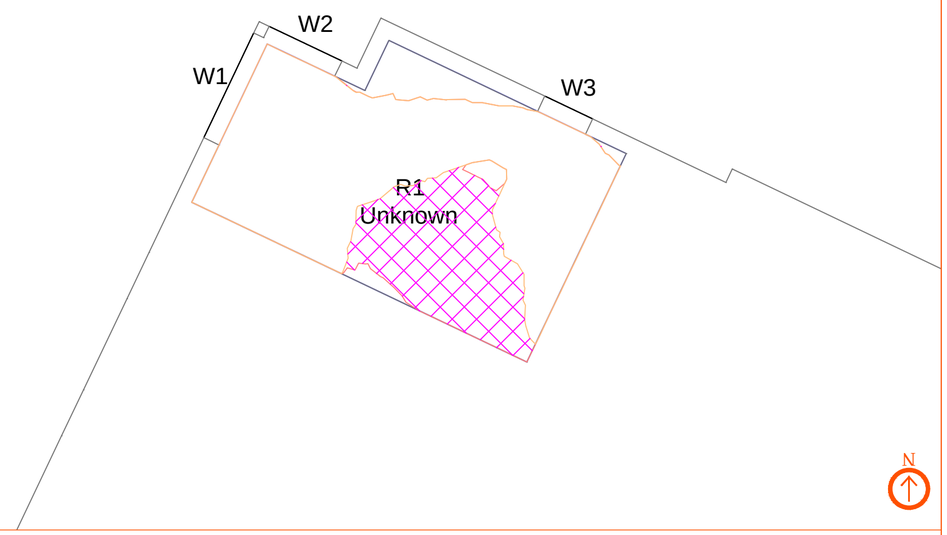
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

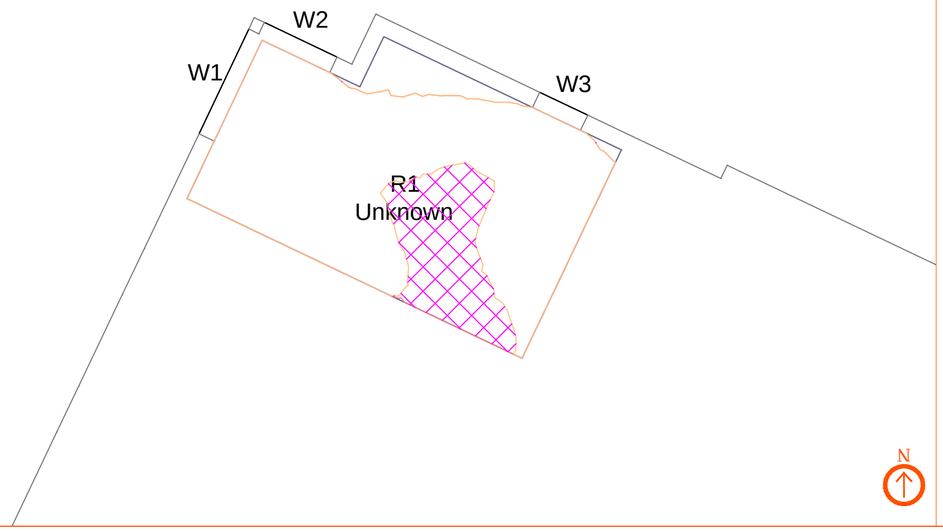
Masson Place
Fifth Floor



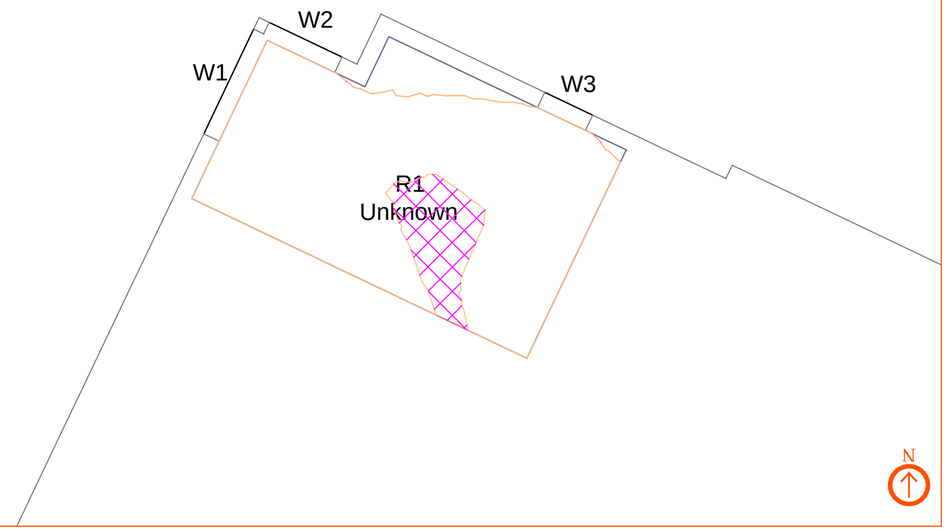
Masson Place
Sixth Floor



Masson Place
Seventh Floor



Masson Place
Eighth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-27	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

All heights in m AOD

DD Legend

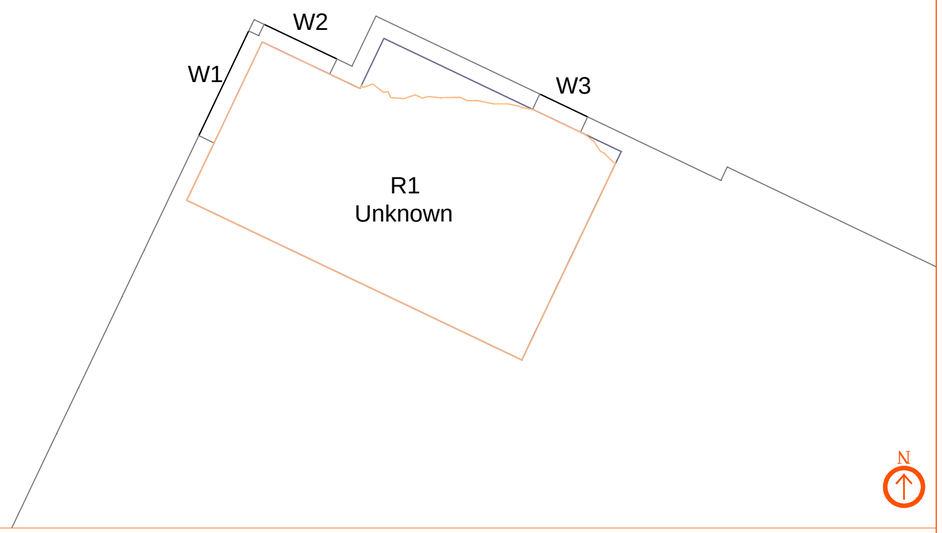
- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Masson Place
Ninth Floor



Masson Place
Tenth Floor



Proximity
Kennedy House, 31 Stamford Street,
Altrincham, WA14 1ES
weareproximity.co.uk
Tel: 0161 444 3950

CLIENT:
Peak Properties

PROJECT:
Number One Lord Street
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	SC
NTS	28.10.2025	CHECKED:	DMH

DRAWING NUMBER:	REV:
2375_MA-28	00

REV:	NOTES:	DRWN:	DATE:

Massing Legend

- Existing
- Proposed

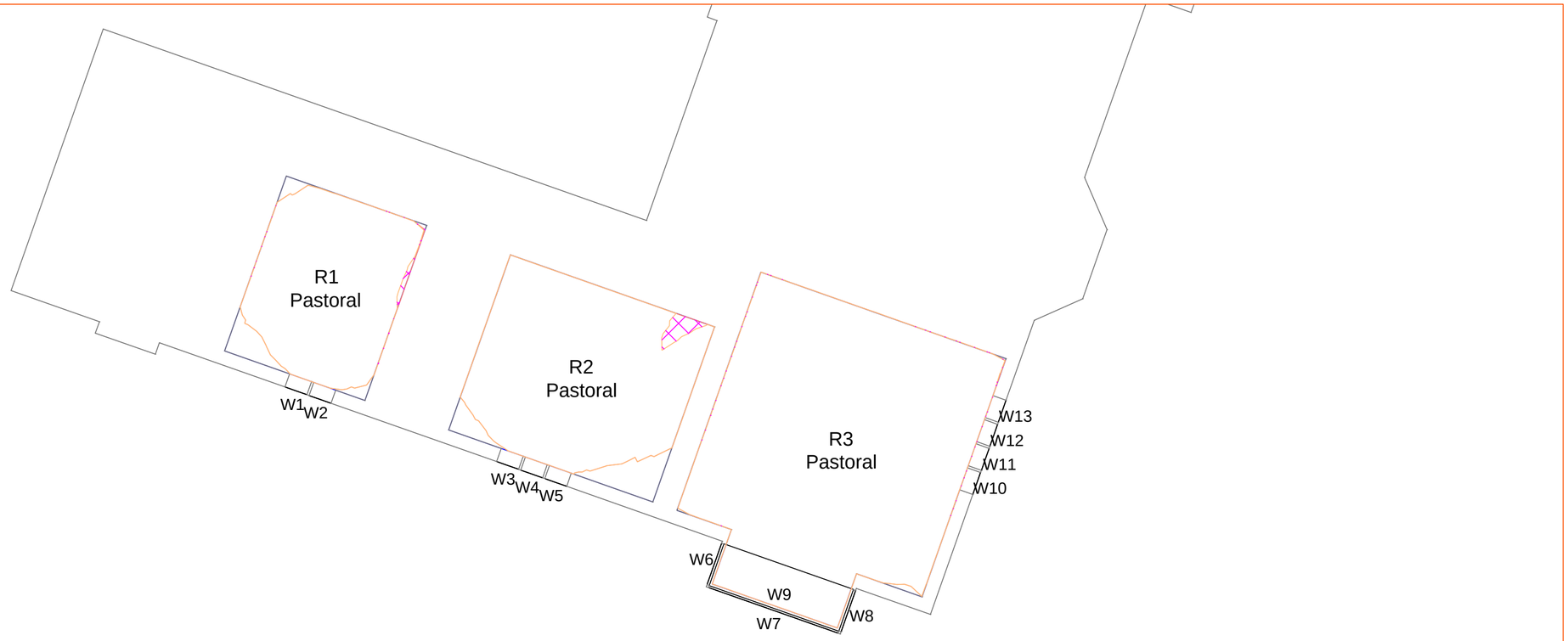
All heights in m AOD

DD Legend

- Room Area (Measured Layout)
- Existing No Sky Area
- Proposed No Sky Area
- Area of Loss/Gain

NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

St Chad's Church
Ground Floor



St Chad's Church
First Floor



Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
St Chads Church													
Ground	R1	Commercial	Pastoral	W1	199°	79.00	67.00	12.00	0.85	23.00	14.00	9.00	0.61
				W2	199°								
	R2	Commercial	Pastoral	W3	199°	77.00	64.00	13.00	0.83	19.00	9.00	10.00	0.47
				W4	199°								
				W5	199°								
	R3	Commercial	Pastoral	W6	289°N	90.00	79.00	11.00	0.88	20.00	12.00	8.00	0.60
				W7	199°								
				W8	109°								
				W9	199° Inc								
				W10	109°								
				W11	109°								
				W12	109°								
				W13	109°								
First	R1	Commercial	Pastoral	W1	289°N	76.00	64.00	12.00	0.84	22.00	12.00	10.00	0.55
				W2	289°N								
				W3	289°N								
				W4	199°								
				W5	199°								
				W6	199° Inc								
	R2	Commercial	Pastoral	W7	199°	86.00	75.00	11.00	0.87	24.00	15.00	9.00	0.63
				W8	199°								
				W9	199° Inc								
	R3	Commercial	Pastoral	W10	199°	81.00	69.00	12.00	0.85	22.00	12.00	10.00	0.55
				W11	199°								
				W12	199° Inc								
Britton House													
Ground	R1	Residential	LKD	W1	25°N			*North	*North			*North	*North
				W2	295°N								
				W3	295°N								
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6	292°N	33.00	9.00	24.00	0.27	5.00	1.00	4.00	0.20
				W7	205°								
	R5	Residential	Bedroom	W8	206°	14.00	12.00	2.00	0.86	3.00	1.00	2.00	0.33
	R6	Residential	Bedroom	W9	205°	44.00	27.00	17.00	0.61	6.00	5.00	1.00	0.83
	R7	Residential	LKD	W10	205°	44.00	27.00	17.00	0.61	6.00	5.00	1.00	0.83
	R8	Residential	Bedroom	W11	205°	43.00	28.00	15.00	0.65	5.00	5.00	0.00	1.00
	R9	Residential	LKD	W12	206°	8.00	6.00	2.00	0.75	4.00	4.00	0.00	1.00
	R10	Residential	LKD	W13	205°	45.00	33.00	12.00	0.73	8.00	8.00	0.00	1.00
				W14	205°								
	R11	Residential	Bedroom	W15	205°	6.00	6.00	0.00	1.00	4.00	4.00	0.00	1.00
	R12	Residential	LKD	W16	206°	22.00	21.00	1.00	0.95	4.00	4.00	0.00	1.00
	R13	Residential	Bedroom	W17	206°	26.00	17.00	9.00	0.65	6.00	6.00	0.00	1.00
First	R1	Residential	LKD	W1	25°N			*North	*North			*North	*North
				W2	295°N								
				W3	295°N								
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6	24°N	36.00	12.00	24.00	0.33	6.00	2.00	4.00	0.33
				W7	292°N								
				W8	205°								
	R5	Residential	Bedroom	W9	206°	15.00	13.00	2.00	0.87	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	46.00	28.00	18.00	0.61	7.00	6.00	1.00	0.86
	R7	Residential	LKD	W11	205°	44.00	28.00	16.00	0.64	7.00	6.00	1.00	0.86
	R8	Residential	Bedroom	W12	205°	44.00	29.00	15.00	0.66	6.00	6.00	0.00	1.00
	R9	Residential	LKD	W13	206°	18.00	15.00	3.00	0.83	4.00	4.00	0.00	1.00

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R10	Residential	LKD	W14 W15	205° 205°	48.00	35.00	13.00	0.73	9.00	9.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	11.00	11.00	0.00	1.00	5.00	5.00	0.00	1.00
	R12	Residential	LKD	W17	206°	27.00	25.00	2.00	0.93	5.00	5.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	28.00	18.00	10.00	0.64	6.00	6.00	0.00	1.00
Second	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	38.00	13.00	25.00	0.34	7.00	3.00	4.00	0.43
	R5	Residential	Bedroom	W9	206°	16.00	14.00	2.00	0.88	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	50.00	30.00	20.00	0.60	9.00	7.00	2.00	0.78
	R7	Residential	LKD	W11	205°	49.00	31.00	18.00	0.63	10.00	8.00	2.00	0.80
	R8	Residential	Bedroom	W12	205°	47.00	30.00	17.00	0.64	7.00	6.00	1.00	0.86
	R9	Residential	LKD	W13	206°	19.00	17.00	2.00	0.89	5.00	5.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	50.00	36.00	14.00	0.72	10.00	10.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	12.00	12.00	0.00	1.00	5.00	5.00	0.00	1.00
	R12	Residential	LKD	W17	206°	29.00	27.00	2.00	0.93	7.00	7.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	31.00	21.00	10.00	0.68	8.00	8.00	0.00	1.00
Third	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	39.00	14.00	25.00	0.36	7.00	3.00	4.00	0.43
	R5	Residential	Bedroom	W9	206°	17.00	15.00	2.00	0.88	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	53.00	32.00	21.00	0.60	11.00	8.00	3.00	0.73
	R7	Residential	LKD	W11	205°	51.00	33.00	18.00	0.65	12.00	10.00	2.00	0.83
	R8	Residential	Bedroom	W12	205°	49.00	32.00	17.00	0.65	9.00	8.00	1.00	0.89
	R9	Residential	LKD	W13	206°	19.00	17.00	2.00	0.89	5.00	5.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	52.00	38.00	14.00	0.73	11.00	11.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	13.00	13.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	30.00	28.00	2.00	0.93	8.00	8.00	0.00	1.00
	R13	Residential	Bedroom	W18	206°	33.00	23.00	10.00	0.70	9.00	9.00	0.00	1.00
Fourth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	39.00	14.00	25.00	0.36	7.00	3.00	4.00	0.43

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R5	Residential	Bedroom	W9	206°	17.00	15.00	2.00	0.88	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	53.00	32.00	21.00	0.60	11.00	8.00	3.00	0.73
	R7	Residential	LKD	W11	205°	52.00	33.00	19.00	0.63	12.00	9.00	3.00	0.75
	R8	Residential	Bedroom	W12	205°	52.00	34.00	18.00	0.65	11.00	9.00	2.00	0.82
	R9	Residential	LKD	W13	206°	21.00	19.00	2.00	0.90	6.00	6.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	54.00	40.00	14.00	0.74	12.00	12.00	0.00	1.00
	R11	Residential	Bedroom	W16	205°	14.00	14.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	32.00	29.00	3.00	0.91	10.00	9.00	1.00	0.90
	R13	Residential	Bedroom	W18	206°	36.00	27.00	9.00	0.75	10.00	10.00	0.00	1.00
Fifth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	15.00	25.00	0.38	7.00	3.00	4.00	0.43
	R5	Residential	Bedroom	W9	206°	17.00	15.00	2.00	0.88	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	54.00	33.00	21.00	0.61	11.00	8.00	3.00	0.73
	R7	Residential	LKD	W11	205°	54.00	35.00	19.00	0.65	13.00	10.00	3.00	0.77
	R8	Residential	Bedroom	W12	205°	53.00	35.00	18.00	0.66	12.00	10.00	2.00	0.83
	R9	Residential	LKD	W13	206°	22.00	20.00	2.00	0.91	6.00	6.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	54.00	39.00	15.00	0.72	12.00	11.00	1.00	0.92
	R11	Residential	Bedroom	W16	205°	15.00	15.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	34.00	31.00	3.00	0.91	10.00	9.00	1.00	0.90
	R13	Residential	Bedroom	W18	206°	36.00	27.00	9.00	0.75	10.00	10.00	0.00	1.00
Sixth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	15.00	25.00	0.38	7.00	3.00	4.00	0.43
	R5	Residential	Bedroom	W9	206°	20.00	18.00	2.00	0.90	4.00	2.00	2.00	0.50
	R6	Residential	Bedroom	W10	205°	57.00	35.00	22.00	0.61	12.00	8.00	4.00	0.67
	R7	Residential	LKD	W11	205°	57.00	37.00	20.00	0.65	14.00	10.00	4.00	0.71
	R8	Residential	Bedroom	W12	205°	55.00	37.00	18.00	0.67	12.00	10.00	2.00	0.83
	R9	Residential	LKD	W13	206°	24.00	22.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	57.00	42.00	15.00	0.74	14.00	13.00	1.00	0.93
	R11	Residential	Bedroom	W16	205°	15.00	15.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	37.00	33.00	4.00	0.89	12.00	10.00	2.00	0.83
	R13	Residential	Bedroom	W18	206°	36.00	27.00	9.00	0.75	10.00	10.00	0.00	1.00
Seventh	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	40.00	16.00	24.00	0.40	7.00	3.00	4.00	0.43
	R5	Residential	Bedroom	W9	206°	22.00	19.00	3.00	0.86	5.00	2.00	3.00	0.40
	R6	Residential	Bedroom	W10	205°	60.00	37.00	23.00	0.62	13.00	8.00	5.00	0.62
	R7	Residential	LKD	W11	205°	59.00	39.00	20.00	0.66	14.00	10.00	4.00	0.71
	R8	Residential	Bedroom	W12	205°	57.00	39.00	18.00	0.68	13.00	10.00	3.00	0.77
	R9	Residential	LKD	W13	206°	26.00	24.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	57.00	42.00	15.00	0.74	16.00	14.00	2.00	0.88
	R11	Residential	Bedroom	W16	205°	17.00	17.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	36.00	32.00	4.00	0.89	12.00	10.00	2.00	0.83
	R13	Residential	Bedroom	W18	206°	36.00	28.00	8.00	0.78	10.00	10.00	0.00	1.00
Eighth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	42.00	18.00	24.00	0.43	8.00	4.00	4.00	0.50
	R5	Residential	Bedroom	W9	206°	23.00	20.00	3.00	0.87	6.00	3.00	3.00	0.50
	R6	Residential	Bedroom	W10	205°	62.00	41.00	21.00	0.66	14.00	10.00	4.00	0.71
	R7	Residential	LKD	W11	205°	61.00	42.00	19.00	0.69	15.00	11.00	4.00	0.73
	R8	Residential	Bedroom	W12	205°	59.00	41.00	18.00	0.69	14.00	11.00	3.00	0.79
	R9	Residential	LKD	W13	206°	26.00	24.00	2.00	0.92	7.00	7.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	60.00	45.00	15.00	0.75	16.00	14.00	2.00	0.88
	R11	Residential	Bedroom	W16	205°	17.00	17.00	0.00	1.00	6.00	6.00	0.00	1.00
	R12	Residential	LKD	W17	206°	42.00	38.00	4.00	0.90	15.00	13.00	2.00	0.87
	R13	Residential	Bedroom	W18	206°	38.00	30.00	8.00	0.79	11.00	11.00	0.00	1.00
Ninth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	43.00	20.00	23.00	0.47	8.00	4.00	4.00	0.50
	R5	Residential	Bedroom	W9	206°	25.00	23.00	2.00	0.92	7.00	5.00	2.00	0.71
	R6	Residential	Bedroom	W10	205°	63.00	42.00	21.00	0.67	15.00	11.00	4.00	0.73
	R7	Residential	LKD	W11	205°	63.00	44.00	19.00	0.70	16.00	12.00	4.00	0.75
	R8	Residential	Bedroom	W12	205°	61.00	44.00	17.00	0.72	15.00	12.00	3.00	0.80
	R9	Residential	LKD	W13	206°	29.00	27.00	2.00	0.93	8.00	8.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	63.00	49.00	14.00	0.78	17.00	15.00	2.00	0.88

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R11	Residential	Bedroom	W16	205°	20.00	19.00	1.00	0.95	7.00	6.00	1.00	0.86
	R12	Residential	LKD	W17	206°	43.00	38.00	5.00	0.88	16.00	13.00	3.00	0.81
	R13	Residential	Bedroom	W18	206°	40.00	32.00	8.00	0.80	11.00	11.00	0.00	1.00
Tenth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	46.00	25.00	21.00	0.54	9.00	6.00	3.00	0.67
	R5	Residential	Bedroom	W9	206°	27.00	25.00	2.00	0.93	8.00	6.00	2.00	0.75
	R6	Residential	Bedroom	W10	205°	64.00	44.00	20.00	0.69	15.00	11.00	4.00	0.73
	R7	Residential	LKD	W11	205°	64.00	46.00	18.00	0.72	16.00	12.00	4.00	0.75
	R8	Residential	Bedroom	W12	205°	64.00	47.00	17.00	0.73	15.00	12.00	3.00	0.80
	R9	Residential	LKD	W13	206°	30.00	29.00	1.00	0.97	8.00	8.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	64.00	51.00	13.00	0.80	17.00	15.00	2.00	0.88
	R11	Residential	Bedroom	W16	205°	21.00	21.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	47.00	43.00	4.00	0.91	16.00	14.00	2.00	0.88
	R13	Residential	Bedroom	W18	206°	42.00	35.00	7.00	0.83	11.00	11.00	0.00	1.00
Eleventh	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	46.00	25.00	21.00	0.54	9.00	6.00	3.00	0.67
	R5	Residential	Bedroom	W9	206°	31.00	29.00	2.00	0.94	9.00	7.00	2.00	0.78
	R6	Residential	Bedroom	W10	205°	67.00	48.00	19.00	0.72	15.00	11.00	4.00	0.73
	R7	Residential	LKD	W11	205°	68.00	50.00	18.00	0.74	16.00	12.00	4.00	0.75
	R8	Residential	Bedroom	W12	205°	66.00	50.00	16.00	0.76	15.00	12.00	3.00	0.80
	R9	Residential	LKD	W13	206°	31.00	30.00	1.00	0.97	8.00	8.00	0.00	1.00
	R10	Residential	LKD	W14 W15	205° 205°	67.00	54.00	13.00	0.81	18.00	16.00	2.00	0.89
	R11	Residential	Bedroom	W16	205°	22.00	22.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	48.00	44.00	4.00	0.92	16.00	14.00	2.00	0.88
	R13	Residential	Bedroom	W18	206°	44.00	37.00	7.00	0.84	11.00	11.00	0.00	1.00
Twelfth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	48.00	27.00	21.00	0.56	10.00	7.00	3.00	0.70
	R5	Residential	Bedroom	W9	206°	31.00	29.00	2.00	0.94	9.00	7.00	2.00	0.78
	R6	Residential	Bedroom	W10	205°	71.00	54.00	17.00	0.76	16.00	12.00	4.00	0.75

Project Name: One Lord Street BRE
Project No.: 2375
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
	R7	Residential	LKD	W11	205°	69.00	52.00	17.00	0.75	16.00	12.00	4.00	0.75
	R8	Residential	Bedroom	W12	205°	68.00	51.00	17.00	0.75	16.00	12.00	4.00	0.75
	R9	Residential	LKD	W13	206°	36.00	34.00	2.00	0.94	9.00	8.00	1.00	0.89
	R10	Residential	LKD	W14 W15	205° 205°	70.00	57.00	13.00	0.81	19.00	16.00	3.00	0.84
	R11	Residential	Bedroom	W16	205°	24.00	24.00	0.00	1.00	7.00	7.00	0.00	1.00
	R12	Residential	LKD	W17	206°	51.00	47.00	4.00	0.92	16.00	14.00	2.00	0.88
	R13	Residential	Bedroom	W18	206°	46.00	39.00	7.00	0.85	11.00	11.00	0.00	1.00
Thirteenth	R1	Residential	LKD	W1 W2 W3	25°N 295°N 295°N			*North	*North			*North	*North
	R2	Residential	Bedroom	W4	295°N			*North	*North			*North	*North
	R3	Residential	Bedroom	W5	295°N			*North	*North			*North	*North
	R4	Residential	LKD	W6 W7 W8	24°N 292°N 205°	50.00	31.00	19.00	0.62	10.00	7.00	3.00	0.70
	R5	Residential	Bedroom	W9	206°	33.00	31.00	2.00	0.94	10.00	8.00	2.00	0.80
	R6	Residential	Bedroom	W10	205°	73.00	56.00	17.00	0.77	17.00	13.00	4.00	0.76
	R7	Residential	LKD	W11	205°	72.00	55.00	17.00	0.76	16.00	12.00	4.00	0.75
	R8	Residential	Bedroom	W12	205°	71.00	54.00	17.00	0.76	16.00	12.00	4.00	0.75
	R9	Residential	LKD	W13	206°	28.00	26.00	2.00	0.93	10.00	9.00	1.00	0.90
	R10	Residential	LKD	W14 W15	205° 205°	72.00	59.00	13.00	0.82	19.00	16.00	3.00	0.84
	R11	Residential	Bedroom	W16	205°	19.00	18.00	1.00	0.95	8.00	7.00	1.00	0.88
	R12	Residential	LKD	W17	206°	52.00	48.00	4.00	0.92	16.00	14.00	2.00	0.88
	R13	Residential	Bedroom	W18	206°	46.00	39.00	7.00	0.85	11.00	11.00	0.00	1.00
Fourteenth	R1	Residential	Unknown	W1 W2	25°N 295°N			*North	*North			*North	*North
	R2	Residential	LKD	W3 W4	295°N 205°	76.00	59.00	17.00	0.78	21.00	16.00	5.00	0.76
	R3	Residential	Bedroom	W5	205°	74.00	56.00	18.00	0.76	20.00	15.00	5.00	0.75
	R4	Residential	LKD	W6	205°	75.00	60.00	15.00	0.80	22.00	19.00	3.00	0.86
	R5	Residential	Bedroom	W7	205°	73.00	60.00	13.00	0.82	21.00	18.00	3.00	0.86
	R6	Residential	LKD	W8	205°	69.00	58.00	11.00	0.84	19.00	16.00	3.00	0.84
	R7	Residential	LKD	W9	205°	63.00	55.00	8.00	0.87	15.00	15.00	0.00	1.00
	R8	Residential	Bedroom	W10	205°	47.00	40.00	7.00	0.85	9.00	9.00	0.00	1.00
Fifteenth	R1	Residential	Bedroom	W1	205°	51.00	45.00	6.00	0.88	13.00	13.00	0.00	1.00
Sixteenth	R1	Residential	Bedroom	W1	205°	51.00	45.00	6.00	0.88	13.00	13.00	0.00	1.00



One Lord Street Wind Microclimate

Client: Linear Living Limited

Prepared by ArcAero

Date: 26th January 2026

Report No: 4570835rep1v2

Author: R. Kumar
Reviewer: H. Y. Teoh & J. Osman

Executive Summary

Wind microclimate studies assess how new developments alter local wind conditions. They estimate how often wind speeds at pedestrian level exceed thresholds for safety and comfort, helping to determine whether areas are suitable for their intended use, or if design changes are needed.

The One Lord Street development was assessed by ArcAero using Computational Fluid Dynamics (CFD) and the London Docklands Development Corporation (LDDC) variant of the Lawson criteria. The study predicts pedestrian wind conditions following the introduction of the proposed buildings and evaluates their suitability for public comfort and safety.

- The wind conditions at the existing site comply with the safety and comfort criteria for existing pedestrian activities.
- Following the introduction of the proposed development into the existing surrounds, wind conditions remain safe and largely comfortable for intended uses within and around the site.
- With the introduction of the cumulative developments, wind conditions within and around the site are entirely safe and comfortable for their intended use, with the exceedance on the terrace level fully resolved.

CONTENTS

01 PROJECT INTRODUCTION

02 MODELLING APPROACH
CFD | Digital Modelling | ABL | Wind Climate Modelling

03 COMFORT AND SAFETY CRITERIA
The Lawson Criteria

04 ASSESSMENT SCENARIOS

05 RESULTS

06 CONCLUSIONS

07 REFERENCES

1. Project Introduction

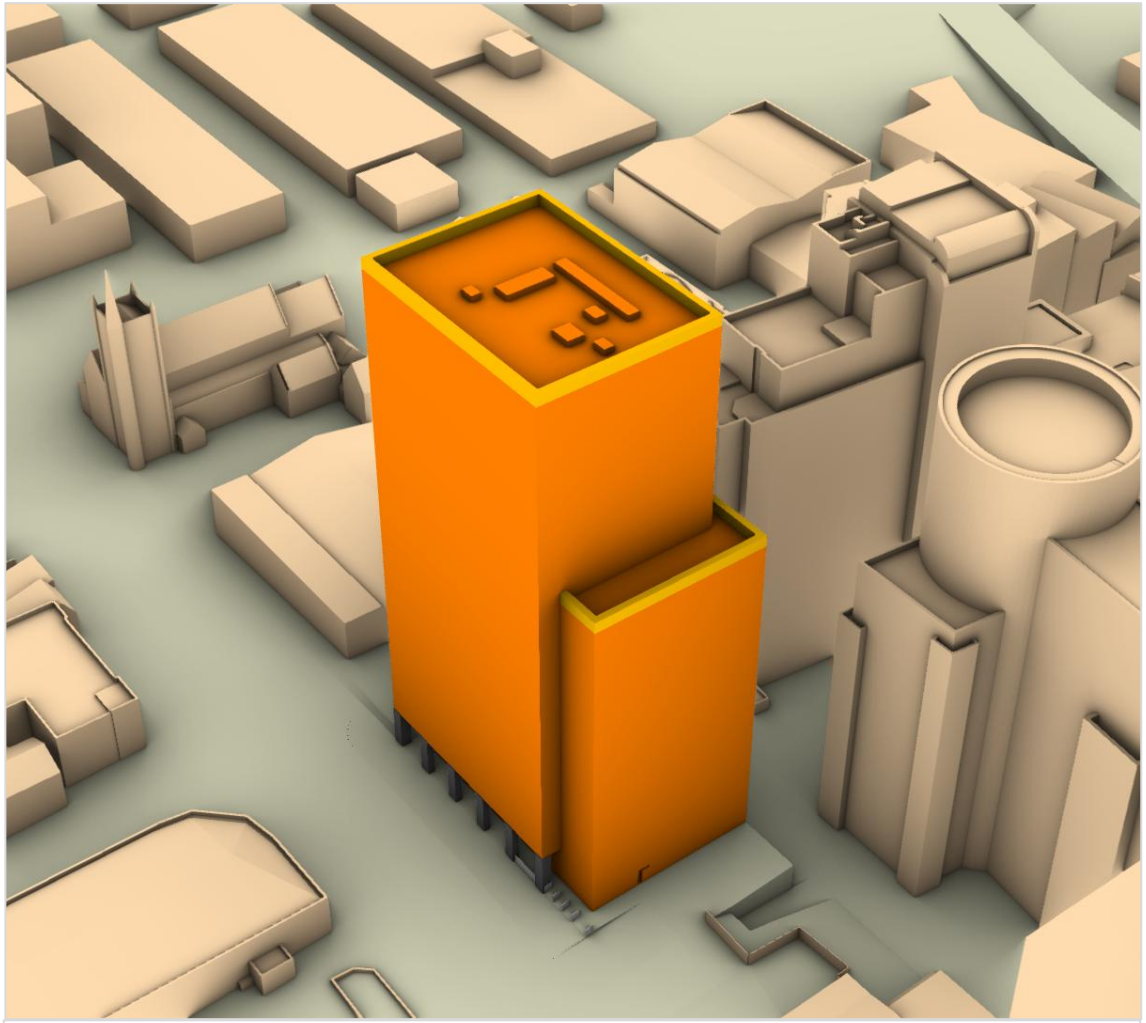


Figure 1: Representation of the proposed development

Overview

This report summarises the results of a CFD study, commissioned by Linear Living Limited, to assess the wind microclimate for the detailed proposals for the One Lord Street development in Manchester, UK.

The assessment focuses on pedestrian safety and comfort, with particular attention to entrances, walkways, seating areas, and outdoor amenity spaces, including elevated terraces.

Predictions have been made using Computational Fluid Dynamics (CFD), based on the Lawson (LDDC) criteria. refinement and planning compliance, ensuring that wind conditions are appropriate for the intended year-round use of public and private external spaces.

One Lord Street

The One Lord Street development site is bordered by Lord Street to the north, Fernie Street to the east, the Texaco petrol station to the south, and Cheetham Hill Road to the west.

Further afield, the development is largely characterized by medium to high rise developments to the east and northeast, with low-rise buildings more prevalent from southwest to north.

The proposed scheme comprises a 24-storey residential tower, reaching an approximate height of 76 meters, with a communal amenity terrace located on level 15.

Demolition of existing structures and erection of a residential apartment development comprising 251no. dwellings (Use Class C3) with landscaping and associated works.

Digital models used in this study are based on project-specific drawing information, detailed in Appendix A.

2. Modelling Approach

CFD Methodology

Computational Fluid Dynamics (CFD) modelling was undertaken using a steady-state Reynolds-Averaged Navier-Stokes (RANS) approach. This method employs turbulence models to approximate the effect of wind gusts by predicting fluctuations about the mean wind speed.

Key aspects of the modelling setup include:

- The Shear Stress Transport (SST) k-ω turbulence model was used for its accuracy in near-wall regions and flow separation.
- All architectural features greater than 0.5 metres in scale were explicitly included in the model geometry.
- A refined mesh resolution was applied in critical areas, with cell sizes as small as 0.2 metres.
- At pedestrian level (1.5 metres height), a minimum of five vertical cell layers were used to accurately resolve ground-level wind conditions.
- 16 wind directions were assessed at 22.5° increments, capturing a full compass range of prevailing and secondary winds.

Mean wind speeds and gust-equivalent mean wind speeds were derived from the simulations, following accepted industry guidance. Analysis was carried out using the Lawson criteria (LDDC variant)[1] for wind comfort and safety, in accordance with industry standard practice.

Further technical detail is provided in Appendix B.

Digital Model Domain

A detailed 3D model of the site and its surroundings was used for the CFD simulations. The study domain extended up to 460 m in all directions from the site, incorporating all existing and planned built forms or topographical features likely to influence airflow patterns.

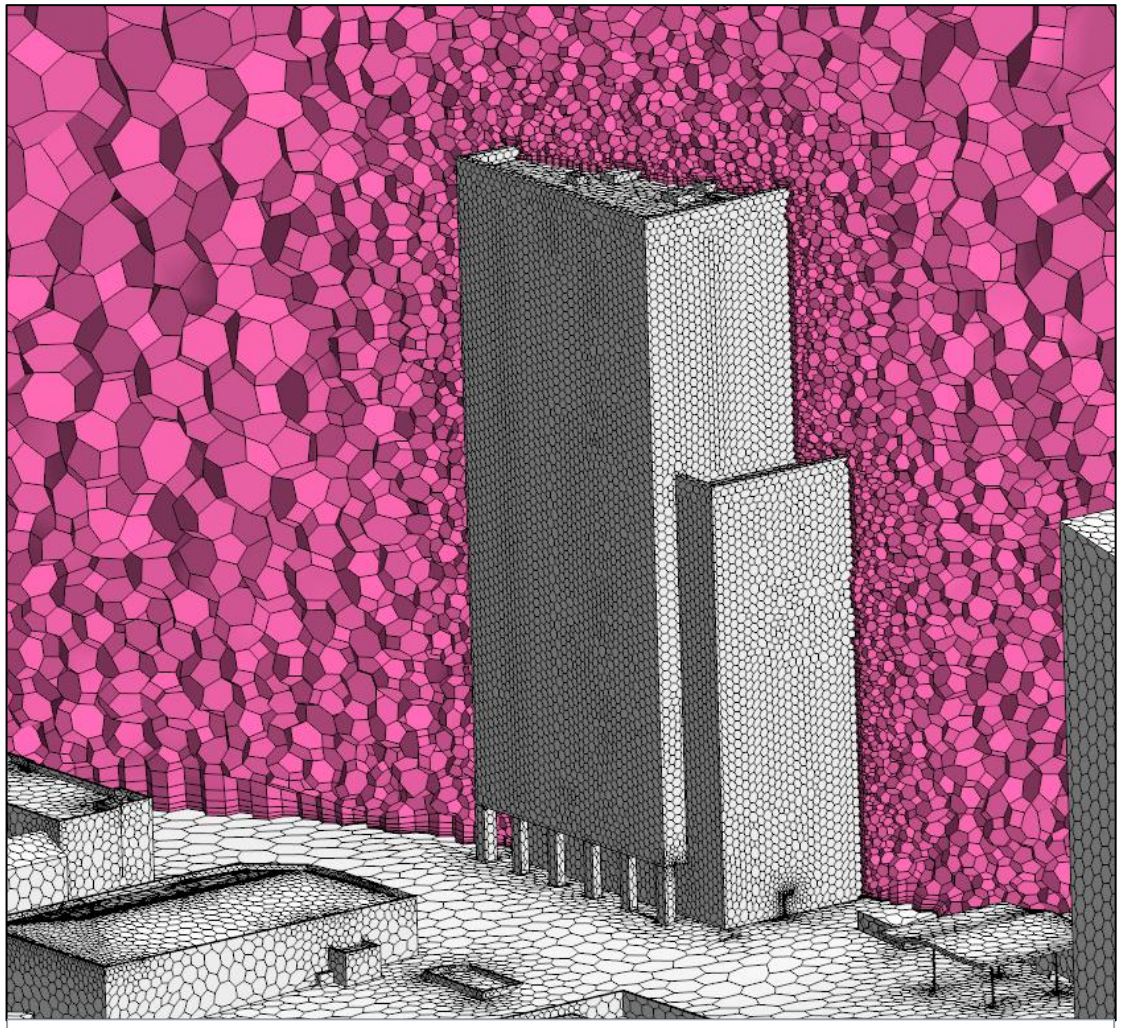


Figure 2: Computational mesh for CFD simulations

ABL & Wind Climate Data

Wind frequency and direction statistics were derived from long-term meteorological data obtained from Manchester Airport.

- Wind data was transposed to the site location and adjusted for local terrain roughness.
- The atmospheric boundary layer (ABL) and wind speed profiles were modelled using methods set out in ESDU Item 01008[2], consistent with best industry practice for microclimate analysis.
- Seasonal variation in wind intensity and directional frequency was accounted for to distinguish worst-case winter safety conditions and seasonal comfort conditions.

ArcAero's terrain roughness assessment, resulting approach wind profiles and annual wind rose are presented in Figure 3.

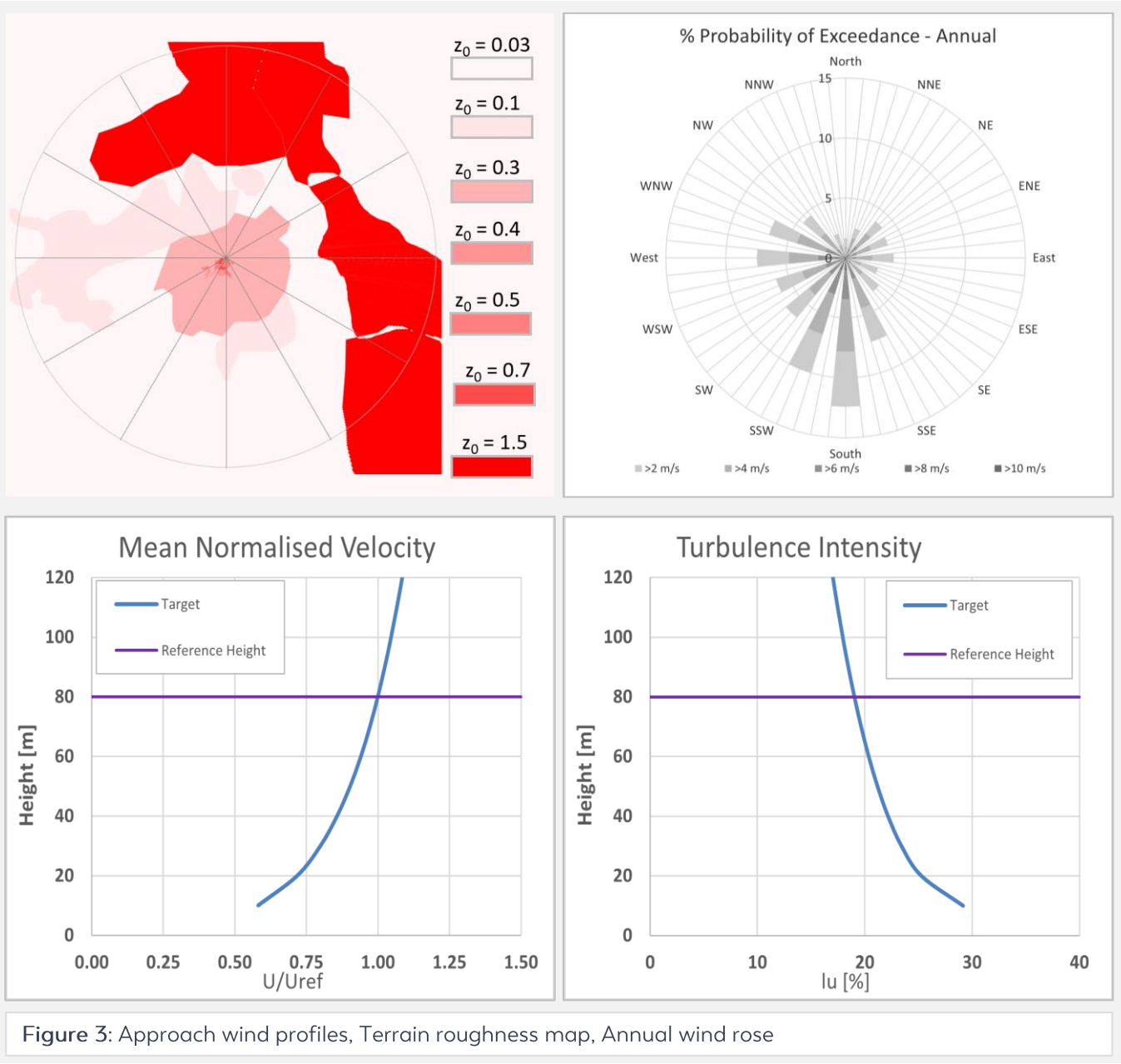


Figure 3: Approach wind profiles, Terrain roughness map, Annual wind rose

3. Understanding Wind Comfort and Safety Criteria

The Lawson Criteria

Pedestrian wind conditions are assessed using the Lawson 'LDDC' criteria[1], which define thresholds for safety, and separate comfort thresholds based on typical outdoor activities. These thresholds are compared against predicted wind speeds using long-term meteorological data.

For safety, a 15 m/s threshold is typically applied. Wind speeds exceeding this level more than once per year (~0.022% ≈ 2 hours per year) may destabilise vulnerable individuals and are considered a risk to pedestrian safety.

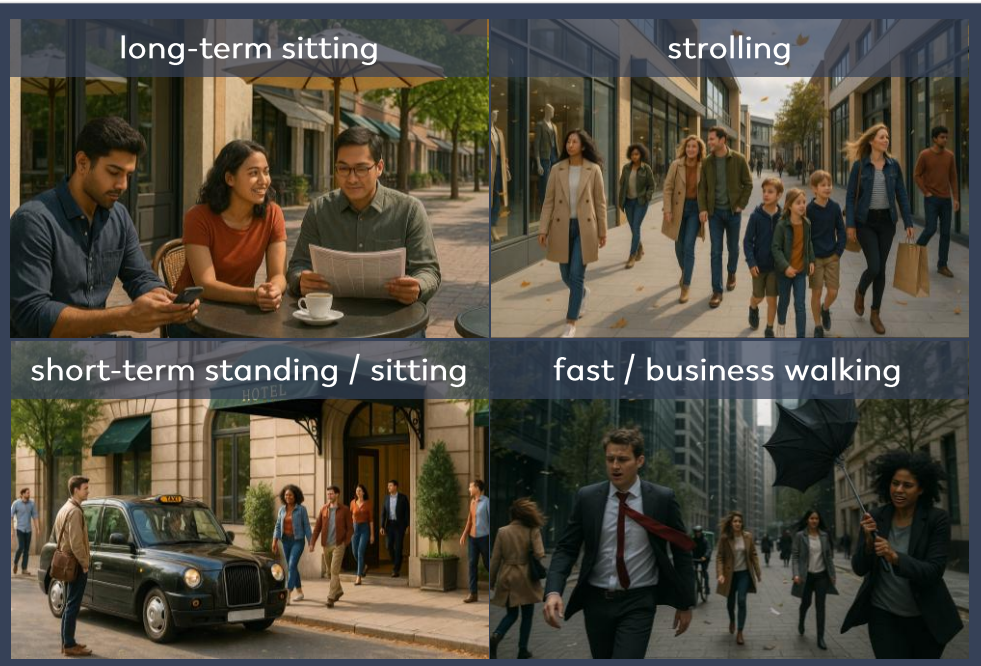
For comfort, wind speeds should not exceed activity-specific thresholds more than 5% of the time. Stricter criteria are applied in areas where pedestrians are expected to pause, wait, or linger, such as café seating, waiting areas, entrances, or playparks. In contrast, higher thresholds apply to routes where continuous movement is expected.

Comfort conditions are assessed seasonally:

- Worst-seasonal conditions are used to evaluate spaces with year-round use, such as entrances, footpaths, and through-routes. This ensures windiness is acceptable during the windiest part of the year, which typically occurs in winter, but sometimes in spring, or autumn.
- Summer amenity conditions are typically applied to seasonal-use areas, such as external seating terraces and roof gardens, using climate statistics for June, July and August.

Table 1 sets out the LDDC variant of the Lawson comfort criteria, with Figure 4 providing visual examples of the primary activities reflected.

Figure 4: Visual examples of typical outdoor activities



	Threshold Wind Speed (m/s)	Lawson Classification	Examples
	4	Long-term sitting	Bar / café
	6	Standing / short-term sitting	Bus stop, school pick-up point, playpark, viewing terrace
	8	Strolling	Residential routes, public realm, shopping streets
	10	Walking	Commuter routes, business district
	>10	Uncomfortable	Unsuitable for regular pedestrian use

Table 1: Lawson comfort criteria

4. Assessment Scenarios

The following scenarios have been modelled:

i. Existing site conditions, Existing surrounding context (EinE)

ii. Proposed development, Existing surrounding context (PinE)

iii. Proposed development, Cumulative surrounding context (PinC)

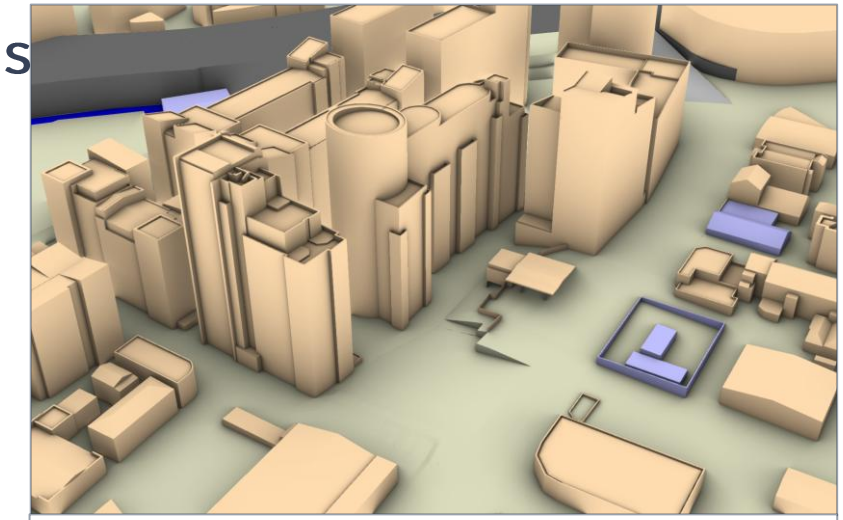


Figure 4.4.1:EinE Closeup from north

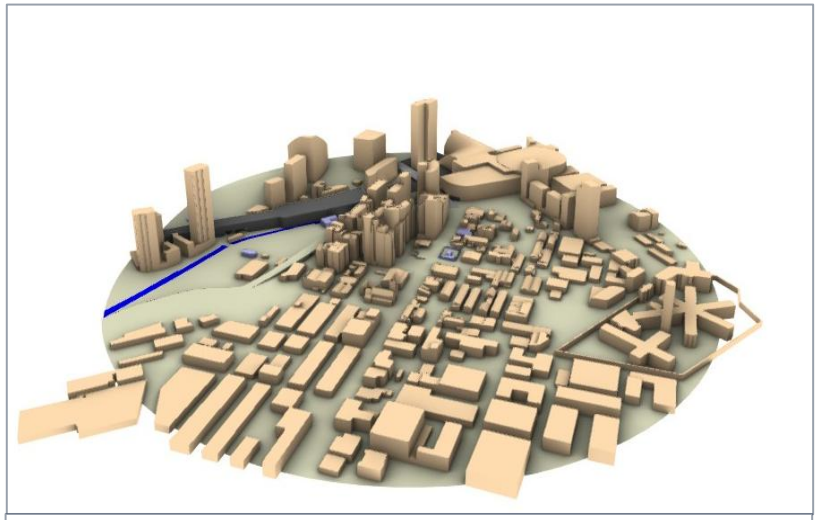


Figure 4.4.2:EinE Surrounds from north

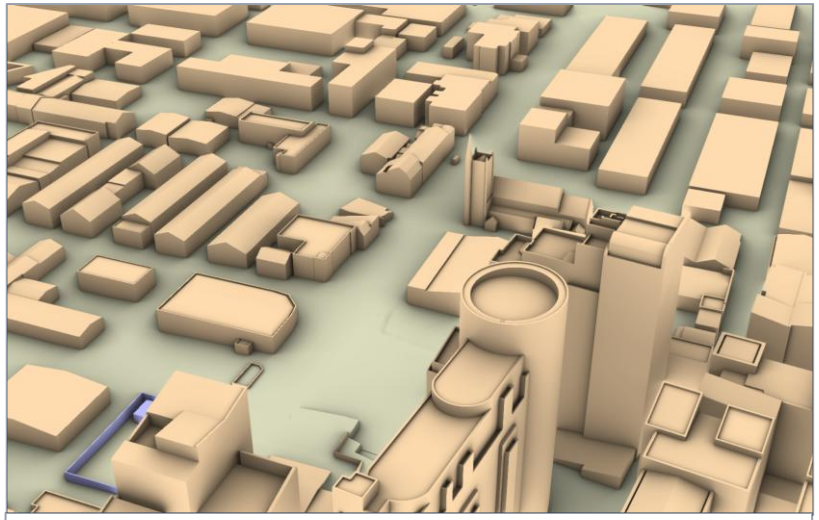


Figure 4.4.3:EinE Closeup from south

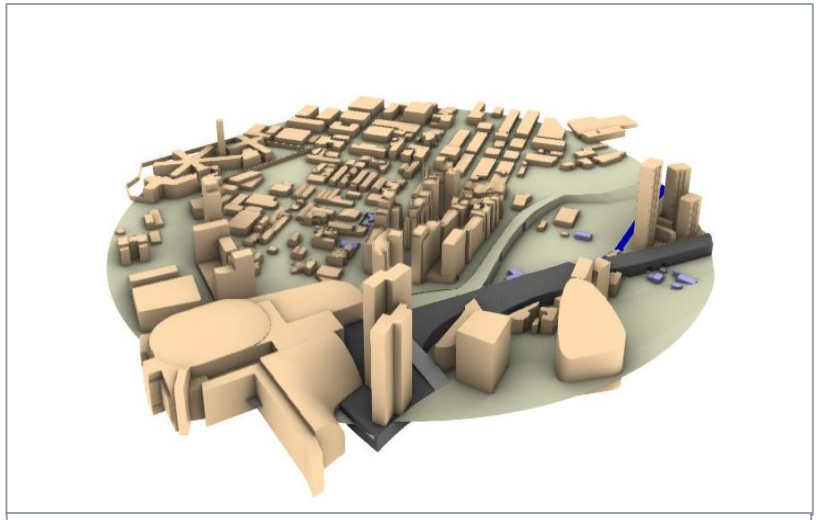


Figure 4.4.4:EinE Surrounds from south

The following scenarios have been modelled:

i. Existing site conditions, Existing surrounding context (EinE)

ii. Proposed development, Existing surrounding context (PinE)

iii. Proposed development, Cumulative surrounding context (PinC)

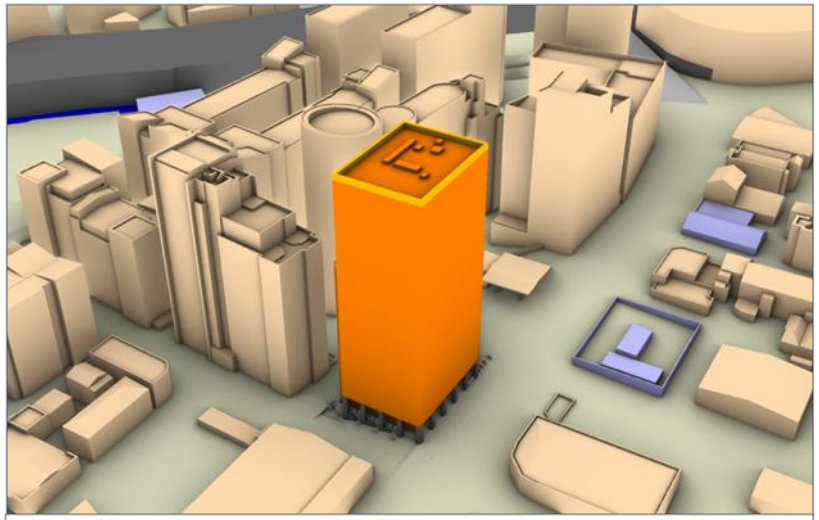


Figure 4.5.1:PinE Closeup from north

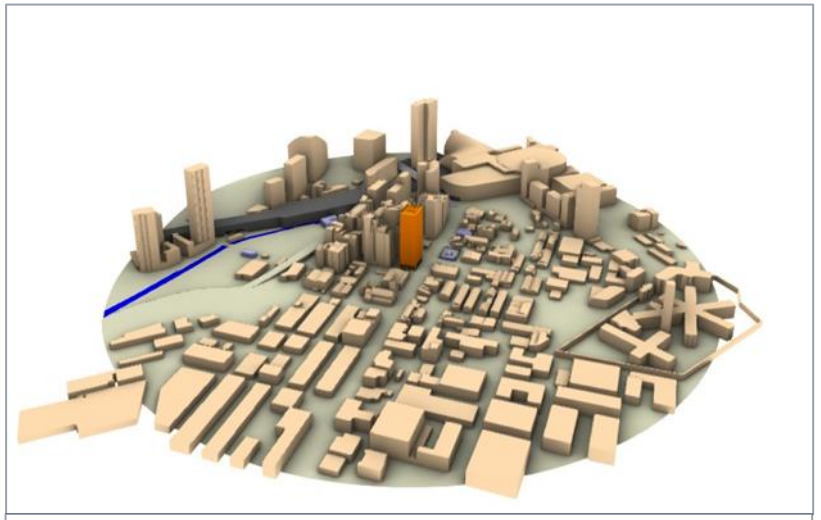


Figure 4.5.2:PinE Surrounds from north

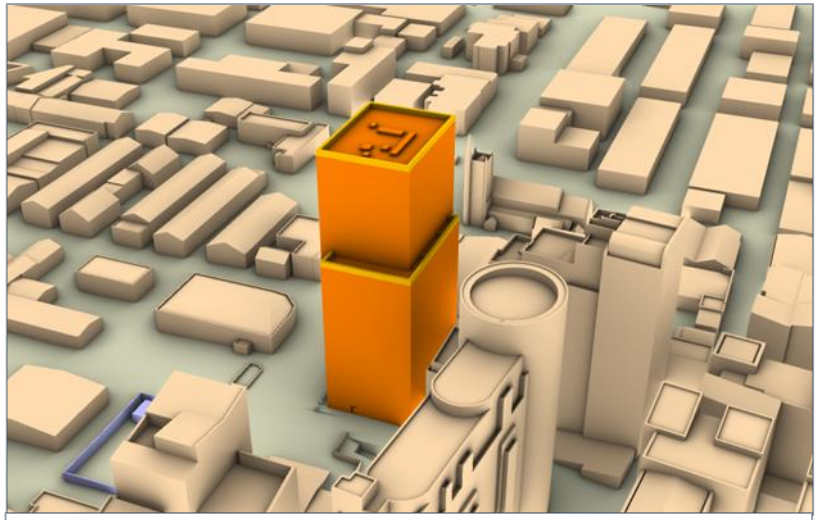


Figure 4.5.3:PinE Closeup from south



Figure 4.5.4:PinE Surrounds from south

The following scenarios have been modelled:

i. Existing site conditions, Existing surrounding context (EinE)

ii. Proposed development, Existing surrounding context (PinE)

iii. Proposed development, Cumulative surrounding context (PinC)

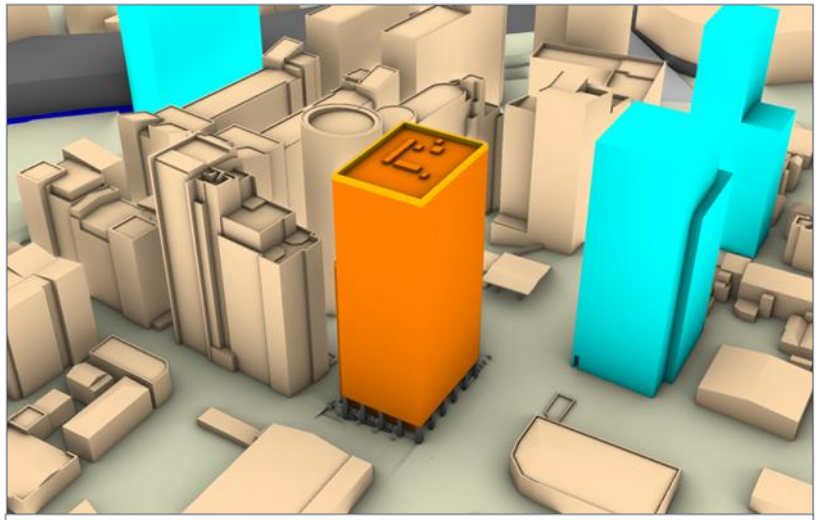


Figure 4.6.1:PinC Closeup from north

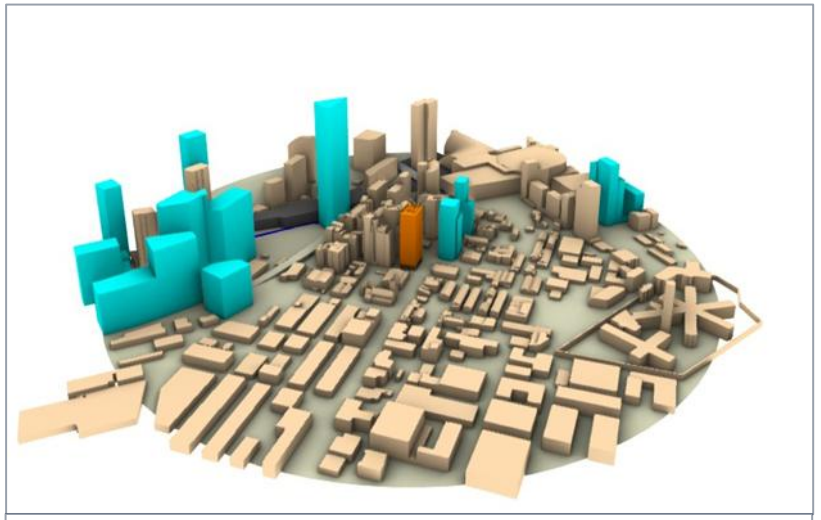


Figure 4.6.2:PinC Surrounds from north

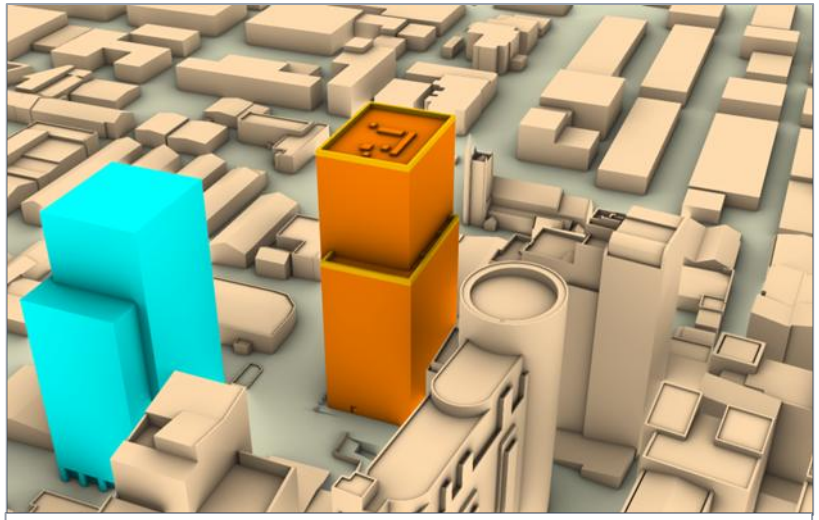


Figure 4.6.3:PinC Closeup from south

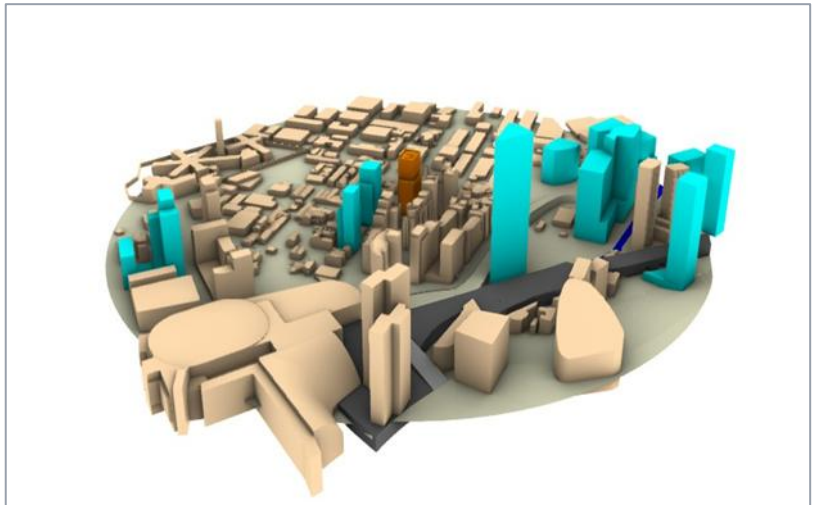


Figure 4.6.4:PinC Surrounds from south

Modelling of Nearby Developments With Planning Consent

Several cumulative schemes have been included in the assessment. These are presented visually in Figure 5 and in tabular format in Table 2.

Developments with planning consent that are substantially under construction have been treated as existing and included within the existing surrounds scenario. These are detailed in Table 3.

Cumulative schemes that fall outside the study radius and are therefore excluded from all modelled scenarios are listed in Table 4.

Table 2: Cumulative developments

Number	Development Name	Planning Reference
1	Land bounded by the Travelodge and surface level carparking to the north, further surface level carparking to the east, Manchester College to the south and Bury New Road to the west, Manchester	137941/FO/2023
2	Red Bank Victoria	136812/OO/2023 136814/FO/2023
3	Land at 33 - 41 Cheetham Hill Road Manchester M4 4FT	138696/FO/2023
4	1 Park Place Manchester M4 4EZ	138302/FO/2023
5	Angel Meadows	116366/FO/2017

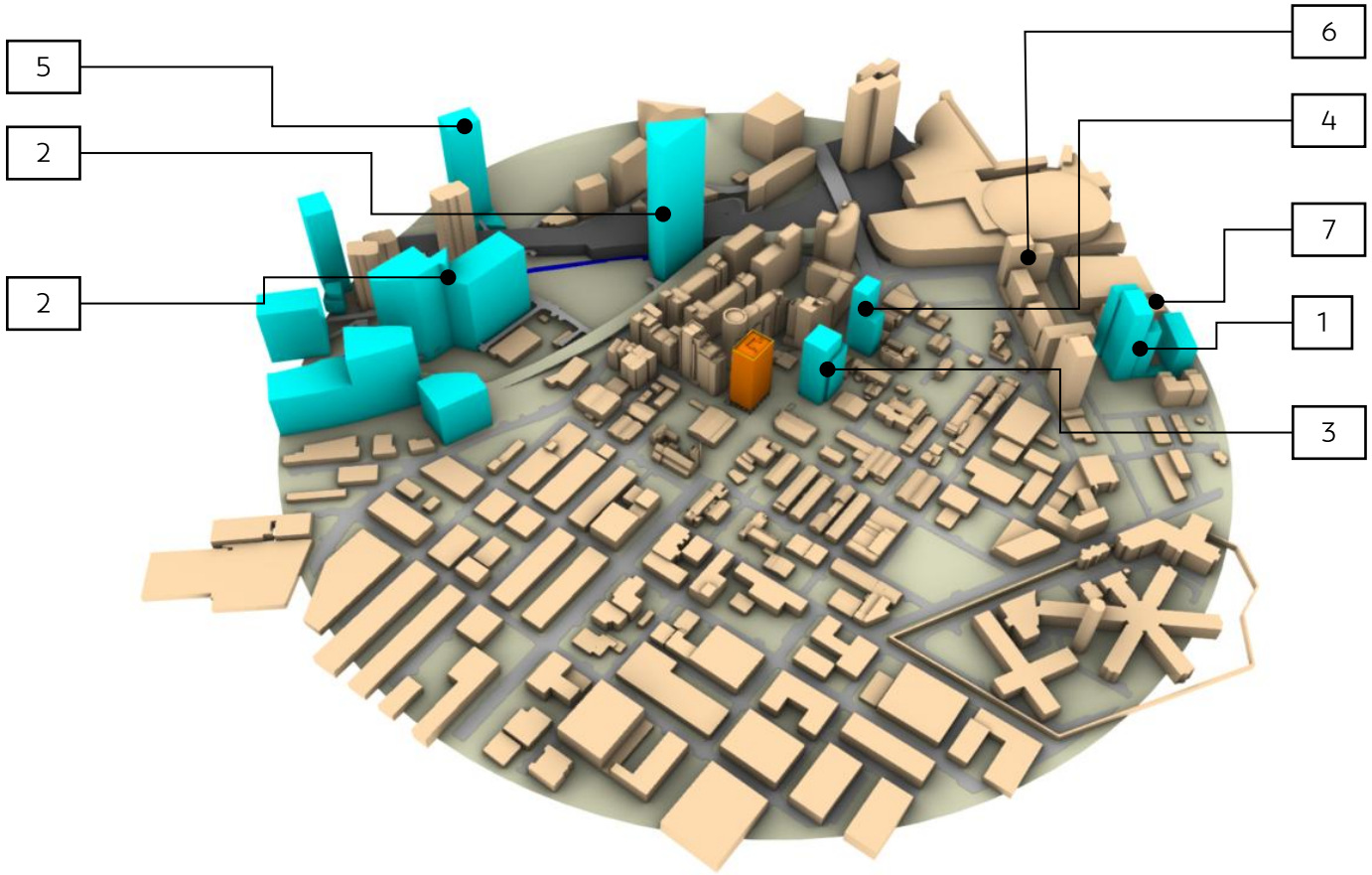


Figure 5: Cumulative developments

Table 3: Built or under-construction cumulative sites treated as existing

Number	Development Name	Planning Reference
6	Former Boddingtons Brewery Site Dutton Street Manchester M3 1LE	118831/FO/2018
7	Manchester College	136492/FO/2023

Table 4: Cumulative schemes beyond the modelling extent

Number	Development Name	Planning Reference
8	Land Bounded By Great Ducie Street AndMirabel Street Manchester M3 1PJ	122280/FO/2019
9	Land Adjacent To The Junction Of Fairy Lane And Bury New Road Manchester	128359/OO/2020
10	Land Bound By Greengate, Collier Street, Queen And King Street And Gravel Lane , M3 7BN	22/80890/REM
11	Land Corner New Bridge Street And, Greengate, Salford	19/74205/FULEIA

5. Results

Pedestrian Uses

Assessments of this nature predict the proportion of time an area will experience wind speeds in excess of threshold values associated with comfortable use once the development is introduced. It is therefore important to have an adequate understanding of the expected uses of the various areas in & around the site.

For the current study, anticipated pedestrian uses are presented graphically in Figure 6.

Results

Results are presented as follows, for safety, worst-seasonal comfort and summertime comfort respectively, at ground level, plus summertime comfort above ground:

- Existing site conditions , Existing surrounding context (EinE) – Figures 7-9
- Proposed development, Existing surrounding context (PinE) – Figures 10-14
- Proposed development, Cumulative surrounding context (PinC) – Figures 15-19

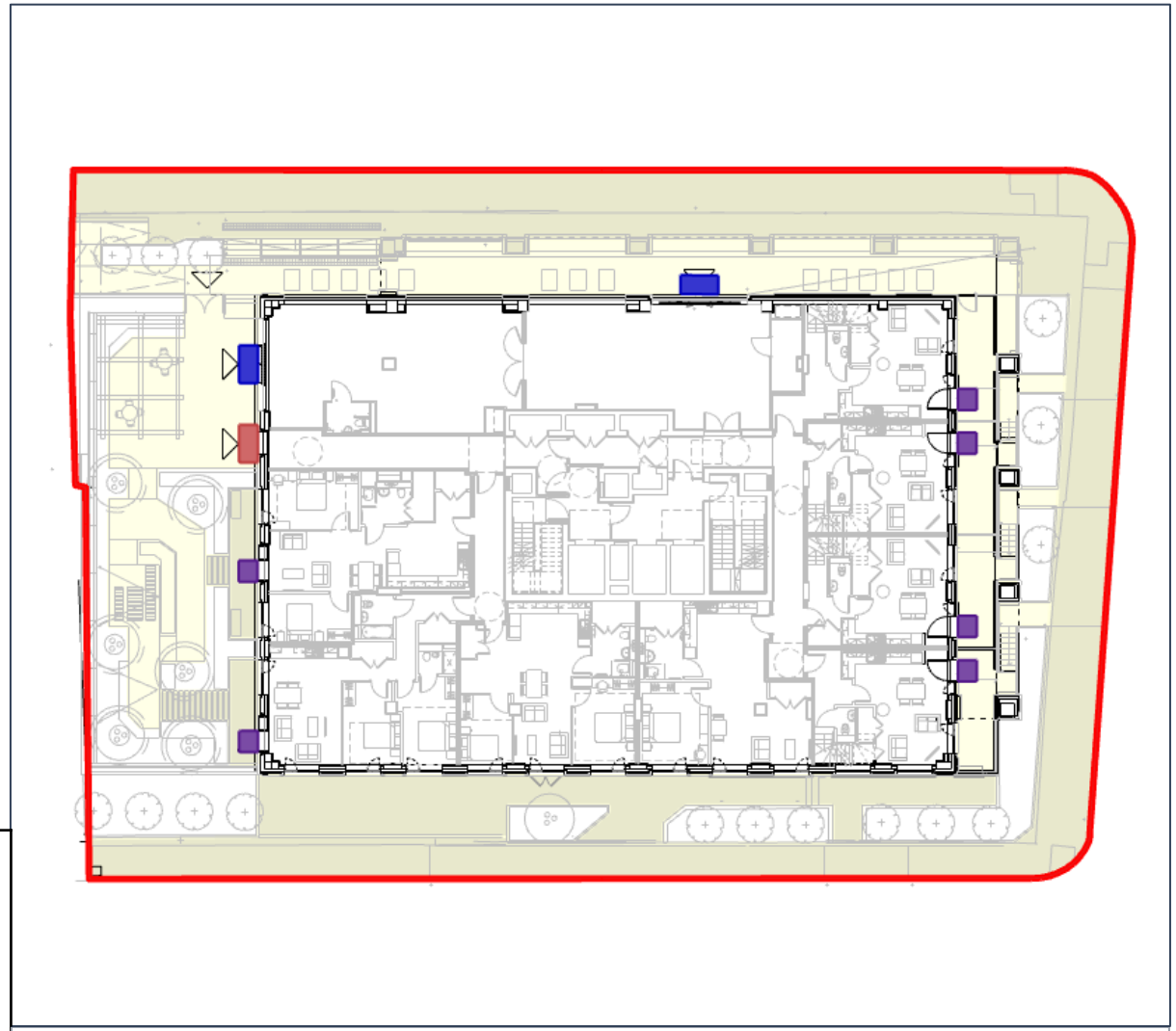


Figure 6: Site wide pedestrian uses

Safety | EinE | Ground

- Wind conditions within and around the existing site satisfy the criteria for pedestrian safety.



Figure 7: Safety | EinE | Ground

Worst-Seasonal Comfort | EinE | Ground

- Wind conditions within the site and immediate surrounding areas are generally suitable for at least short-term standing or sitting, with a small area of strolling conditions to the northeast of the site.
- Thus, wind conditions within and around the site are suitable for their intended uses, including at entrances and along thoroughfares.



Figure 8: Worst-Seasonal Comfort | EinE | Ground

Summertime Comfort | EinE | Ground

- Wind conditions within the site and the immediate surrounding areas are suitable for at least short-term standing or better.



Figure 9: Summertime Comfort | EinE | Ground

Safety | PinE | Ground

- Following the introduction of the proposed development, wind conditions within the site and immediate surrounds satisfy the Lawson safety criteria.

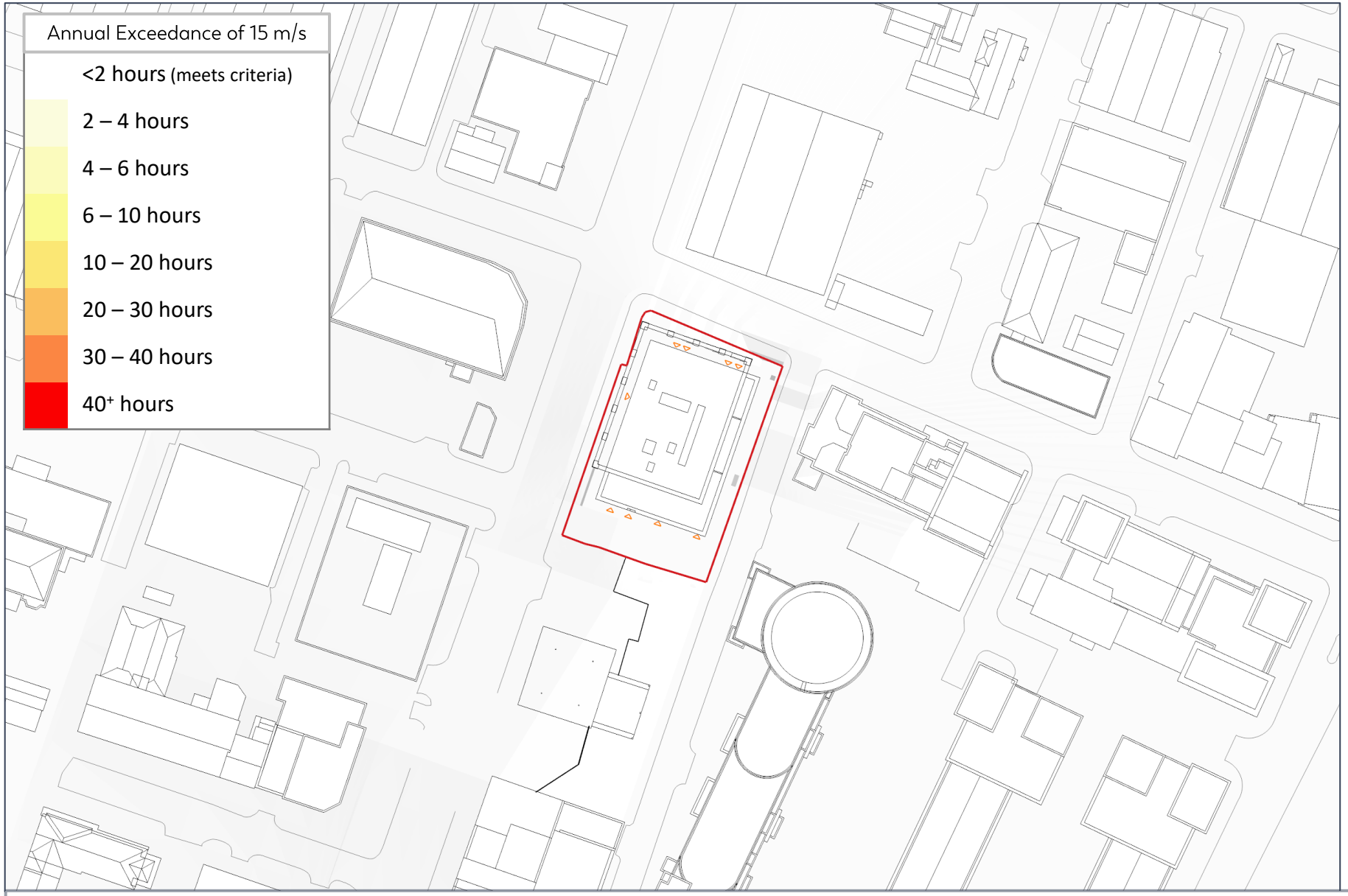


Figure 10: Safety | PinE | Ground

Safety | PinE | Terrace

- The wind conditions at the level 16 communal terrace satisfy the Lawson safety criteria.

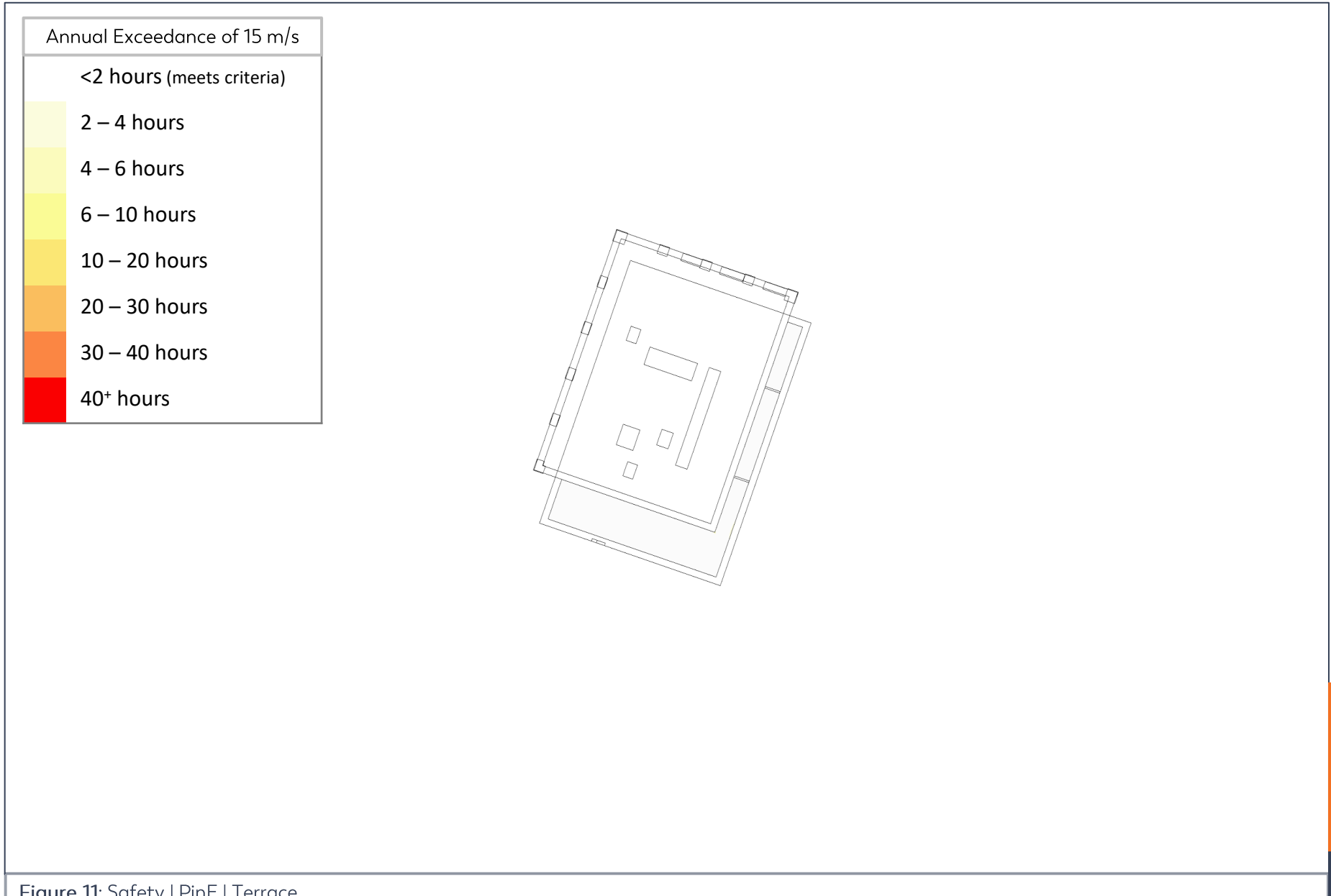


Figure 11: Safety | PinE | Terrace

Worst-Seasonal Comfort | PinE | Ground

- The wind conditions within the site are generally suitable for at least short-term standing / sitting at ground level.
- Wind conditions at the entrances leading into the proposed development are suitable for at least short-term sitting / standing throughout the year and therefore are comfortable for pedestrian ingress and egress.
- Wind conditions on thoroughfares within the site remain suitable for pedestrian strolling or better and are thus comfortable for pedestrian access to and passage through the site.
- Within the surrounding areas, wind conditions remain generally suitable for at least strolling or better all year round. Thus, wind conditions at all entrances and thoroughfares within the surrounding area remain comfortable for their intended uses.

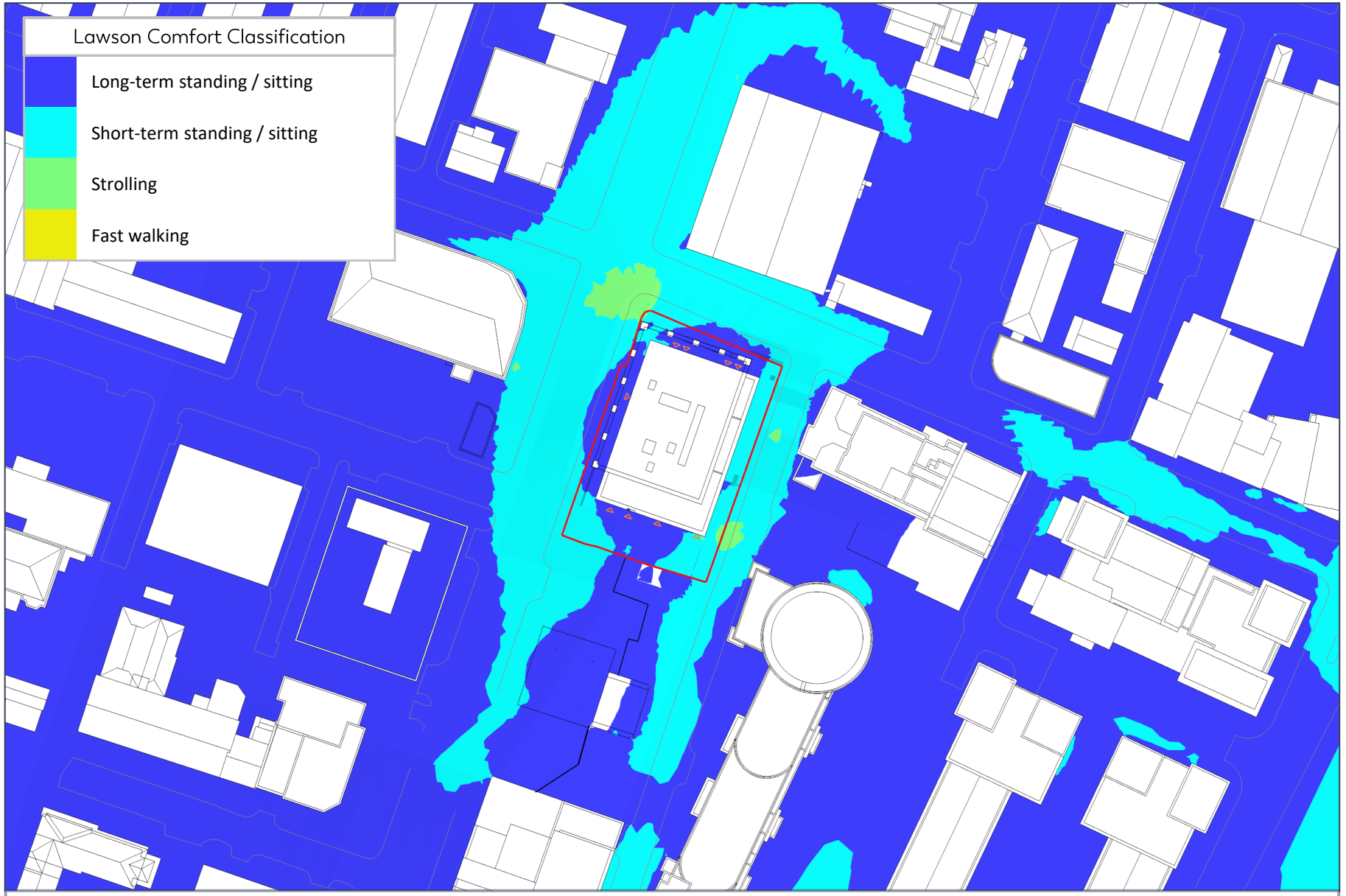


Figure 12: Worst-Seasonal Comfort | PinE | Ground

Summertime Comfort | PinE | Ground

- The wind conditions within the site and around its immediate surrounds are suitable for at least short-term standing / sitting.

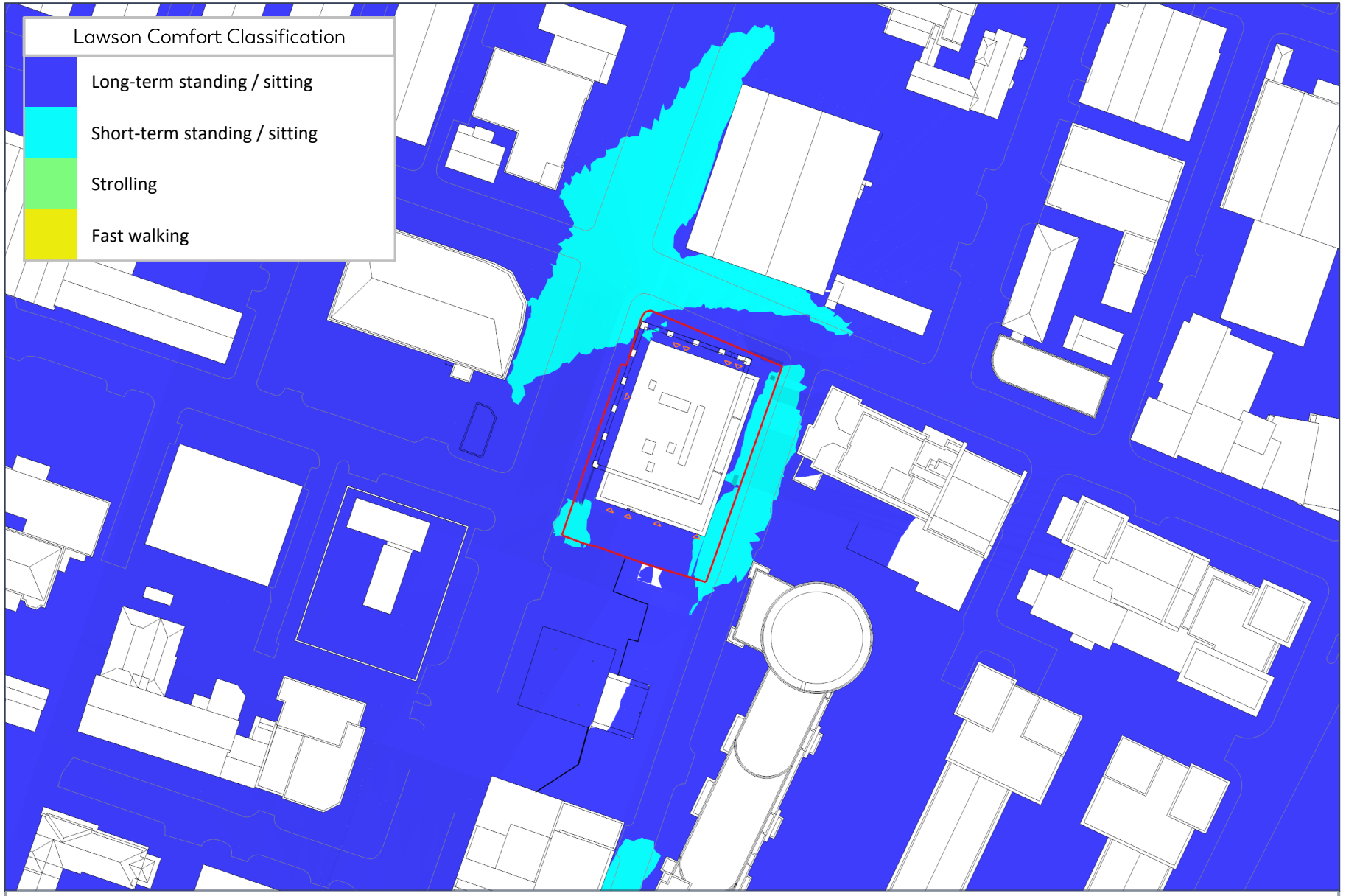


Figure 13: Summertime Comfort | PinE | Ground

Summertime Comfort | PinE | Terrace

- The wind conditions at the terrace are generally suitable for short-term standing / sitting or better with a large portion of long-term standing/sitting.
- Typical features, such as benches and planting would likely further improve conditions predicted.

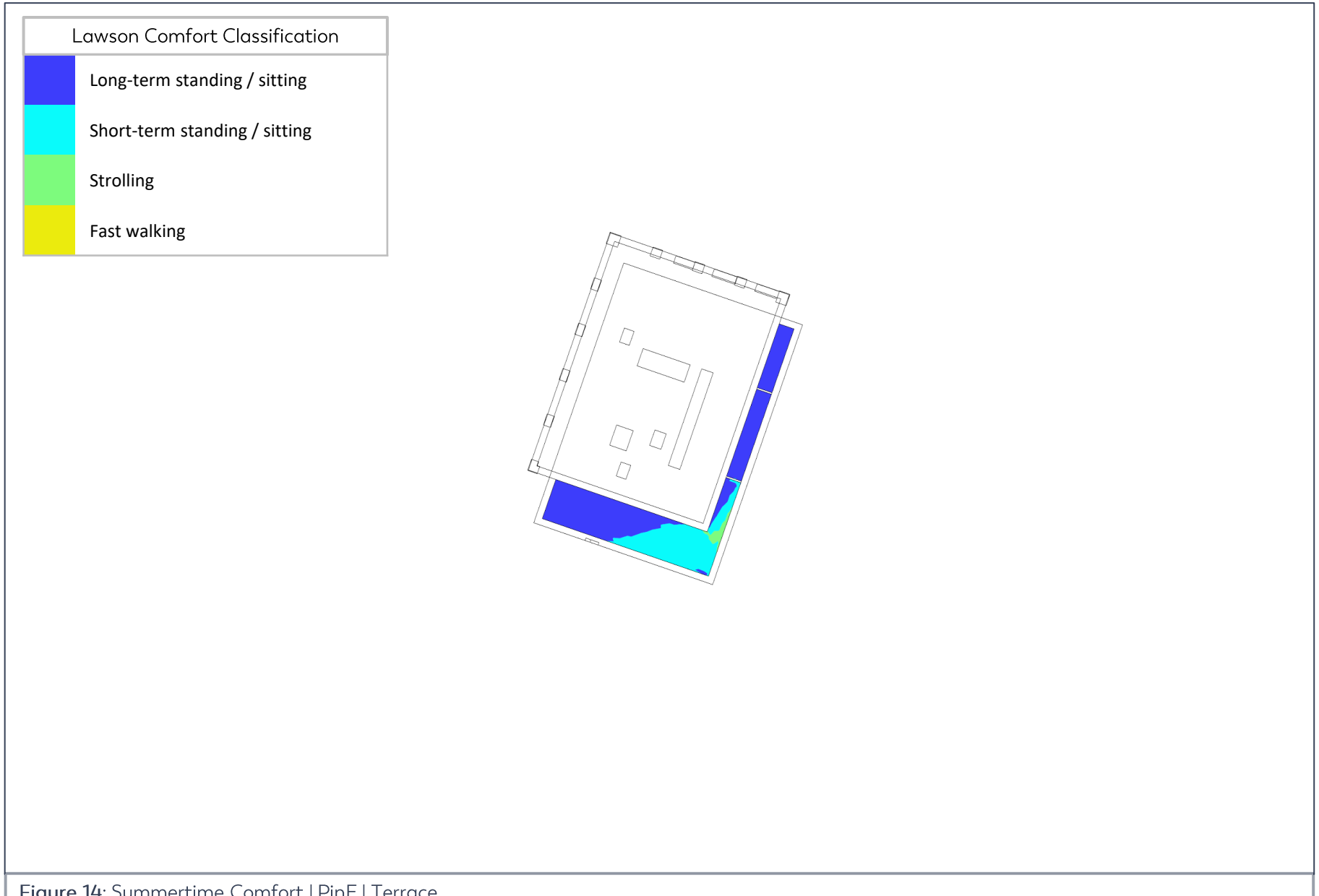


Figure 14: Summertime Comfort | PinE | Terrace

Safety | PinC | Ground

- Upon the introduction of the cumulative surrounds, the wind conditions within the site and immediate surrounds satisfy the Lawson safety criteria.

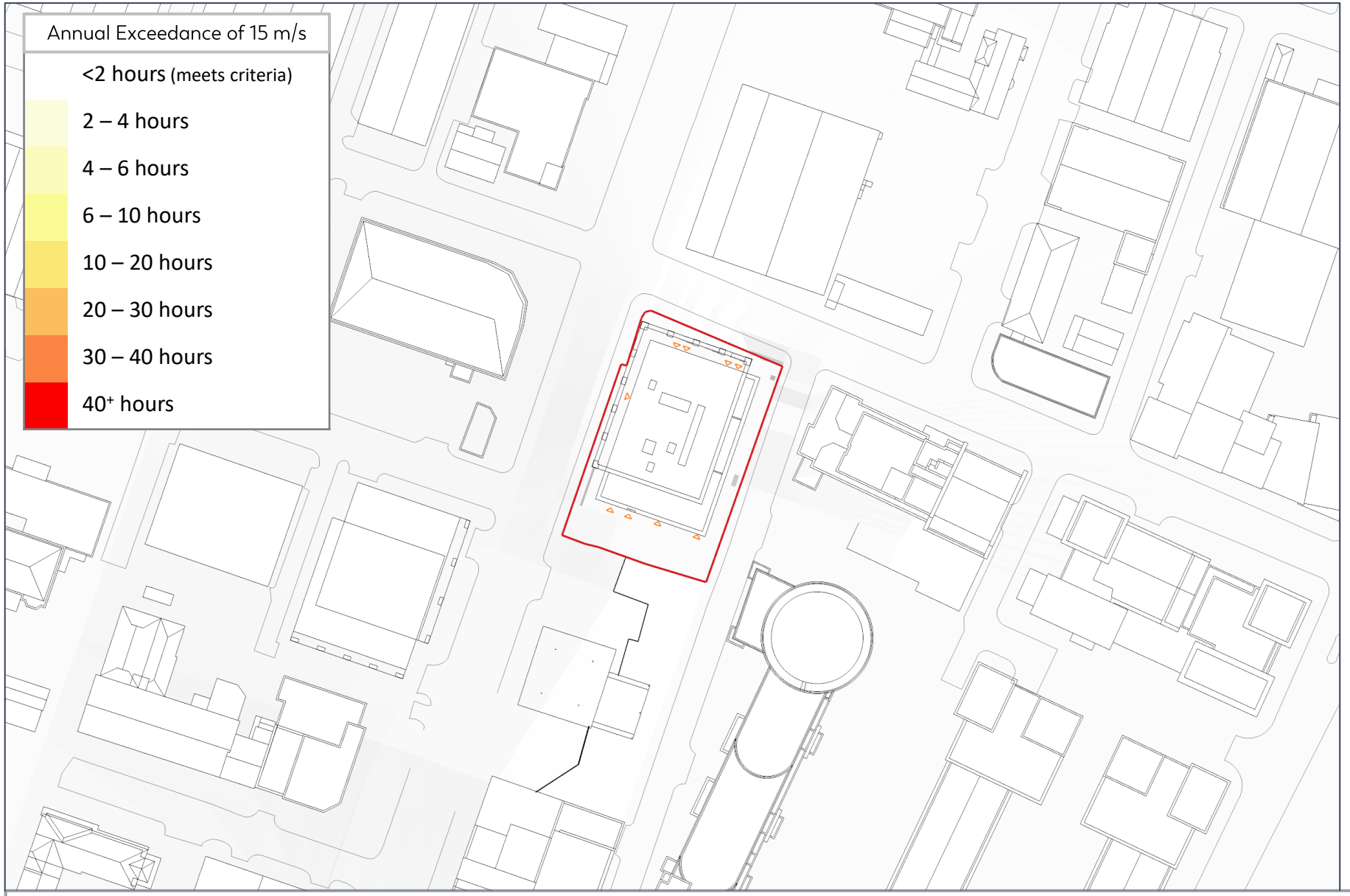


Figure 15: Safety | PinC | Ground

Safety | PinC | Terrace

- The wind conditions at the terrace satisfy the Lawson safety criteria.

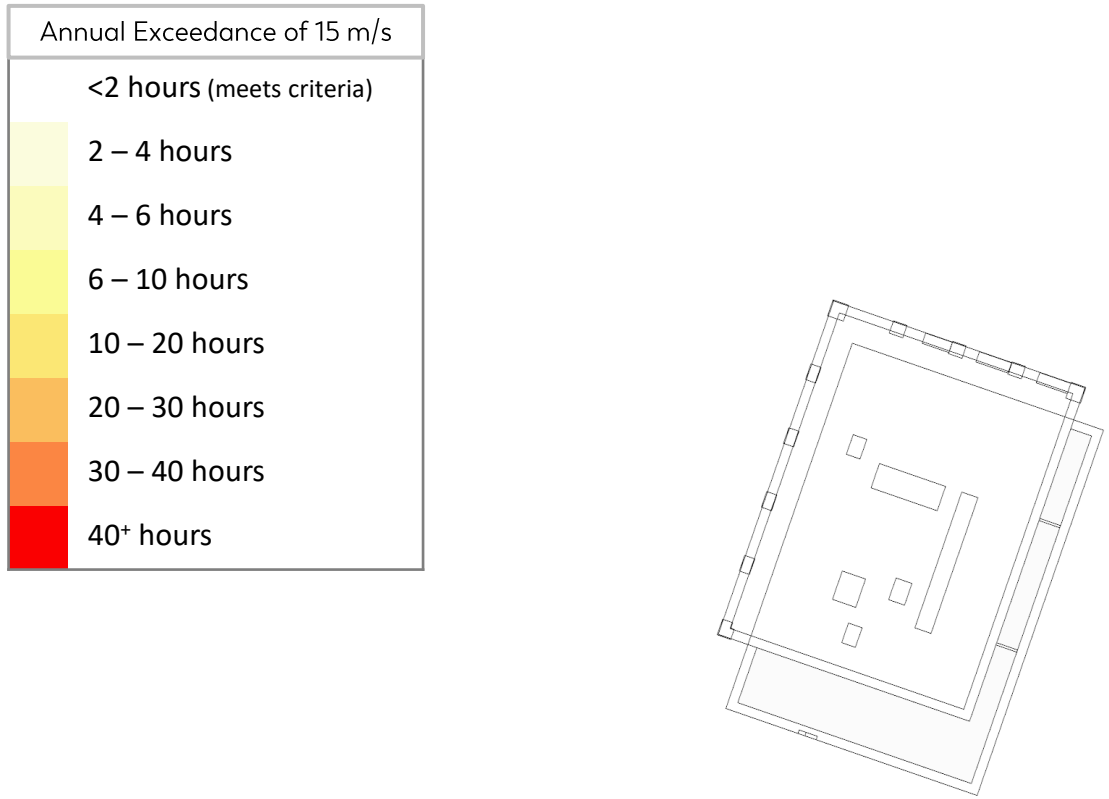


Figure 16: Safety | PinC | Terrace

Worst-Seasonal Comfort | PinC | Ground

- Upon the introduction of the cumulative surrounds, wind conditions are materially similar to the existing surrounds scenario.
- Thus, conclusions drawn from the proposed development within existing surrounds scenario for worst-seasonal comfort are equally applicable to the cumulative surrounds scenario.

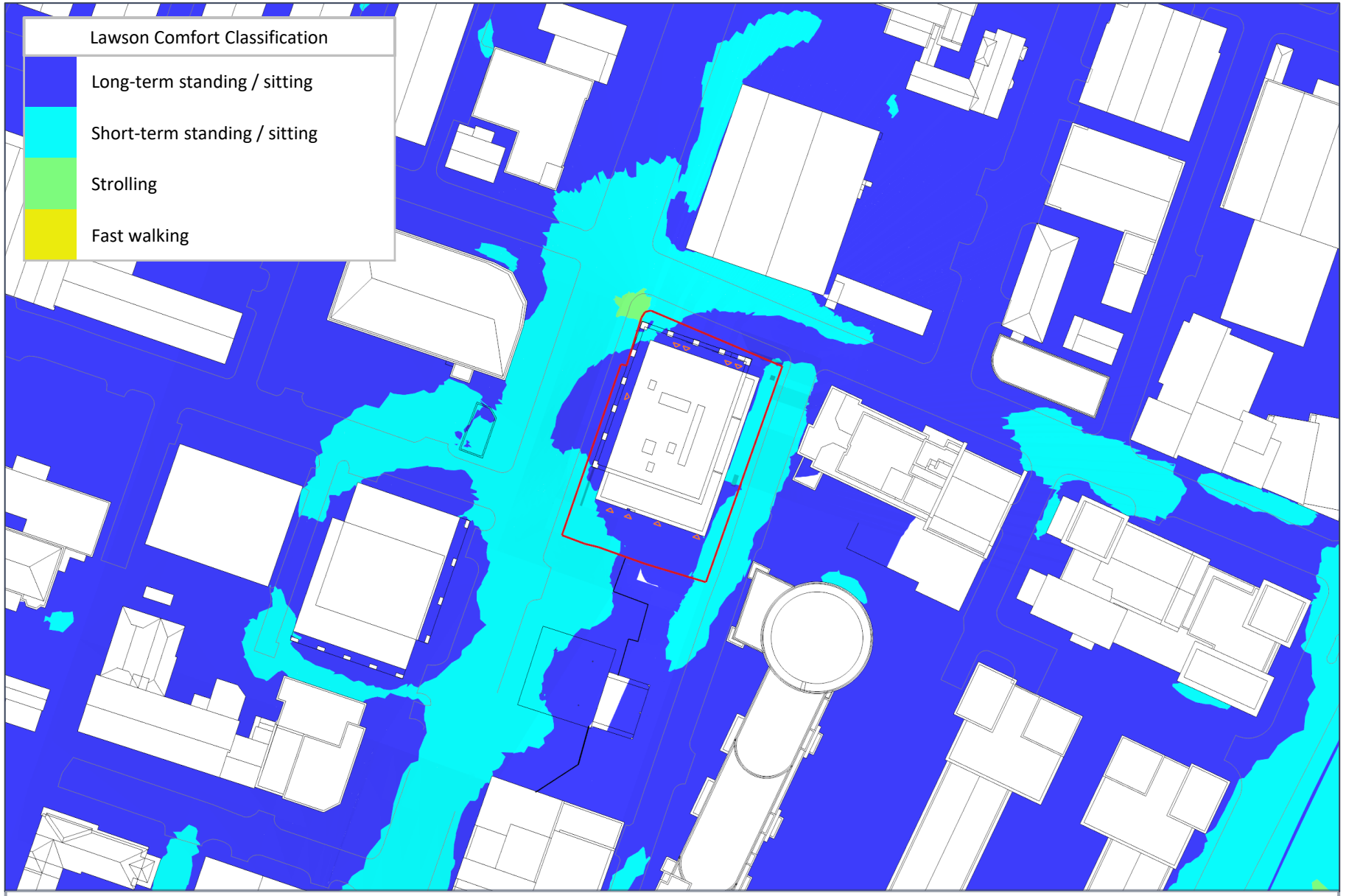


Figure 17: Worst-Seasonal Comfort | PinC | Ground

Summertime Comfort | PinC | Ground

- With the inclusion of the cumulative surrounding developments, the wind conditions do not materially change when compared to the existing surrounds scenario.

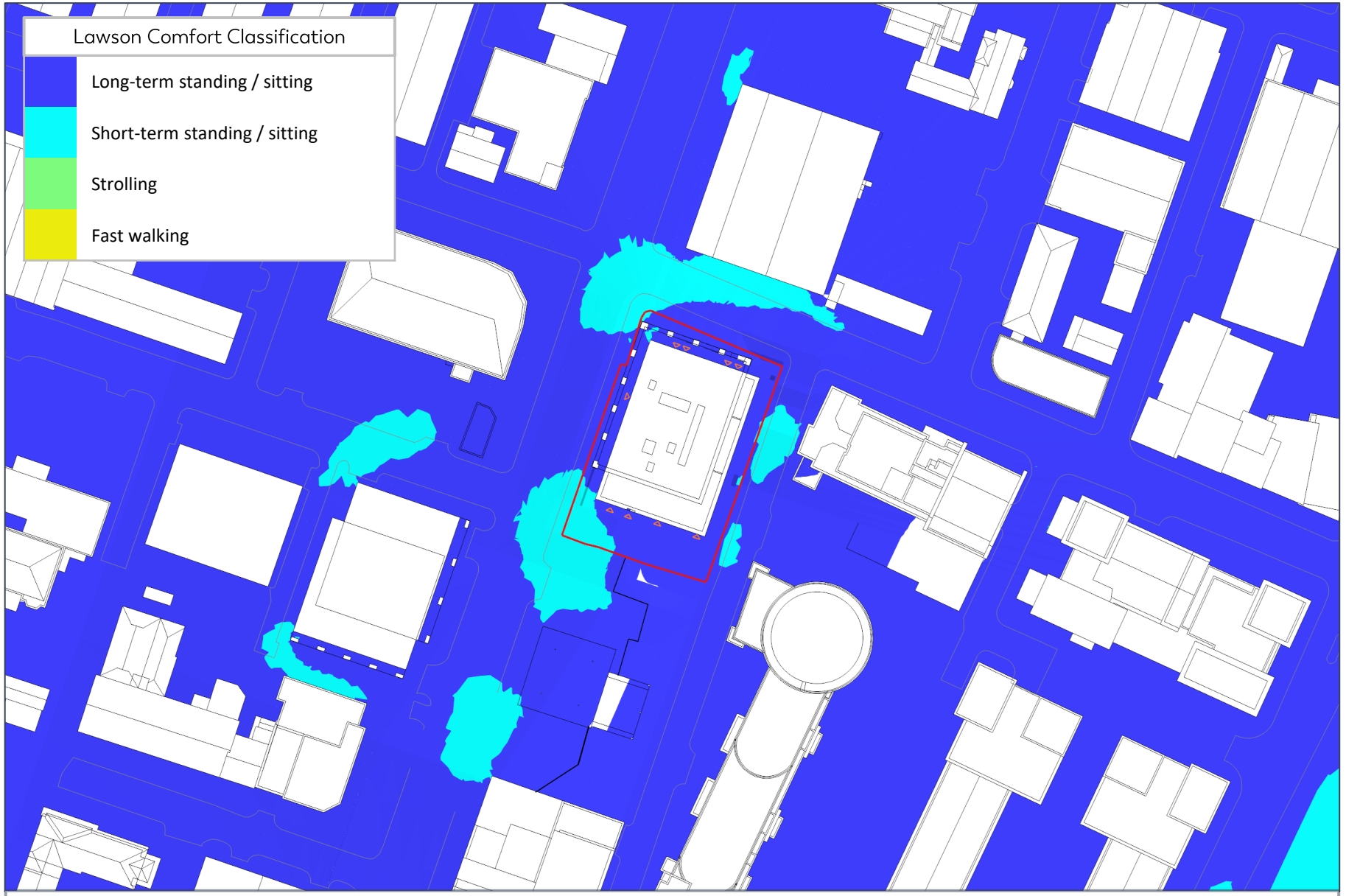


Figure 18: Summertime Comfort | PinC | Ground

Summertime Comfort | PinC | Terrace

- With the introduction of the cumulative surrounding developments, wind conditions at the terrace have improved and are now suitable for short-term standing / sitting or better.
- Thus, the terrace is suitable for recreational use during the summer.

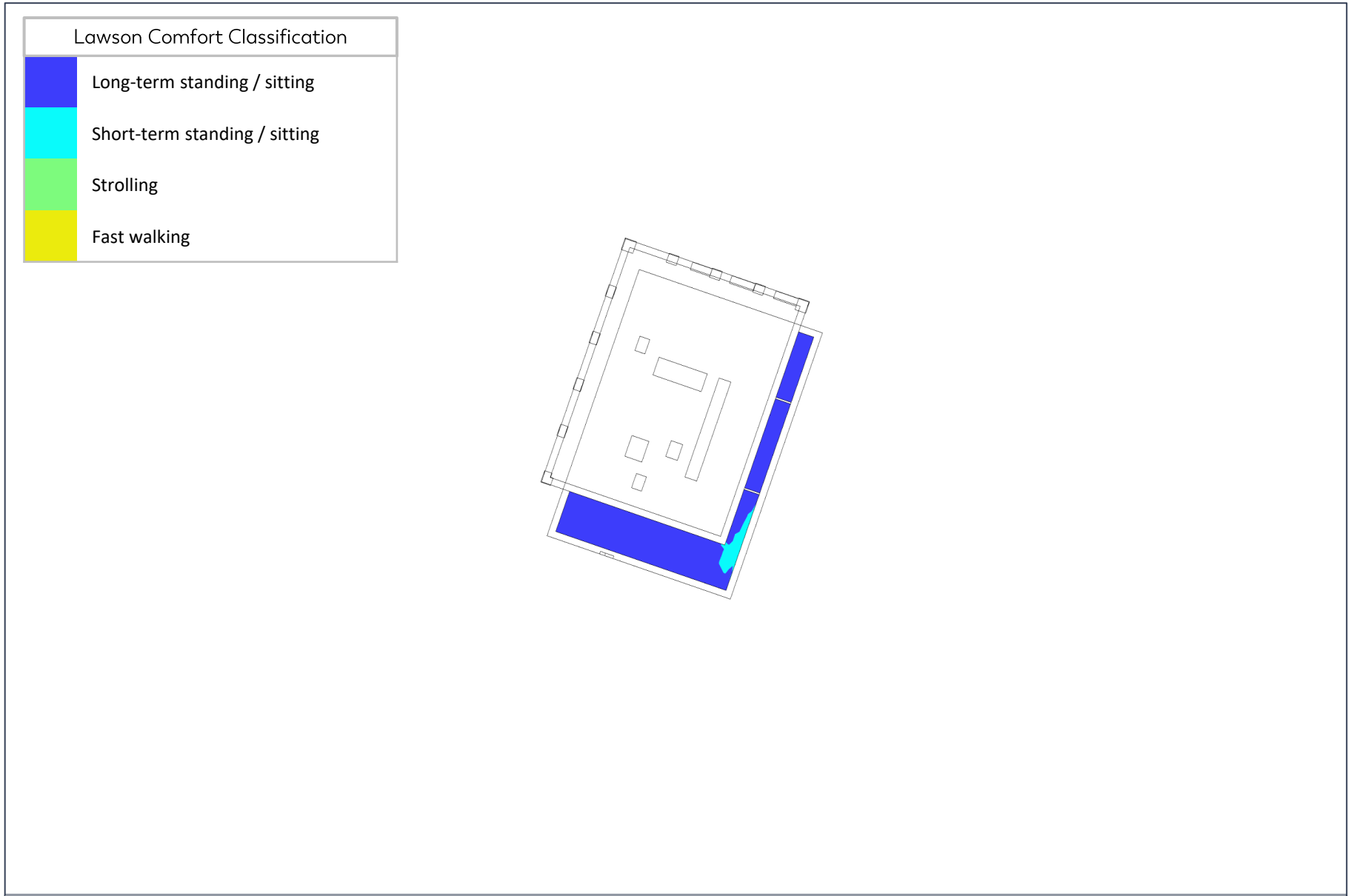


Figure 19: Summertime Comfort | PinC | Terrace

6. Conclusions

Wind microclimate studies assess how new developments alter local wind conditions. They estimate how often wind speeds at pedestrian level exceed thresholds for safety and comfort, helping to determine whether areas are suitable for their intended use, or if design changes are needed.

The One Lord Street development was assessed by ArcAero using Computational Fluid Dynamics (CFD) and the Lawson criteria. The study predicts pedestrian wind conditions following the introduction of the proposed buildings and evaluates their suitability for public comfort and safety.

- The wind conditions at the existing site comply with the safety and comfort criteria for existing pedestrian activities.
- Following the introduction of the proposed development into the existing surrounds, wind conditions remain safe and largely comfortable for intended uses within and around the site.
- With the introduction of the cumulative developments, wind conditions within and around the site are entirely safe and comfortable for their intended use, with the exceedance on the terrace level fully resolved.

7. References

[1] Lawson, T.V. The determination of the wind environment of a building complex before construction. Bristol : University of Bristol, Department of Aeronautical Engineering, 1990.

[2] ESDU (Engineering Science Data Unit). Item 01008. Computer Program for wind speeds and turbulence properties: flat or hilly sites in terrain with roughness. 2001.

[3] F, Menter. Zonal Two Equation k-ω Turbulence Models for Aerodynamic Flows. 1993. AIAA Paper 93-2906.

[4] F, Menter. Turbulence Modelling for Engineering Flows. s.l. : ANSYS Inc., 2011.

[5] Richards, P.J. and Hoxey, R.P. Appropriate boundary conditions for computational wind engineering models using the k-ε turbulence model. s.l. : Journal of Wind Engineering and Industrial Aerodynamics, 1993. vol. 46 & 47, pg. 145 - 153.

[6] Blocken, B. and Carmeliiet, J. Pedestrian wind environment around buildings: Literature review and practical examples. s.l. : Journal of Thermal Envelope and Building Science, 2004.

Appendix A: Preparation of Digital Models

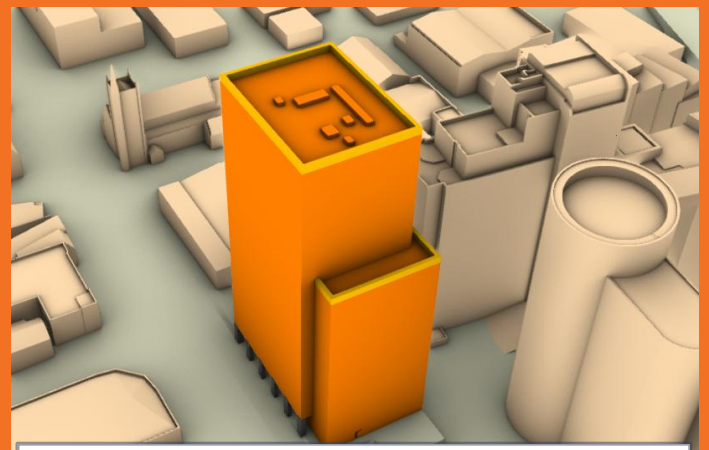


Figure A.1: Proposed Development, close-up



Figure A.2: Proposed Development, close-up

Digital models used in this study were prepared using project-specific drawing information, provided by AEW Architects on the 23rd October 2025, listed below.

- NO1LOR-AEW-B1-ZZ-M3-A-0005-S2-P01-3D Model.dwg

The simulations executed for this report were carried out in the absence of any soft landscaping proposals.

Figures A.1 and A.2 present the Proposed Development in detail, as modelled.

Appendix B: CFD Modelling

Spatial Discretization

The computational domain was discretised using polyhedral cells for the core mesh and low aspect-ratio prism cells adjacent to solid boundaries, including building walls and the ground surface. Separate computational meshes were constructed for each of the three study configurations.

The domain includes the Proposed Development site along with surrounding buildings and topographical features, explicitly modelled within a 460m radius. The overall domain extends to 1500 m in the along-wind direction, 1100 m across-wind, and 450 m vertically.

To resolve detailed architectural features and flow structures, the Proposed Development and its immediate surroundings were meshed with a minimum cell size of 0.2 m. Pedestrian-level surfaces were meshed with a five-layer prism mesh, which increases in thickness near buildings to reach a total height of 1.5 m above ground level.

Figure B.1 illustrates the computational domain.

Figures B.2 to B.4 provide examples of mesh resolution and distribution.

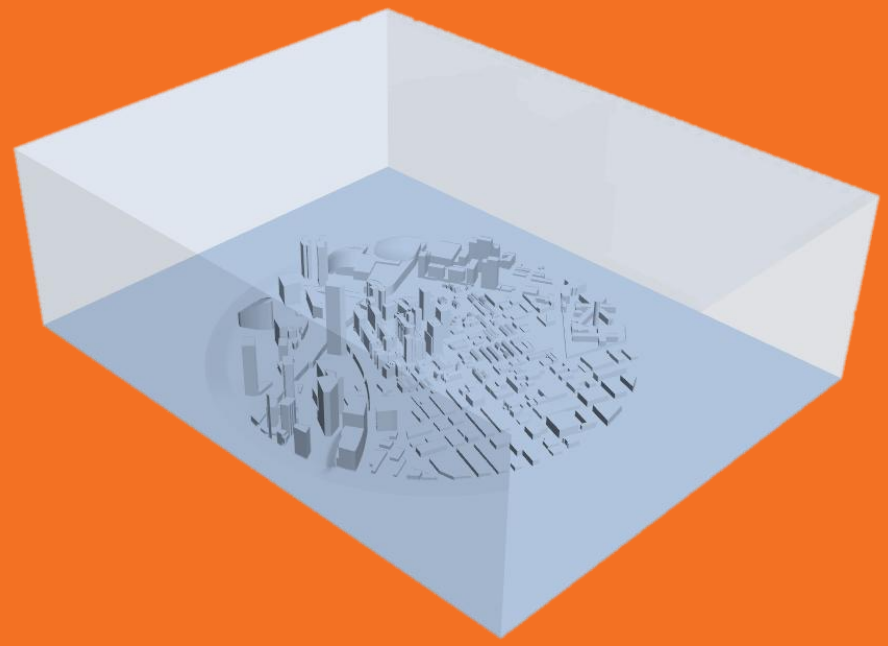


Figure B.1: Computational domain

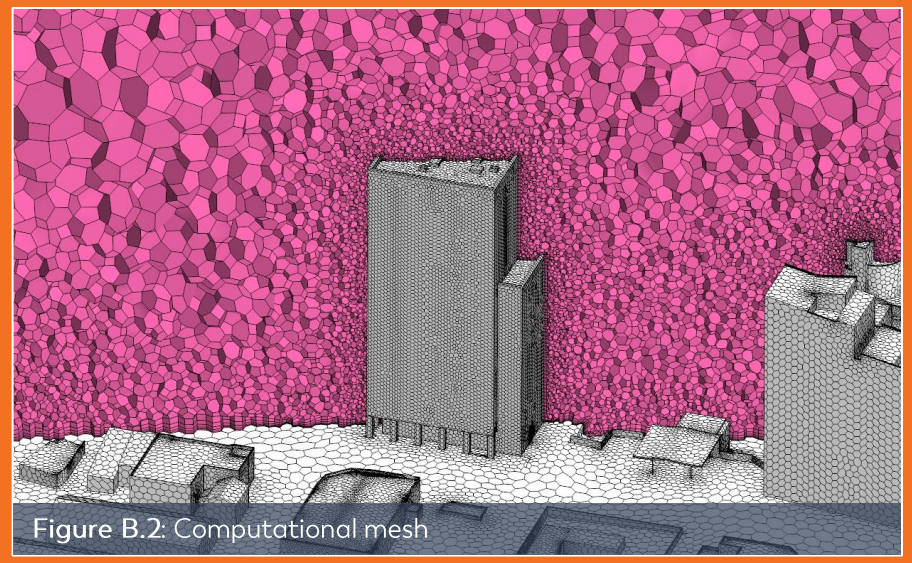


Figure B.2: Computational mesh

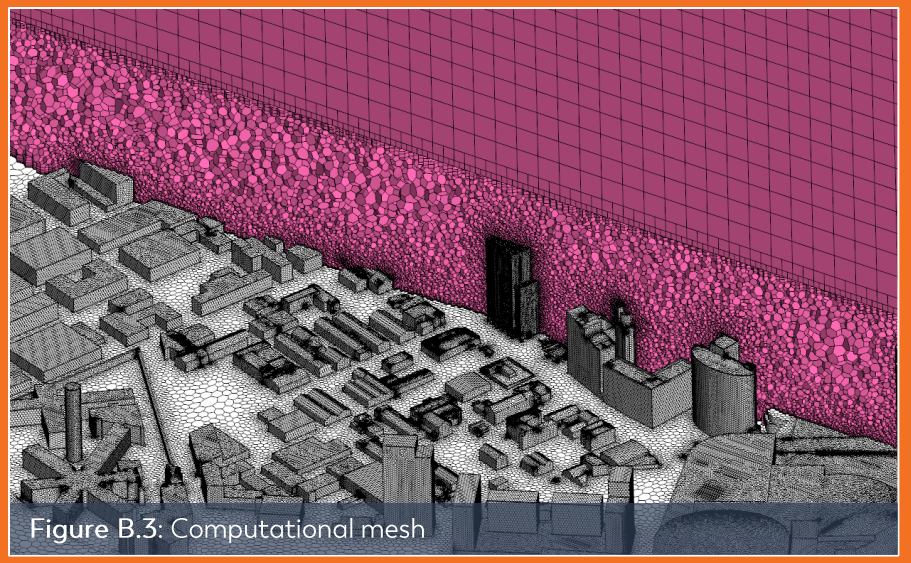


Figure B.3: Computational mesh

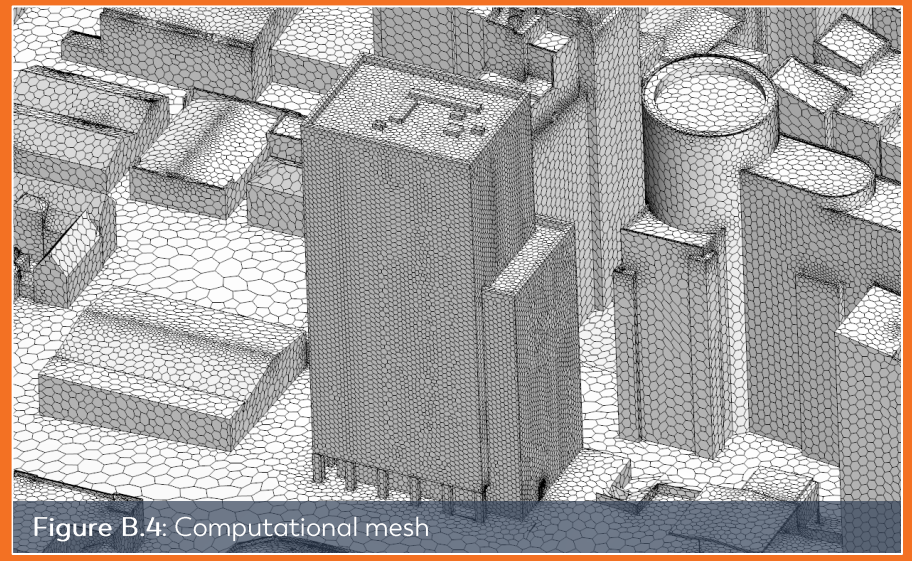


Figure B.4: Computational mesh

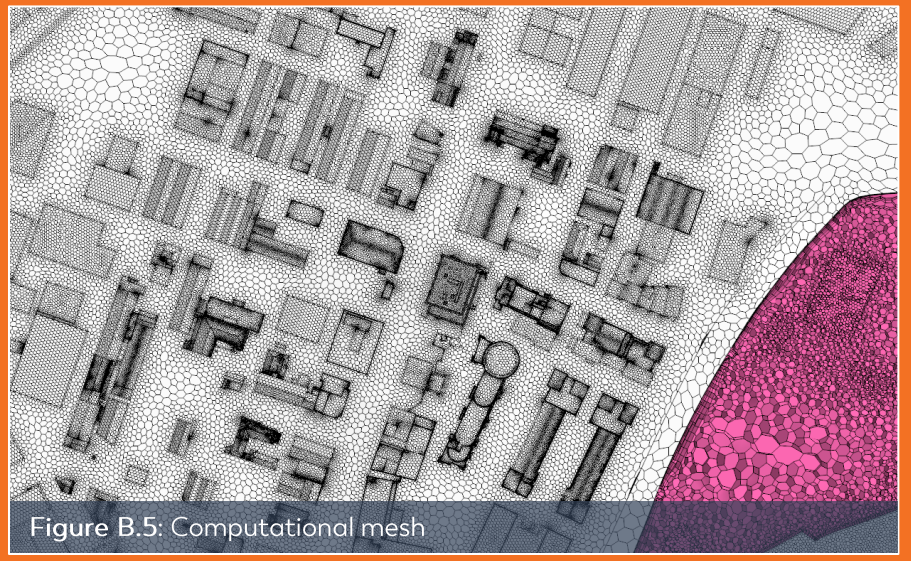


Figure B.5: Computational mesh

Solution Method

The modelling of incompressible fluid flow was carried out using variants of the Semi-Implicit Method for Pressure-Linked Equations (SIMPLE) algorithm. Turbulent flow features were simulated using the Shear Stress Transport (SST) k–ω turbulence model.

Originally proposed by Menter[3], the SST k–ω model is a two-equation eddy-viscosity model that blends the advantages of both the k–ω and k–ε formulations. It applies the k–ω model near wall boundaries for accurate resolution of boundary layers, while transitioning to a k–ε-like behaviour in the free-stream regions to improve robustness and accuracy in separated flows. Further detail on the formulation and application of the SST k–ω turbulence model can be found in the work of Menter[3, 4].

Initial and Boundary Conditions

The atmospheric boundary layer flow was simulated by implementing a logarithmic velocity profile model presented by Richards and Hoxey[5], with the following main assumptions:

- The vertical velocity component at the domain boundary is negligible
- The pressure gradient and shear stress are constant

The model implies the following equation for the mean inlet velocity at the CFD domain:

$$U(z) = \frac{U^*}{\kappa} . ln\left(\frac{z + z_0}{z0}\right)$$

where:

- κ - is the von Karman's constant
- z - is the distance from the ground surface in vertical direction
- z_0 - is the ground surface roughness length in metres

The friction velocity U* is calculated by the following equations:

$$U^* = \kappa \frac{U_{ref}}{ln\left(\frac{z_{ref} + z_0}{z0}\right)}$$

where:

- z_{ref} – is the reference height in metres
- U_{ref} - is the reference velocity in m/s measured at z_{ref}

The turbulent velocity fluctuations at the domain inlet are induced by constant shear stress with height, maintained by the turbulent kinetic energy k equation below:

$$k(z) = \frac{U_{ref}}{\sqrt{C_\mu}}$$

where:

- C_μ = **0.09** - is a k-ε turbulence model constant

All surface boundary conditions were modelled as smooth walls with a no-slip condition. A no-slip wall boundary condition with a varying roughness length height based on the terrain analysis for the site was applied on the ground surface outside the explicit surrounds area of the domain.

Gust Equivalent Mean Calculation

The presence of gusts in the wind flow is a major component that may lead to additional instability and discomfort to that caused by the mean wind flow. Thus, the gust wind speed is accounted for by a calculation of the short-duration gust wind speed, considering the standard deviation of the mean wind speed, and in particular the turbulent kinetic energy, k:

$$\sigma = \sqrt{\frac{2}{3}k}$$

The Gust Equivalent Mean (GEM) is them calculated as:

$$U_{GEM} = \frac{U_{mean} + 3.5\sigma}{k_g}$$

where gust factor, k_g= 1.85

The final wind speed ratio (speed-up) used in the Lawson criteria assessment corresponds to the worst-case value derived from both the time-averaged mean wind speed and the gust equivalent mean wind speed. Once known, it is applied in conjunction with the the Weibull cumulative distribution function to calculate the probability of exceedance:

$$P(V > v) = exp\left[-\left(\frac{V^k}{c}\right)\right]$$

Where v is the wind speed threshold, c is the scale (or dispersion) parameter, and k is the shape parameter. To this formulation, the directional probability of occurrence pp for each wind direction is incorporated. This allows the exceedance probability to be calculated for each wind direction and for each month of the year, providing a directional and temporal profile of wind comfort conditions in accordance with the Lawson criteria.

One Lord Street – Wind Microclimate Assessment
Version 02 – Issued 26th January 2026

Prepared by R. Kumar
Reviewed by H. Y. Teoh and J. Osman

ArcAero | george@architecturalaero.com | www.architecturalaero.com

Socioeconomics and Human Health Appendix 8.1 Policy and Guidance

8.1 The assessments found within ES Vol 1 Chapter 8 Socioeconomics and Human Health have been informed by the following legislation, policies and guidance.

International Legislation

8.2 There is no international legislation relating to the assessment of socioeconomics.

8.3 There is no international legislation relating to the assessment of human health.

National Legislation, Policy and Guidance

National Planning Policy Framework (2024)

8.4 The National Planning Policy Framework[1] (NPPF) (revised in December 2024) remains a material consideration for planning decisions by Local Planning Authorities and for the preparation of local and neighbourhood plans.

8.5 The latest iteration of the NPPF (published December 2024) states that the purpose of the planning system is to contribute to sustainable development through interconnected economic, social, and environmental objectives (paragraph 8).

8.6 The economic role emphasises building a "strong, responsive, and competitive economy" ensuring suitable land use availability. The social role prioritises supporting "strong, vibrant, and healthy communities" by addressing housing needs and "fostering well-designed, beautiful and safe places".

8.7 The NPPF lists six planning principles (paragraph 135) that should underpin both plan-making and decision-making. These include contributing to the achievement of sustainable development; effective engagement between plan makers and communities; and being accessible to assist public involvement.

8.8 These principles are further developed within the following key sections:

- **Chapter 5** – Delivering a Sufficient Supply of Homes emphasises diverse, high-quality housing supply responsive to demographic trends, market needs, and local demands, supporting affordable and mixed-tenure housing, including social rent (paragraph 64);
- **Chapter 6** – Building a Strong, Competitive Economy outlines the need for policies and decisions that accommodate sector-specific requirements to foster local economic growth, including supporting innovation hubs and modern infrastructure needs (paragraph 87);
- **Chapter 7** – Ensuring the Vitality of Town Centres encourages residential development in town centres to enhance vitality and addresses adaptive reuse of spaces to meet community needs (paragraph 90);
- **Chapter 8** – Promoting Healthy and Safe Communities highlights the role of planning in improving health and wellbeing by ensuring access to schools, safe public spaces, and facilities that promote social interaction and cohesion (paragraph 96);
- **Chapter 11** – Making Effective Use of Land emphasises the role of planning to promote and support the development of under-utilised land and buildings, especially if this would help to meet identified needs for housing
- where land supply is constrained and available sites could be used more effectively (paragraph 125); and
- **Chapter 12** – Achieving Well-Designed Places underlines the importance of local, high-quality, and sustainable design to foster better living environments (paragraph 131).

8.9 For large-scale developments, promoting med-use layouts is vital to reduce travel needs for work, shopping, leisure, and education, aligning with updated sustainable transport guidelines (paragraph 111).

8.10 The provision of high-quality open spaces and sports facilities is emphasised as critical for community health and well-being. Policies must be informed by robust, up-to-date assessments of needs and opportunities for recreational spaces, with added benefits for nature and climate resilience (paragraph 103).

Regional Policy and Guidance

Greater Manchester Combined Authority (GMCA) Places for Everyone Joint Development Plan 2022 – 2039

8.11 The GMCA Places for Everyone Joint Development Plan[2] provides a comprehensive framework aimed at delivering sustainable and inclusive growth across the boroughs of Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan. With a vision to transform Greater Manchester into an economically vibrant, environmentally sustainable, and socially inclusive city-region, the plan sets out milestones for development up to 2039.

8.12 The strategic vision is underpinned by several key objectives:

- **Meet Housing Needs**: Increase the number of net additional dwellings, ensure a diverse mix, and boost affordable housing;
- **Create Neighbourhoods of Choice**: Prioritise brownfield land use, focus new homes in growth areas and town centres, and ensure accessibility to public transport hubs;
- **Promote Economic Growth**: Develop high-value employment clusters, facilitate diverse employment sites, and leverage national and international assets;
- **Reduce Inequalities**: Ensure access to skills training and employment, strengthen northern competitiveness, and improve public transport;
- **Promote Sustainable Movement**: Enhance the transport network, encourage active travel, and implement infrastructure for cleaner vehicles;
- **Achieve Carbon Neutrality**: Promote patterns that minimise travel needs, enhance energy efficiency, and integrate renewable energy solutions;
- **Enhance Natural Environment**: Protect landscapes, improve access to green spaces, and promote biodiversity;
- **Support Infrastructure**: Ensure developments are served by necessary physical and social infrastructure including schools, health facilities, and transport; and
- **Foster Health and Wellbeing**: Improve access to healthy food, reduce air pollution impacts, and maximise health benefits from green spaces

8.13 The plan includes specific policies to realise these objectives:

- **Policy JP-H1**: Housing Supply: Targets delivery of homes to meet local needs by optimising land use;
- **Policy JP-E1**: Employment Areas: Encourages creation of employment clusters to boost job opportunities;
- **Policy JP-S2**: Health and Social Care Facilities: Ensures development plans address local healthcare needs;

[1] MHCLG (2024) National Planning Policy Framework December 2024 (revised February 2025). Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[2] Greater Manchester Combined Authority (2022) GMCA Places for Everyone Joint Development Plan 2022 – 2039. Available at: https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/strategic-planning/places-for-everyone/pfe-adoption/

- **Policy JP-S3**: Education and Childcare Facilities: Requires provision of quality educational and childcare facilities;
- **Policy JP-S4**: Play and Informal Recreation: Promotes inclusion of accessible play areas in residential developments;
- **Policy JP-S5**: Sports and Recreation Facilities: Supports development of high-quality sports and recreation spaces;
- **Policy JP-G4**: Open Space: Protects and promotes the creation of green spaces;
- **Policy JP-C1**: Integrated Transport Network: Supports development patterns that minimise travel needs and integrate sustainable transport options; and
- **Policy JP-S1**: Sustainable Development: Emphasises the need to maximise economic, social, and environmental benefits from growth.

8.14 Through these strategic objectives and policies, the GMCA Places for Everyone Joint Development Plan aims to ensure that the growth over the coming years is inclusive, sustainable, and beneficial for all residents of Greater Manchester.

Greater Manchester Combined Authority (GMCA) Strategy 2025-2035

8.15 The Greater Manchester Combined Authority (GMCA) Strategy[3] aims to position Greater Manchester as a pioneer in economic growth, social inclusion, and environmental sustainability. The Strategy, underpinned by the Greater Manchester Strategy, envisions a city-region that thrives economically, supports its residents to realise their full potential, and ensures equitable growth across all boroughs.

8.16 The strategic vision is anchored by several core objectives:

- **Economic Strengthening**: Promoting high-value sectors and fostering innovation to boost global competitiveness, while addressing productivity disparities;
- **Inclusive Growth**: Ensuring all residents benefit from economic prosperity through equitable access to jobs, housing, education, and health services; and
- **Environmental Sustainability**: Committing to carbon neutrality by 2038, enhancing green infrastructure, and promoting sustainable development practices.
- **Quality of Life**: Improving health and well-being by ensuring access to healthcare, opportunities for active lifestyles, and reducing health inequalities.

8.17 Health and well-being are also key to the GMCA Strategy, reflected in specific policies aimed at improving community health:

- **Health Infrastructure**: Ensuring new developments provide adequate healthcare facilities to meet community needs. Coordinating with local and Greater Manchester-wide health strategies to enhance healthcare services;
- **Healthy Lifestyles**: Promoting active travel and access to green spaces to encourage physical activity and improve mental well-being. Initiatives to improve air quality by facilitating public transportation, cycling, and walking; and
- **Healthy Food Access**: Enhancing access to healthy food options across all communities, addressing dietary-related health issues, and supporting local food initiatives.

8.18 Through these objectives and policies, the GMCA Strategy aims to create a resilient, healthy, and inclusive Greater Manchester. The approach emphasises sustained economic growth balanced with environmental stewardship and social equity, ensuring long-term prosperity for all residents.

Greater Manchester Combined Authority (GMCA) Housing Strategy 2024

8.19 The Greater Manchester Combined Authority Housing Strategy (2024)[4] provides the strategic framework for housing delivery across Greater Manchester, setting out how housing growth will support inclusive economic development, improved health outcomes, and reduced inequalities across the city-region.

8.20 The Strategy recognises housing as a key social determinant of health and seeks to address challenges relating to housing affordability, quality, availability, and accessibility. It aligns housing delivery with wider objectives for regeneration, economic participation, environmental sustainability, and health and wellbeing.

8.21 Key objectives of the GMCA Housing Strategy relevant to socioeconomics and human health include:

- Increasing the supply of homes to meet identified needs, including affordable, social, and specialist housing;
- Improving housing quality, safety, and energy efficiency to support physical and mental health and reduce fuel poverty;
- Reducing homelessness and housing insecurity;
- Supporting place-based regeneration to strengthen communities and local economies; and
- Promoting the delivery of healthy neighbourhoods with access to green space, services, employment opportunities, and sustainable transport.

8.22 The Strategy also emphasises the importance of partnership working with local authorities, health bodies, and developers to ensure that housing growth is supported by appropriate social and health infrastructure.

8.23 The Socioeconomics and Human Health assessments have had regard to the GMCA Housing Strategy in considering population change, housing-led regeneration, demand on services, and potential implications for health inequalities arising from the Proposed Development.

Local Policy and Guidance

Manchester City Council (MCC) Places for Everyone (Local Plan)

8.24 The Manchester Places for Everyone Local Plan[5], which covers Manchester City Council, provides the statutory development framework for the city and sets out policies to guide sustainable growth, improve health and wellbeing, and reduce socio-economic inequalities.

8.25 Key Local Plan policies relevant to the assessment of socioeconomics and human health include those which seek to:

- Promote healthy, inclusive and resilient neighbourhoods;
- Ensure access to employment, education, healthcare and community facilities;
- Deliver a sufficient supply of high-quality housing, including affordable housing;
- Improve environmental quality, including air quality and access to green and open space; and
- Support sustainable transport and active travel.

8.26 Policies relating to housing delivery, employment land provision, social infrastructure, open space, and sustainable movement have informed the identification of health determinants and pathways considered within the assessment. The socioeconomics and human health assessments have had regard to the Local Plan's objectives to address health inequalities and support inclusive economic growth.

[3] Greater Manchester Combined Authority (2025) GMCA Strategy 2025 – 2035. Available at: https://togetherwearegm.co.uk/

[4] Greater Manchester Combined Authority (2019) GMCA Housing Strategy 2019 – 2024. Available at: https://www.greatermanchester-ca.gov.uk/media/2257/gm-housing-strategy-2019-2024.pdf

[5] Manchester City Council (2024) Places For Everyone Joint Development Plan Document For Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 To 2039 Adopted 21 March 2024. Available at: https://www.greatermanchester-ca.gov.uk/media/2drduk0t/places-for-everyone-joint-development-plan-dec24.pdf

Manchester City Council (MCC) Core Strategy Development Plan Document

8.27 The Manchester City Council Core Strategy Development Plan Document[6] (2012) establishes the spatial vision and strategic objectives for development in the city and explicitly recognises the role of planning in improving health outcomes.

8.28 Relevant Core Strategy policies include:

- **Policy SP1 – Spatial Principles**, which promotes sustainable development, accessibility, and the efficient use of land;
- **Policy SP2 – Spatial Distribution of Development**, which focuses growth in accessible locations close to services, employment and public transport;
- **Policy H1 – Overall Housing Provision**, supporting delivery of housing to meet identified needs;
- **Policy H4 – Affordable Housing**, aimed at addressing housing affordability and reducing inequality;
- **Policy EC1 – Employment and Economic Growth**, supporting job creation and economic participation;
- **Policy CC1 – Climate Change Mitigation**, promoting sustainable design and reduced exposure to environmental health risks; and
- **Policy EN1 – Design Principles**, which seeks to create safe, attractive and inclusive environments that support health and wellbeing.

8.29 The assessment considers how the Proposed Development aligns with these strategic policies and contributes to positive socio-economic and health outcomes for existing and future populations.

Relevant Supplementary Planning Documents

8.30 Relevant Supplementary Planning Documents (SPDs) prepared by Manchester City Council have been reviewed where applicable. These include SPDs relating to design and placemaking, planning obligations, developer contributions, and health and wellbeing.

8.31 SPDs provide additional guidance on how Local Plan and Core Strategy policies should be implemented at the site level, including expectations for mitigating adverse effects and maximising health benefits. The principles contained within relevant SPDs have informed mitigation and enhancement measures identified within the Socioeconomics and Human Health assessments.

Topic Specific Guidance and Industry Standards

Additionality Guide (2014)

8.32 The Additionality Guide[7] (2014) has informed the approach to assessing socio-economic and health effects by ensuring that impacts attributed to the Proposed Development are additional to baseline conditions, existing trends, and other committed development.

8.33 This guidance supports transparent consideration of causality, scale and attribution, particularly in relation to employment effects, population change, and associated health outcomes.

ISEP (formerly IEMA) publications including Social Impact Assessment in EIA in the UK, Delivering Proportionate EIA, Demystifying Cumulative Effects, Determining Significance for Human Health in Environmental Impact Assessment and other good practice guidance

8.34 Guidance published by the Institute of Sustainability and Environmental Professionals (ISEP), formerly IEMA, has informed the scope, methodology and reporting of the Socioeconomics and Human Health assessments.

8.35 Key guidance includes:

- Social Impact Assessment in EIA in the UK;
- Delivering Proportionate EIA;
- Demystifying Cumulative Effects; and
- Determining Significance for Human Health in Environmental Impact Assessment.

8.36 These publications have guided the identification of relevant receptors and health pathways, the consideration of cumulative and in-combination effects, and the approach to determining the significance of effects.

ISEP Guide to Scoping in Human Health Assessment and Health in Environmental Impact Assessment

8.37 The ISEP Guide to Scoping in Human Health Assessment and Health in Environmental Impact Assessment has informed the scoping process, ensuring a proportionate and evidence-based approach. The guidance supports a focus on material health effects, appropriate spatial and temporal boundaries, and population groups likely to be affected, including vulnerable groups.

HUDU and other relevant guidance on planning for health, health infrastructure and healthy built environments

8.38 Guidance produced by the Health and Urban Development Unit (HUDU), alongside other relevant planning-for-health resources, has informed consideration of healthcare capacity, social infrastructure provision, and healthy placemaking.

8.39 This guidance has supported assessment of potential demand on healthcare services arising from population change and informed the identification of mitigation measures and planning obligations where appropriate.

[6] Manchester City Council (2012) Manchester's Local Development Framework Core Strategy Development Plan Document. Available at: https://www.manchester.gov.uk/downloads/download/5672/core_strategy

[7] Homes and Communities Agency (2014) Additionality Guide 4th Edition 2014. Available at: https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf

Climate Change and Greenhouse Gas Environmental Impact Assessment

ES Volume 3: Technical Appendix 9.1 - Climate Change and Greenhouse Gases Legislation and Policy Summary

Lord Street, Manchester



Table of Contents

1.1	Introduction	1
1.2	International Legislation	1
	Paris Agreement 2015	1
1.3	National Legislation	1
	Climate Change Act (2008) (2050 Target Amendment) Order (2019	1
	Carbon Budget Orders 2009, 2011, 2016 and 2021	2
1.4	National Planning Policy and Strategy	2
	National Planning Policy Framework	2
	Planning Practice Guidance - Climate Change	4
	Net Zero Strategy (Build Back Greener	5

1.1 Introduction

1.1.1 This Technical Appendix supports ES Volume 1: ES Chapter 9 Climate Change and Greenhouse Gases and provides and overview of the International and National legislation and policy documents relevant to the assessment.

1.2 International Legislation

Paris Agreement 2015

1.2.1 The Paris Agreement 2015 is a global framework agreed at Conference of the Parties (COP) 21 in Paris, on 12th December 2015. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future. The Paris Agreement requires all Parties to put forward commitments through "nationally determined contributions" (NDCs) and to strengthen these commitments in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts.

1.3 National Legislation

Climate Change Act (2008) (2050 Target Amendment) Order (2019)

1.3.1 The Climate Change Act (CCA) 2008 established the context for government action on climate change, providing a legally binding framework for the UK to reduce GHG emissions and develop the UK's ability to adapt to climate change. In 2019, the CCA 2008 was amended to include a revision of the previous aim of 80% reduction of GHG emissions compared to 1990 levels by 2050. The CCA 2008 now mandates a net zero target by 2050:

> "the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline."

1.3.2 To reach net zero carbon emissions, the UK government has set legally binding carbon budgets, capping the amount of GHG emitted in the UK over a 5-year period.

Carbon Budget Orders 2009, 2011, 2016 and 2021

1.3.3 The Carbon Budget Orders are made in accordance with the duty to set carbon budgets as required by the CCA 2008. These Orders provide the legal requirement to meet the carbon budgets as set out in Table 1.

Table 1 UK Carbon Budgets

UK Budget	Carbon Budget Level ($MtCO_2e$)	Target Reduction Below 1990 Levels (%)
1st Carbon Budget (2008 - 2012)	3,018	25
2nd Carbon Budget (2013 - 2017)	2,782	31
3rd Carbon Budget (2018 - 2022)	2,544	37
4th Carbon Budget (2023 - 2027)	1,950	52
5th Carbon Budget (2028 - 2032)	1,725	58
6th Carbon Budget (2032 - 2037)	965	77

1.3.4 These carbon budgets apply to the UK as a whole. However, Wales and Scotland have set different carbon budgetary periods to England and Northern Ireland. The emissions of all four parts of the UK contribute to the carbon budgets, even if their individual approaches are different.

1.3.5 In February 2025, the Climate Change Committee (CCC) issued advice to government on setting the Seventh Carbon Budget (CB7). This recommended that CB7 be set at 535$MtCO_2e$ for the period 2038 to 2042. The UK Government is yet to formally respond to the recommendation and as such it has not been formally adopted.

1.4 National Planning Policy and Strategy

National Planning Policy Framework

1.4.1 The revised National Planning Policy Framework (NPPF)[1] was published in December 2024 and amended in February 2025. The document sets out the Government's planning

[1] Ministry of Housing, Communities and Local Government (2024) NPPF

policies for England and how these are expected to be applied.

1.4.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

> "c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

1.4.3 At the heart of the Framework is a presumption in favour of sustainable development, as detailed in Paragraph 11:

> "11. Plans and decisions should apply a presumption in favour of sustainable development.
>
> For plan-making this means that:
>
> a) all plans should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; mitigate climate change (including by making effective use of land in urban areas) and adapt to its effects"

1.4.4 Paragraph 161 to 163 relates to the role of the planning system in relation to climate change and states:

> "The planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from rising temperatures 61. Policies should support appropriate measures to ensure the future health and resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

The need to mitigate and adapt to climate change should also be considered in preparing and assessing planning applications, taking into account the full range of potential climate change impacts"

1.4.5 Paragraph 164 specifically refers to new development and states:

"New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through incorporating green infrastructure and sustainable drainage systems; and

b) help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings in plans should reflect the government's policy for national technical standards."

Planning Practice Guidance - Climate Change

1.4.6 The Planning Practice Guidance (PPG)[2] supports the NPPF. Regarding climate change, the PPG advises how to identify suitable mitigation measures in the planning process to address the impacts of climate change.

[2] Source: https://www.gov.uk/guidance/climate-change

1.4.7 Local Planning Authorities use the NPPF and PPG to identify appropriate mitigation measures in plan making.

> "Every area will have different challenges and opportunities for reducing carbon emissions from new development such as homes, businesses, energy, transport and agricultural related development.
>
> …The distribution and design of new development and the potential for servicing sites through sustainable transport solutions, are particularly important considerations that affect transport emissions. Sustainability appraisal should be used to test different spatial options in plans on emissions.
>
> Different sectors may have different options for mitigation. For example, measures for reducing emissions in agricultural related development include anaerobic digestion, improved slurry and manure storage and improvements to buildings. In more energy intensive sectors, energy efficiency and generation of renewable energy can make a significant contribution to emissions reduction."

Net Zero Strategy (Build Back Greener)

1.4.8 The Net Zero Strategy (Build Back Greener)[3] was published on 19th October 2021 and updated in April 2022. The strategy was produced as part of the UK Government's statutory duties under the CCA 2008. It sets out policies and proposals for decarbonising all sectors of the UK economy to meet the government's net zero target by 2050.

1.4.9 Sector and technology specific strategies were also published to support the strategy, including the following:

- Environmental Improvement Plan[4], updated February 2023;
- Powering Up Britain: Energy Security Plan[5], April 2023;
- Decarbonising Trasport: A Better Greener Britain[6], 2021;

3 Department for Energy Security and Net Zero (2022) Net Zero Strategy: Build Back Greener

4 Department for Environment, Food and Rural Affairs (2023) Environmental Improvement Plan

5 Department for Energy Security and Net Zero (2023) Powering Up Britain: Energy Security Plan

6 Department for Transport (2021) Decarbonising Transport: A Better Greener Britain

- Industrial Decarbonisation Strategy[7], updated April 2021; and,
- Heat and Buildings Strategy[8], updated March 2023.

[7] Department for Energy Security and Net Zero (2021) Industrial Decarbonisation Strategy

[8] Department for Energy Security and Net Zero (2023) Heat and Buildings Strategy

ELEMENT SUSTAINABILITY

ONE LORD STREET, MANCHESTER

LIFE CYCLE ASSESSMENT

DECEMBER 2025

REF: 2025.168



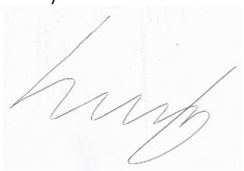
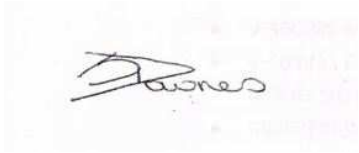
ELEMENT SUSTAINABILITY – ISSUE NOTES

Project No: 2025.168

Title: One Lord Street, Manchester
Whole Life Cycle Assessment

Client: Linear Living Ltd.

Status: Draft

Version:	0.0	
Date:	November 2025	
Prepared by: 	Checked by: 	Approved by: 
Harry Higgins Sustainability Consultant	Stacey Downs Associate Consultant	Laurie Wills Director

Version	Version Details	Date Issued	Issued by:
0.0	Draft for client comment	December 2025	HH

ELEMENT SUSTAINABILITY

phone: 01829 733 444

email: hello@elementsustainability.co.uk

www: www.elementsustanability.co.uk

© Report copyright of Element Sustainability Ltd.

Disclaimer

This report has been prepared for the sole use of the client, for the intended purposes as stated in the agreement under which this work was completed. It is not intended for and should not be relied upon by any third party. Any such party relies on this report at their own risk. No part of this report may be copied or duplicated without the express permission of Element Sustainability Ltd. and the party for whom it was prepared.

CONTENTS

1. Introduction 1

2. Project Details 2

2.1 Project Details 2

3. Life Cycle Assessment 4

3.1 Definition 4

3.2 Methodology 5

3.3 Scope 6

3.4 Assumptions 6

3.5 The Contingency Factor 7

3.5.1 The Contingency Factor 7

3.5.2 The Carbon Data Uncertainty Factor 7

3.5.3 The Carbon Data Confidence Score Approach 7

3.5.4 The Quantities Uncertainty Factor 8

3.5.5 The Whole Life Cycle Uncertainty Factor 8

3.6 Limitations 8

4. LCA Results 9

4.1 Embodied Carbon 9

4.1.1 Upfront Embodied Carbon Assessment 9

4.2 Whole Life Carbon 9

4.2.1 Whole Life Carbon Assessment 9

5. Benchmarking 12

5.1.1 Embodied Carbon Key Performance Indicators 12

5.1.2 Embodied Carbon Targets 13

6. Conclusion 14

1. INTRODUCTION

Element Sustainability have been commissioned by Linear Living LTD. to undertake a Life Cycle Assessment (LCA) of the proposed One Lord Street residential apartment building located in Cheetham Hill within Manchester. In order to understand what impact, the scheme will have on the environment, regarding both embodied and whole life carbon. This also enables comparisons to be made against industry benchmarks.

An LCA has been prepared to show compliance with Greater Manchester Combined Authority 'Places for Everyone' (PfE) Design Guidance for Net Zero requirements. This assessment aims to show compliance with the net zero design and carbon reporting requirements set out in the 2025 guidance.

The purpose of this assessment is to assess the whole life carbon impact of the proposed scheme, in line with the Royal Institute of Chartered Surveyors (RICS) Professional Statement 2nd edition (incorporating all life cycle modules), and to separately report on the upfront embodied carbon (lifecycle modules A1–A5), whole life cycle carbon (lifecycle modules A-C, excluding B6, B7 and D), and life cycle module D.

The primary metric used to analyse the Global Warming Potential (GWP) of the scheme is expressed in terms of carbon dioxide equivalent (CO_2e), often referred to as carbon emissions. Whole Life-Cycle Carbon (WLC) emissions are the carbon emissions resulting from the materials, construction, and the use of a building over its entire life, including its demolition and disposal.

2. PROJECT DETAILS

2.1 Project Details

The mandatory asset-related technical characteristics for the project are set out within Table 2.1 as per the requirements of the RICS Professional Statement.

Table 2.1 - Key Project Details

Category	Project Details
Project Name	One Lord Street
Asset type	New construction – Residential Apartments
Development Proposal	Erection of a residential apartment building (One Lord Street) with 251 apartments
Gross Internal Area	22,200m^2
Number of Storeys	24 floors (including ground)
Location	One Lord Street, Cheetham Hill, Manchester M4 4EX
Anticipated start-on-site and completion dates.	TBC

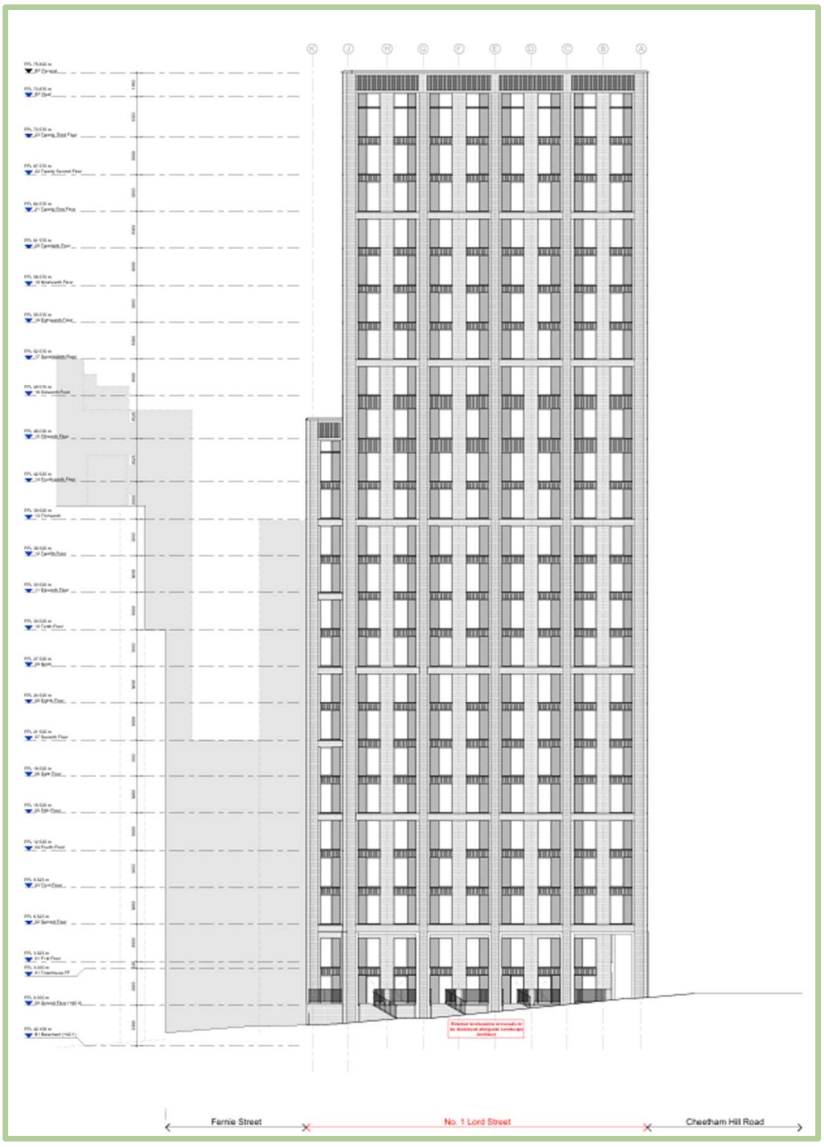
The mandatory assessment details for the project are set out within Table 2.2 as per the requirements of the RICS Professional Statement.

Table 2.1 - Key Assessment Details

Category	Assessment Details
Assessed by	Element Sustainability Limited
Date of Assessment	November 2025
Project Phase	Concept Design – Planning Stage
Assessment Scope	Fully fitted

Figures 2.1 below demonstrates the proposed north elevation for the scheme:

Figure 2.1 – Proposed Elevation



3. LIFE CYCLE ASSESSMENT

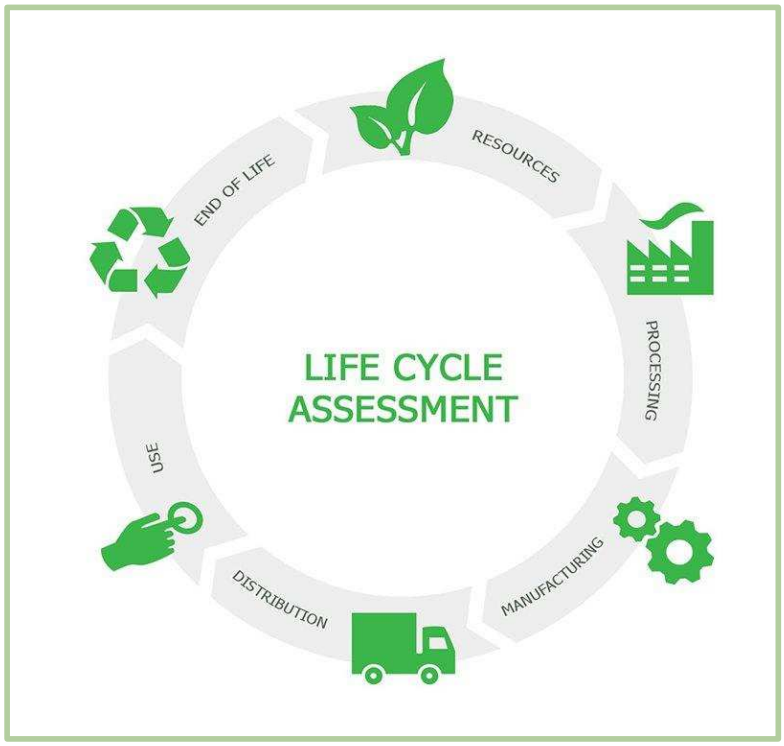
3.1 Definition

Building Life Cycle Assessment (LCA) is a science-based methodology for quantifying the lifetime environmental impacts of a building. It is used to measure and reduce the embodied, and whole-life carbon of a building. The embodied carbon refers to the emissions arising from the extraction, manufacture, transportation, installation, maintenance and disposal of all building materials.

Typically, the assessment is used to calculate the overall environmental footprint of a product and then identify design measures to reduce the carbon emissions associated with each stage of the project's lifecycle.

The following image shows a LCA model that would apply to a scheme within the built environment.

Figure 3.1 – Lifecycle Stages of a Building



Source: OneClickLCA

3.2 Methodology

The RICS Professional Statement mandates a whole life approach to reducing carbon emissions within the built environment. It is intended to standardise whole life carbon assessments and enhance consistency in outputs, by providing specific practical guidance for the interpretation and implementation of the methodology stipulated by EN 15978. This assessment has been conducted in line with the RICS Professional Statement.

One Click LCA Software was used to undertake this life cycle assessment, as it is a compliant and recognised tool to conduct life cycle assessments, in accordance with the following standards:

- BS EN 15978: 2011 – Sustainability of Construction Works – Assessment of Environmental Performance of Buildings - Calculation Method;
- ISO 14040 2006: Environmental Management – Lifecycle Assessment – Principles and Framework; and,
- ISO 14044 2006: Environmental Management – Lifecycle Assessment – Requirements and Guidelines.

The construction materials and quantities specified for this model were provided by the design team or extracted from the necessary plans and specification documents provided, as listed below:

- Lord Street cost plan extract for Elements 06.11.25, and,
- NO1LOR-AEW-XX-RF-DR-A-21040-P02-Proposed GA Plan – Roof.

The LCA templates selected for assessment match the details of the materials provided and, where certain material templates were not available, a similar product was then selected from those available within the extensive One Click database.

One Click LCA default scenarios were used to facilitate the carbon calculations for this scheme, as set out below:

- Service life values were set to the 'RICS 2nd Edition Default Service Life';
- Transportation distances for materials were set to reflect UK construction best practice;
- The 'End of Life' calculation method used reflects market scenarios, which utilises the most typical method for that material in the market;
- Country specific end of life scenarios were set to 'United Kingdom – RICS V2'; and
- The study period was set at sixty years in line with the methodology outlined in the RICS Professional Statement.

The LCA undertaken for this report will demonstrate the environmental impact of the proposed scheme in terms of its Global Warming Potential (GWP), which represents the impact of all greenhouse gases on a carbon dioxide basis emitted as a direct result of the building.

3.3 Scope

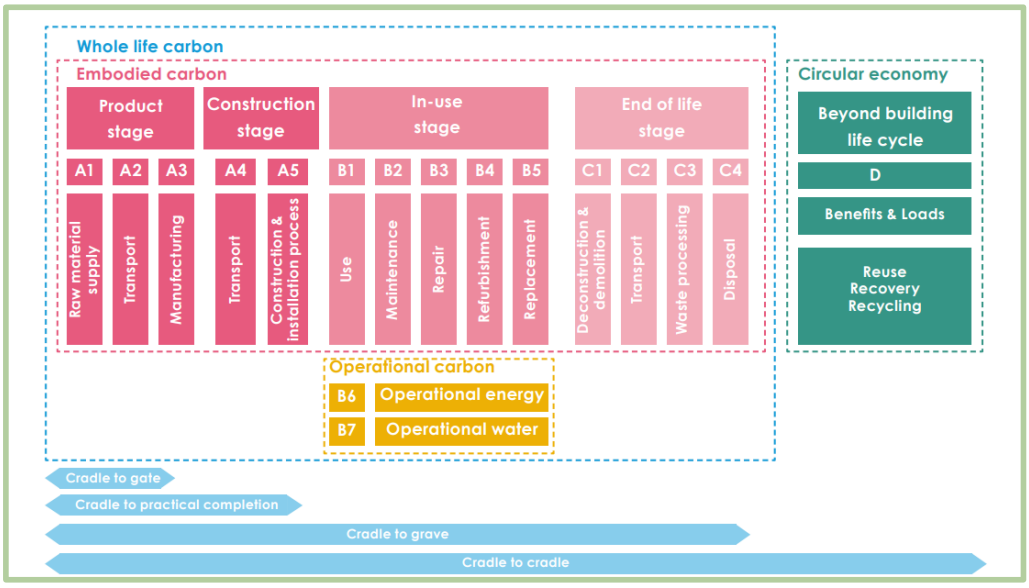
The LCA undertaken for this report will cover the RIBA Stage 2 design and be assessed in accordance with the RICS Professional Statement 2nd Edition (2023). Consequently, all lifecycle modules have been included.

The assessment scope has therefore considered the following elements:

- Demolition;
- Facilitating Works;
- Substructure;
- Superstructure;
- Finishes;
- Fittings, Furnishings and Equipment;
- Public Health;
- Heating, Ventilation and Air Conditioning (HVAC);
- Electrical Installations;
- On Site Renewable Energy; and,
- External Works.

The 'study boundary' has been defined, as per the life cycle modules set out in Figure 3.2 below:

Figure 3.2 – EN 15978 Assessment Scope



Source: LETI Embodied Carbon Primer.

The focus of this assessment is on the environmental impacts of the project, in particular the embodied carbon of the materials sourced, and energy consumed in the manufacturing, transportation, assembly, in use and the end-of-life stages of the scheme.

3.4 Assumptions

This assessment is being conducted during RIBA Stage 2 (concept design); therefore, design detail is limited and will be considered further as the scheme progresses through to the Technical Design Stage. A number of assumptions were consequently used in order to complete the baseline assessment. The RICS Professional Statement has provided reasonable assumptions, based on UK average industry standard practice, which must be used during early design phase whole life carbon assessments (WLCA's) that are to act as baselines for progressive reporting. This data should be refined during later project phases and replaced by more comprehensive and product specific information as it becomes available.

3.5 The Contingency Factor

When costing projects, it is common for contingencies to be used to reflect uncertainties. For WLCA's, there are similar uncertainties, particularly during the early design phase when far less is known about the final design and materials.

This uncertainty is managed by developing a WLCA uncertainty factor, which is made up of three component parts.

1. A contingency factor,
2. A carbon data uncertainty factor, and
3. A quantities uncertainty factor.

3.5.1 The Contingency Factor

The contingency factor used for this assessment is aligned with the early design information listed in Table 3.2 below, which was extracted from the RICS Professional Statement.

Table 3.2 – RICS Professional Statement Default Contingency Factors

RICS project phase	RIBA stage	Default contingency factor to apply to all life cycle stages and modules	Additional uncertainty factors
Early design	0-2	**15%**	-
Technical design and construction	3-5	6%	Carbon data uncertainty factor and quantities uncertainty factor
Post-completion	6	0%	Carbon data uncertainty factor and quantities uncertainty factor

In order to account for uncertainty and lack of detailed or complete information, particularly during the early design phases, the contingency factor has been applied to the results for each life cycle information module and element category and reported separately in Section 4 of this report.

3.5.2 The Carbon Data Uncertainty Factor

During early design stages, it is best to use generic data to represent products and materials, as it is generally not clear the exact products that will be used, and from where and which manufacturers they will be sourced. There is therefore considerable uncertainty as to whether the dataset chosen will accurately represent the product that is finally selected, and **it is therefore inappropriate to use the carbon data uncertainty factor during the early design phase.**

3.5.3 The Carbon Data Confidence Score Approach

Carbon data confidence scores are calculated for each of the key products used in the asset. Key products are identified as the ten most impactful products or materials in terms of the percentage of the asset's embodied carbon impact (modules A1–A5, B1–B5, C1–C4).

However, this is only required during the technical design, construction and post-completion phases, the asset carbon confidence score produced using this method must be reported in the WLCA report, together with the percentage of the asset's overall upfront and embodied carbon for which the key products are responsible.

3.5.4 The Quantities Uncertainty Factor

A quantities uncertainty factor for key products (the most impactful products and materials used) provides an indication of the uncertainty associated with the quantities used for the WLCA.

However, this is only required during the technical design, construction and post-completion phases, when the quality of the quantities data must be assessed for each of the key products: the ten products or materials that cause the greatest impact for the asset.

3.5.5 The Whole Life Cycle Uncertainty Factor

The total percentage figure to be added to the WLCA is therefore a combination of the contingency factor, the carbon data uncertainty factor and the quantities uncertainty factor. For the purpose of this assessment, only the contingency factor will be used to determine the level of uncertainty in line with the minimum requirements of the RICS Professional Statement. It is however, advised that the entire whole life cycle uncertainty factor is calculated at the Technical Design Stage to entirely align with the RICS Professional Statement methodology.

3.6 Limitations

The One Click LCA predictions of embodied impacts conducted in One Click LCA software, by their very nature, cannot be exact. It is not possible to track all the impacts associated with a product or service back through history. One Click LCA software has been built and tested to enable informed decisions when comparing design options. Generic environmental impact coefficients do not necessarily correspond to those of individual brands of the same product or service due to differences within industries and in the way these products and services are delivered.

Due to the nature of Whole Life Carbon Assessments, certain assumptions and default values can be used, to fill any gaps throughout the early design stages. Therefore, the service life of the materials inputted have been based on the latest guidance from the RICS Professional Statement, which in practise may vary from these values and could well be extended. Thereby reducing the overall environmental impact associated with Life Cycle Module B4 – Replacement.

4. LCA RESULTS

4.1 Embodied Carbon

Embodied carbon impacts arise from sourcing, manufacturing and installing the materials and components that make up a built asset (life cycle modules A1-A5).

To obtain a more accurate representation of the operational energy (module B6), it is recommended that a TM54: Operational Energy Performance analysis is conducted in accordance with the Chartered Institution of Building Services Engineers (CIBSE) criteria on the entire building as for this assessment the operational energy figure was calculated using average figure for the various apartment types.

4.1.1 Upfront Embodied Carbon Assessment

The results of the upfront embodied carbon assessment are based on the information provided by the design team and are presented in Table 4.1 below.

Table 4.1 - GWP Impact of 'Upfront' Modules A1 to A5 (Excluding Biogenic Carbon)[1]

	Total $kgCO_2e$	Total $kgCO_2e/m^2$
One Lord Street	13,180,003.63	593.69

4.2 Whole Life Carbon

Whole life carbon emissions are the sum total of all assets relating to GHG emissions and removals, and both operational and embodied carbon, over the life cycle of an asset, including its disposal (modules A0–A5, B1–B7, B8 optional, C1–C4, all including biogenic carbon, with A0 assumed to be zero for buildings). Overall, whole life carbon asset performance includes separately reporting the potential benefits or loads from future energy or material recovery, reuse, and recycling and from exported utilities (modules D1, D2).

4.2.1 Whole Life Carbon Assessment

The results of the whole life carbon assessment are based on the information provided by the design team and are presented in table 4.2 below.

Table 4.2 – Whole Life Cycle GWP Impact

	Total $kgCO_2e$	Module D[2]
One Lord Street	20,601,529.04	-1,848,211.34

[1] Omits carbon sequestration (biogenic carbon), in accordance with the LETI Embodied Carbon Target Alignment publication and the RICS Whole Life Carbon Assessment/ RIBA 2030 targets. Therefore, allowing for accurate comparisons to be made.

[2] Module [D] is communicated separately as it occurs beyond the life cycle of the project under study and also bears high inherent uncertainty regarding the future treatment of building components. It is, however, important to assess module [D] figures along with cradle to grave [A–C] figures to acquire a holistic understanding of the environmental impacts of a built project.

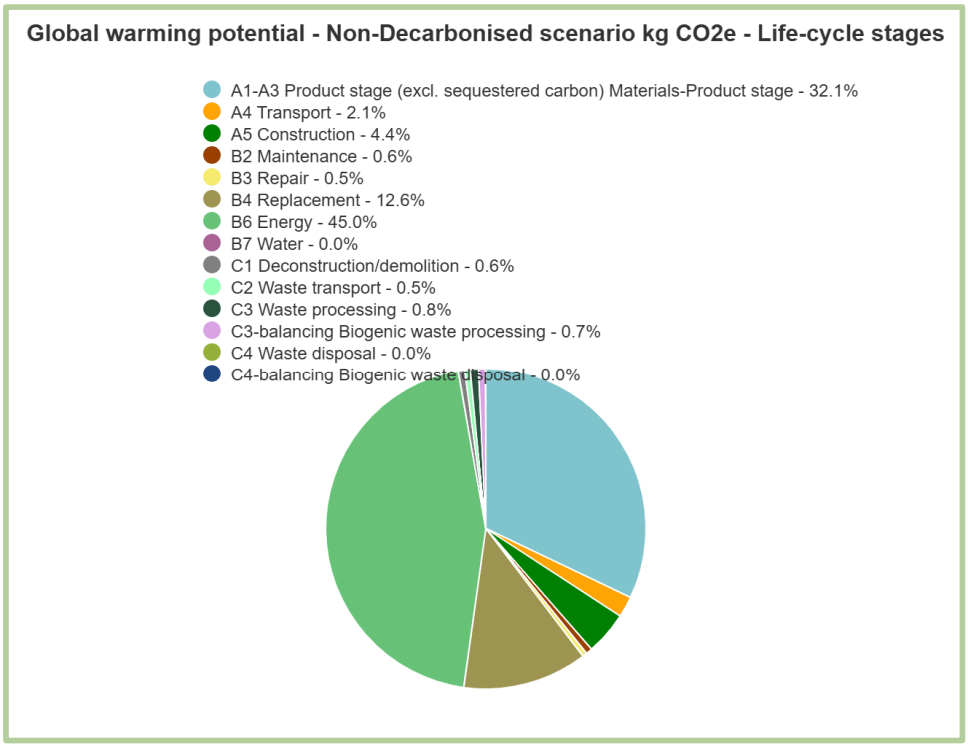
The total GWP impact per life cycle module is presented in Table 4.3.

The contingency factor used for this assessment is aligned with the early design information listed in Section 3 of this report, which was extracted from the RICS Professional Statement. For ease of reference a 15% contingency has been applied to the non-decarbonised data as presented.

Table 4.3 - GWP Impact Per Life Cycle Modules

Module	Total $KgCO_2e$
A1-A3	11,011,788.51
A4	729,072.24
A5	1,494,586.2
B1–B4	2,349,675.04
B6	4,581,070.51
B7	200.63
C1	111,000
C2	93,678.78
C3	534,713.34
C4	469.1
Biogenic Carbon (Carbon Sequestration)[3]	-304,725.3
Total	**20,601,529.04**
D	-1,848,211.34

Figure 4.1 - GWP Impact Per Life Cycle Module



[3] Carbon sequestration can be included as it meets the following criteria:

1. The whole life carbon assessment of the project includes the impacts of the End-of-Life stage [C]; and,
2. The timber originates from sustainable sources - Timber sourced and processed by Grosvenor Estate own woodland and mill

It is evident from the results displayed in Figure 4.1 above, that the life cycle modules B6 (regulated energy), A1-A3 (materials) and B4 (replacement) will have the most significant impact throughout the lifecycle of the project.

Life cycle modules A1 to A3 are likely to have high carbon emissions due to the high energy production processes associated with materials such as concrete and steel.

The environmental impact associated with the replacement emissions (module B4) considers the anticipated replacement of building components, including any emissions from the replacement process. The building components which are expected to be replaced the most relate to the building services and the finishes and coverings. To obtain a more accurate representation of the operational energy (module B6), it is recommended that a TM54: Operational Energy Performance analysis is conducted in accordance with the Chartered Institution of Building Services Engineers (CIBSE) criteria on the entire building as for this assessment the operational energy figure was calculated using the average TM54 figure for the various apartment types.

A large photovoltaic (PV) array will also be installed upon the roof of the development to provide renewable electricity to the site. Despite the positive impacts this will have on the operational emissions, a large PV array will have significant upfront embodied carbon levels associated with it, and as a result will have the most significant carbon impact (A1 to A3) from the materials selected. Conversely, the renewable energy produced by the PV array will offset any associated carbon emissions during its first few years of operation, and if maintained and operational for its anticipated lifetime should see an overall positive impact on carbon emissions.

5. BENCHMARKING

Embodied carbon benchmarks and targets are a developing knowledge area; it is anticipated that, as the quantity of more accurate and detailed information becomes available, target figures may be updated.

Following the release of the (PfE), Design Guidance for Net Zero in March 2025, the Greater Manchester Combined Authority released Embodied Carbon targets for major developments as part of the Whole Life Carbon assessment required.

Targets have been created for upfront embodied carbon for both Major and Large Major Developments which is expressed in terms of $kgCO_2/m^2$. The following lifecycle modules are required to compare accurately with these targets:

- Upfront embodied carbon: A1-A5 excluding carbon sequestration (biogenic carbon).

Table 5.1 presents the upfront embodied carbon and life cycle embodied carbon performance of the One Lord Street scheme

Table 5.1 – One Lord Street Results

	Upfront Embodied Carbon	Life Cycle Embodied Carbon
One Lord Street	593.69 $kgCO_2/m^2$	699 $kgCO_2/m^2$

5.1.1 Embodied Carbon Key Performance Indicators

Places for Everyone, Design Guidance for Net Zero (March 2025) states the following broad key performance indicators for residential buildings:

Table 5.2 – Places for Everyone Upfront Embodied Carbon Comparison (Residential Buildings)

Compared to the residential upfront embodied targets stipulated within Places for Everyone Design Guidance for Net Zero (March 2025), it is evident that **the proposed scheme improves upon the Places for Everyone Residential Major Development: Flats target for upfront embodied carbon**.

	Upfront Embodied Carbon A1-A5 ($kgCO2e/m^2$)
Major Development: Flats	<600 $kgCO_2/m^2$
One Lord Street	593.69 $kgCO_2/m^2$

5.1.2 Embodied Carbon Targets

The Places for Everyone guidance outlines various metrics and key performance indicators (KPIs). These are used to measure success of Net Zero Carbon design and construction to provide an indication of how design decisions have influenced the carbon performance of the building.

Below are the upfront embodied carbon ($kgCO_2e/m^2$) targets outlined for residential developments in section 2: Energy and Carbon requirements of the Design Guidance for Net Zero, Places for Everyone policies.

Table 5.3 – Places for Everyone Upfront Embodied Carbon Targets



As the proposed One Lord Scheme has two hundred and fifty one apartments it is classified as a 'Large Major' development under PfE and therefore has the upfront embodied carbon target of ≤600 kgCO2e/m^2. Which as shown in Table 5.2 the One Lord Street development improves upon with a total of 593.69 $kgCO_2/m^2$.

Table 5.4 – Top three materials with the highest upfront embodied carbon

	Upfront embodied carbon	kg CO2e/m2
Minimise embodied carbon	Material 1: Ready-mix concrete, normal-strength, generic, C40/50	143.96
	Material 2: Precast hollow core concrete flooring	81.89
	Material 3: Aluminium metal ceiling system	44.81

Table 5.4 shows the top three materials with the highest upfront embodied carbon emissions ($kgCO_2e/m^2$GIA) being: Ready-mix concrete, normal-strength, generic, C40/50, Precast hollow core concrete flooring, and Aluminium metal ceiling system which together contribute to around 54.5% of the cradle to gate (A1-A3) CO_2e.

6. CONCLUSION

The purpose of this Life Cycle Assessment is to quantify the environmental impacts of the proposed One Lord Street scheme in accordance with the methodology expressed within the RICS Professional Statement – 2nd Edition (2021), and to benchmark the results against the PfE Design Guidance for Net Zero targets.

The total global warming potential for the scheme has been calculated as follows:

Table 6.1 – Results Summary

	Total – $kgCO_2e$	$kgCO_2e/m^2$
Upfront Carbon	15,420,604.25	593.69
Whole Life Carbon Assessment	20,601,528.04	699

	Targets	
	PfE Benchmark - $kgCO_2e/m^2$	One Lord Street - $kgCO_2e/m^2$
Upfront	<600 (Residential Major Developments Targets)	593.69
Whole life	n/a	699

When compared to the targets stipulated within Places for Everyone Design Guidance for Net Zero (March 2025), it is evident that **the One Lord Street scheme improves upon the Places for Everyone Residential Major Development: Flats target for upfront embodied carbon**.

It is recommended that further life cycle assessments are conducted at the Technical Design stage when increasing levels of detail in the design and specification of the built asset will become available. It is during this stage when uncertainties around the data used are managed using carbon data confidence scores.

It is also recommended that a TM54: Operational Energy Performance assessment is conducted on the entire building, in order to accurately assess the operational energy of the development.

ELEMENT SUSTAINABILITY – ISSUE NOTES

Project No:	2025.168
Title:	One Lord Street Carbon & Energy Statement
Client:	Linear Living Ltd
Status:	Draft

Version:	0.0	
Date:	December 2025	
Prepared By	Checked by:	Approved by:

Version	Version Details	Date Issued	Issued by
0.0	Draft		

ELEMENT SUSTAINABILITY

phone: 01829 733 444

email: hello@elementsustainability.co.uk

www: www.elementsustanability.co.uk

© Report copyright of Element Sustainability Ltd.

Disclaimer

This report has been prepared for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. It is not intended for and should not be relied upon by any third party. Any such party relies on this report at their own risk. No part of this report may be copied or duplicated without the express permission of Element Sustainability Ltd. And the party for whom it was prepared.

CONTENTS

1. Executive Summary 1
2. Energy and Carbon Proforma 4
3. Introduction 5
4. Project Overview 6
   4.1 Development Site Description 6
   4.2 Development Proposals 7
5. Policy Review 14
   5.1 National Planning Policy 14
   5.2 Local Planning Policy 14
      5.2.1 Manchester Core Strategy 14
      5.2.2 Places for Everyone - Addendum to Manchester Core Strategy 17
   5.3 Regional Planning Policy 19
      5.3.1 Places For Everyone 19
   5.4 Regulatory Framework 25
   5.5 Applicable Targets 25
6. Energy Hierarchy 26
   6.1 The Energy Hierarchy 26
7. Energy Strategy 27
   7.1 CIBSE TM54 Modelling and Energy Demand 27
      7.1.1 Overview 27
      7.1.2 Geometry and Site Details 28
      7.1.3 Data Inputs and Internal Gains 29
      7.1.4 Results 31
   7.2 Part L Calculations 31
   7.3 Building Fabric and Ventilation 32
   7.4 Maximise Energy Efficiency 34
      7.4.1 Energy Use Intensity 34
      7.4.2 Efforts to Reduce Energy Use of Equipment 34
   7.5 Renewable Energy Generation 35
      7.5.1 Proposed Renewable Energy Generation System 35
   7.6 Low Carbon Heating 37
      7.6.1 Fossil Fuel Free 37
      7.6.2 Proposed Heating and Hot Water System 38

7.6.3 Proposed Cooling System 38
8. Enhanced Low Carbon Heat Appraisal 39
8.1 KPI Assessment Summary 41
8.2 Option 1 (Proposed): Direct Electric & Heat Pump 42
8.2.1 Overview 42
8.2.2 Operation and Maintenance 42
8.2.3 Carbon Emissions 43
8.3 Option 2: Direct Electric 44
8.3.1 Overview 44
8.3.2 Operation and Maintenance 44
8.3.3 Carbon Emissions 45
8.4 Option 3: Communal Heat Pump 45
8.4.1 Overview 45
8.4.2 Operation and Maintenance 46
8.4.3 Carbon Emissions 46
8.5 Option 4: Exhaust Air Heat Pump 46
8.5.1 Overview 46
8.5.2 Operation and Maintenance 47
8.5.3 Carbon Emissions 48
8.6 Viability of Heating Strategy Options 48
9. Overheating Risk 50
9.1 Overheating Risk Assessment 50
9.2 Data Inputs and Building Model 50
9.3 Ventilation Strategy 52
9.4 TM59 Results 52
10. Materials 58
10.1 Whole Life Cycle Assessment & Upfront Embodied Carbon 58
10.2 Efforts Made to Minimise Embodied Carbon 58

1. EXECUTIVE SUMMARY

The purpose of this statement is to summarise the relevant policy background and requirements of Manchester City Council and to demonstrate the ways in which the developer has addressed these aims through their proposals, ensuring all practicable measures have been taken to deliver a sustainable development at this site. This energy statement has been prepared in response to the local and regional planning policy guidance.

The application site is situated at the junction between Fernie Street and Lord Street in Cheetham Hill, Manchester. The proposed development consists of a residential tower providing two-hundred and fifty-one apartments. Eight dwelling types have been chosen based on key design variations to provide a robust representative sample for this energy and carbon appraisal:

- Townhouse Type A, c.82m^2 floor area
- Ground floor, 2B4P Type B, c.74m^2 floor area
- Second floor, 1B2P Type B, c.51m^2 floor area
- Second floor, 2B4P Type D, c.78m^2 floor area
- Fourteenth floor, 2B4P Type E, c.73m^2 floor area
- Fifteenth floor, 2B3P Type B, c.61m^2 floor area
- Sixteenth floor, 2B3P Type F, c.62m^2 floor area
- Twenty-third floor, 2B3P Type D, c.66m^2 floor area

The Energy Hierarchy has been used as a framework to guide the energy strategy for this development to achieve practical and cost-effective carbon emission reductions. The form of the dwellings proposed for the scheme is as follows:

- The Townhouses are two storey dwellings; and,
- The remaining apartment types consist of, ground, mid and top floor units.

The calculated form factors for the representative apartment types have been calculated, as follows:

- Townhouse Type A: 0.9
- Level 00, 2B4P Type B: 1.5
- Level 02, 1B2P Type B: 0.6
- Level 02, 2B4P Type D: 0.3
- Level 14, 2B4P Type E: 0.7
- Level 15, 2B3P Type B: 0.3
- Level 16, 2B3P Type F: 0.7
- Level 23, 2B3P Type D: 1.4

The proposed material specification to be incorporated within the scheme will limit heat loss and ensure efficient operation of the houses. In addition, the dwellings will be fitted with highly efficient Mechanical Ventilation with Heat Recovery (MVHR) systems. These systems provide a continuous supply of fresh air while the heat recovery unit significantly reduces space-heating demand.

For the dwelling types listed below representative CIBSE TM54 predictive energy models have been calculated using Design Builder v7.2.0.032 Dynamic Simulation Modelling (DSM) Software, using the internationally approved Energy Plus Simulation Engine. This sample provides a robust indication of the overall performance of the development proposals. The space heating demand for the house types has been calculated, as follows:

- Townhouse Type A = 3.38 kWh/m^2/year
- Level 00, 2B4P Type B = 4.36 kWh/m^2/year
- Level 02, 1B2P Type B = 6.66 kWh/m^2/year
- Level 02, 2B4P Type D = 9.27 kWh/m^2/year
- Level 14, 2B4P Type E = 6.81 kWh/m^2/year
- Level 15, 2B3P Type B = 5.50 kWh/m^2/year
- Level 16, 2B3P Type F = 5.98 kWh/m^2/year
- Level 23, 2B3P Type D = 10.23 kWh/m^2/year

- Average space heating demand = **6.51 kWh/m^2/year**

Both regulated + unregulated energy demand has been assessed for the purposes of the Energy Use Intensity (EUI) calculation. The EUI for the house types has been calculated, as follows:

- Townhouse Type A = 23.43 kWh/m^2/year
- Level 00, 2B4P Type B = 28.33 kWh/m^2/year
- Level 02, 1B2P Type B = 33.66 kWh/m^2/year
- Level 02, 2B4P Type D = 32.47 kWh/m^2/year
- Level 14, 2B4P Type E = 31.19 kWh/m^2/year
- Level 15, 2B3P Type B = 28.24 kWh/m^2/year
- Level 16, 2B3P Type F = 28.05 kWh/m^2/year
- Level 23, 2B3P Type D = 33.83 kWh/m^2/year

- Average Energy usage intensity = **29.90 kWh/m^2/year**

Photovoltaic (PV) arrays have been selected as an appropriate renewable energy technology to contribute to the CO_2 emission reduction target for the development and to support the requirements stipulated within Places for Everyone.

Figure 1.1 – Proposed roof layout for renewable generation

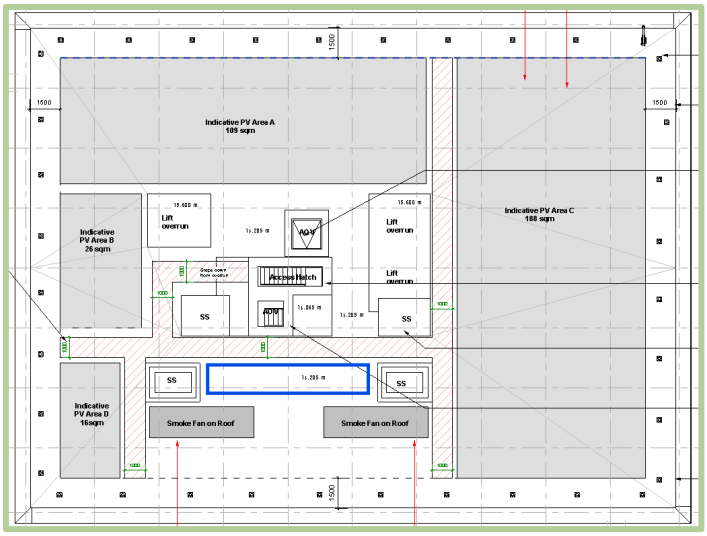


Table 1.1 – Proposed PV area as a percentage of ground floor space

	Solar PV
Ground Floor Area (m^2)	826
Proposed PV Area (m^2)	339
PV Footprint area (% of Ground floor space)	**41%**

The scheme will be fossil fuel free.

The proposed specification includes an Air Source Heat Pump (Dimplex Edel EDL170-520RF) providing hot water very efficiently to each dwelling within the scheme. This system operates with a COP of 302% efficiency.

The space heating is to be provided electric panel heaters, which are 100% efficient at the point of consumption. Additionally, it generates a reduced overheating potential – electric space heating delivers virtually instantaneous heating at the location where it is required. Unlike a 'wet system' associated with communal gas boilers which inherently have a long lag time for the heat to be generated and then dissipated when no longer needed. This lag time can lead to the dwelling overheating as the hot water remains in the radiators for a considerable time after the heat demand is required.

the residential section of the building has been assessed and complies with Building Regulations, Part O and CIBSE's TM59 assessment of overheating, however, the dwellings require the following measures to do so:

- The solar control g-value of the glazing is to be specified at g=0.40.
- MVHR to provide fresh air to apartments, detailed flow rates are specified in Chapter 9 of this report

The proposals will contribute towards making more efficient use of non-renewable materials resources, and to reducing the lifecycle impact of materials used in construction.

2. ENERGY AND CARBON PROFORMA

Figure 2.1 – Energy and Carbon Proforma[1]

Energy and Carbon Proforma
Residential
Major development *(+10 homes)*
Version 1.0

GMCA GREATER MANCHESTER COMBINED AUTHORITY

Project Name: One Lord Street
Application ref: TBC
Date: 10/12/2025

		Ref. name	One Lord Street
		No. dwellings	251
		Area (m² GIA)	22,200
		Target values	**Building 1**
Minimise energy demand	**Space heating demand (kWh/m² GIA/yr)**	***≤ 15** (flats) **≤ 20** (houses)*	**6.51**
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	*Predictive energy model*	representative CIBSE TM54 calcs
	Form factor per building	*≤ 2*	0.8
	Average external wall U-value (W/m²K)	*≤ 0.15*	0.17
	Average window U-value (W/m²K)	*≤ 1 (triple)*	1.2
	Air permeability rate (m³/h/m² @ 50 Pa)	*≤ 1*	3
Maximise energy efficiency	**Energy use intensity (kWh/m² GIA/yr)**	***≤ 35***	**29.9**
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	*Predictive energy model*	representative CIBSE TM54 calcs
Use renewable energy	**PV footprint area (% of ground floor space)**	***≥ 40***	**41%**
	Annual renewable energy generation (kWh/m² building footprint/yr)	-	47.5
	Renewable energy balance (%)	-	8.18
	Total energy used (kWh/yr)	-	479,805
	Total energy generated on-site (kWh/yr)	-	39,239
Use low carbon energy	**Fossil fuel free (yes/no)**	***Yes***	**Yes**
	Heat source	*Electric*	Electric
	Low Carbon Heat Appraisal completed	*Yes*	Yes
	Heat network suitability	-	n/a
	Exemption requested	-	n/a
	Efficiency of heating system (SCOP)	*≥ 3.5*	1.00 & 3.02
	Carbon content of heat (gCO₂/kWh)	*≤ 100*	142.5
Reduce overheating risk	**Have Part O overheating requirements been met without the use of mechanical cooling?**	***Yes***	**Yes**
	If no, how many homes are cooled?	*Yes*	None
	Has a CIBSE TM59 assessment been carried out using DSY2 and DSY3 weather files? Have any additional passive measures been included as a result?	*Yes*	No
Minimise embodied carbon	**Upfront embodied carbon (kgCO₂e/m²GIA)**	***≤ 500-600***	
	List top three materials with the highest upfront embodied carbon emissions (kgCO₂e/m²GIA): Material 1	-	143.96
	Material 2	-	81.89
	Material 3		44.81
	Lifecycle embodied carbon (kgCO₂e/m²GIA) - *for large major developments only*	-	593.69
Offsets	**Offset contribution (£)**	**-**	

[1] The following assumptions have been made for the PV generation:

- 2m² panels produce 500 watts
- 1 kWp of PV generates 463 kWh, based on SAP10 for south-facing, unshaded panels.

3. INTRODUCTION

Element Sustainability has been commissioned by Linear Living Ltd to review the sustainability and energy performance of the proposed residential development in Manchester.

The purpose of this statement is to summarise the relevant policy background and requirements of Manchester City Council and to demonstrate the ways in which the developer has addressed these aims through their proposals, ensuring all practicable measures have been taken to deliver a sustainable development at this site.

Details of the design attributes, specifications and characteristics of the scheme are appraised in order to demonstrate how the proposals contribute to sustainable development in Manchester and seek to mitigate the environmental impacts of the scheme, providing a sustainability appraisal in support of the planning application.

This report is intended to support the planning application for this development and therefore, establish an approach to the delivery of this scheme which meet the criteria outlined by the council that the developer commits to implement at the site.

4. PROJECT OVERVIEW

4.1 Development Site Description

The site is situated at the junction between Fernie Street and Lord Street in Cheetham Hill, Manchester. Currently, the site comprises of brownfield land which was formerly occupied by a commercial building. The majority of structures on site have since been demolished but a single storey derelict building occupies the south west corner of the site.

The remainder of the site is occupied by hardstanding and vegetation which has encroached onto the site since the demolition of previous structures. Fencing surrounds the northern, western and eastern borders of the site with a metal access gate situated along the eastern border. Off the southern border is a garage forecourt.

The site is situated within Manchester City Centre and is surround by a mix of residential and commercial developments. It is not located within a designated conservation zone.

Figure 4.1 – Site Location Plan



4.2 Development Proposals

Development proposals comprise of the construction of a twenty-four-storey residential tower providing of two-hundred and fifty-one apartments including basement car parking and areas of communal soft landscaping.

Eight dwelling types have been chosen based on key design variations to provide a robust representative sample:

- Townhouse Type A
- Ground floor, 2B4P Type B
- Second floor, 1B2P Type B
- Second floor, 2B4P Type D
- Fourteenth floor, 2B4P Type E
- Fifteenth floor, 2B3P Type B
- Sixteenth floor, 2B3P Type F
- Twenty-third floor, 2B3P Type D

Figure 4.2 to 4.13 present the proposed floor plans and elevations for the proposed development:

Figure 4.2 – Proposed Basement Plan

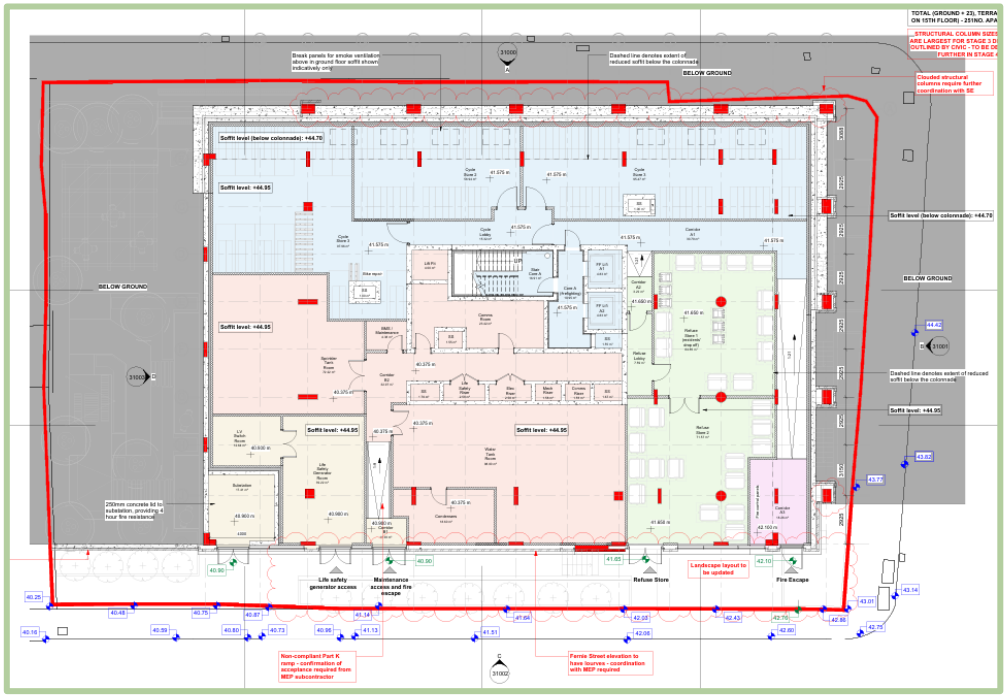


Figure 4.3 – Proposed Ground Floor

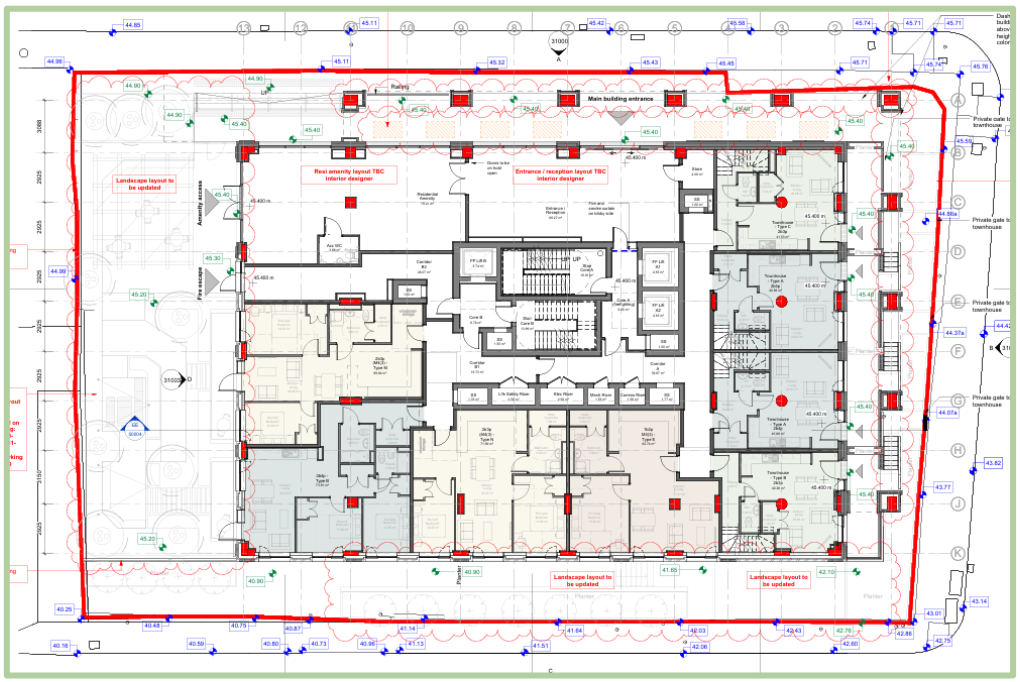


Figure 4.4 – Proposed First Floor

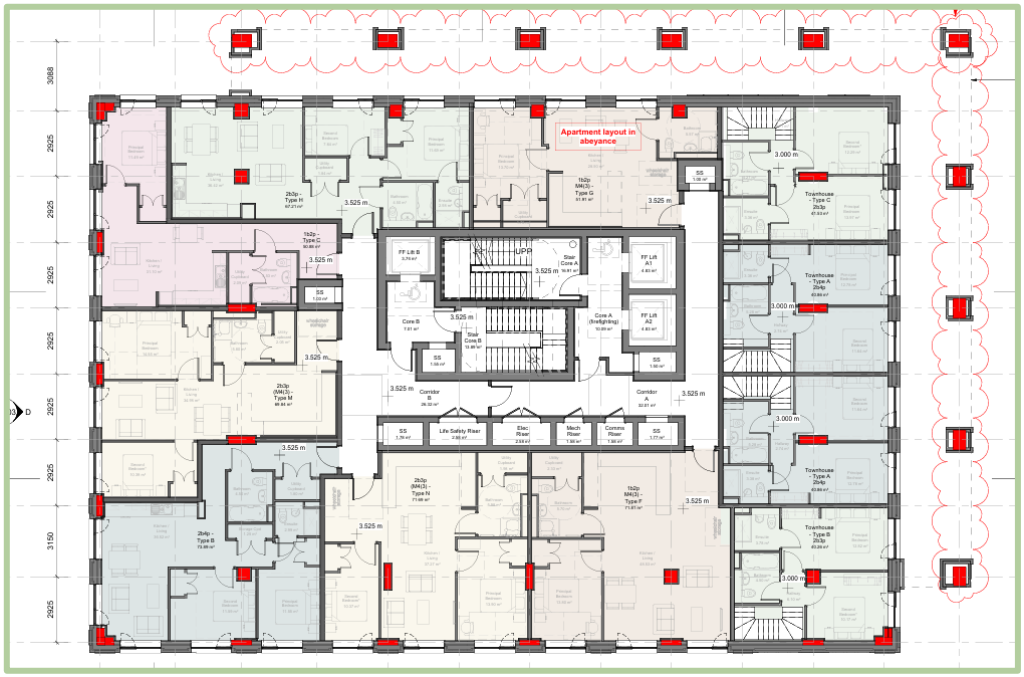


Figure 4.5 – Proposed Second to Fourteenth Floor

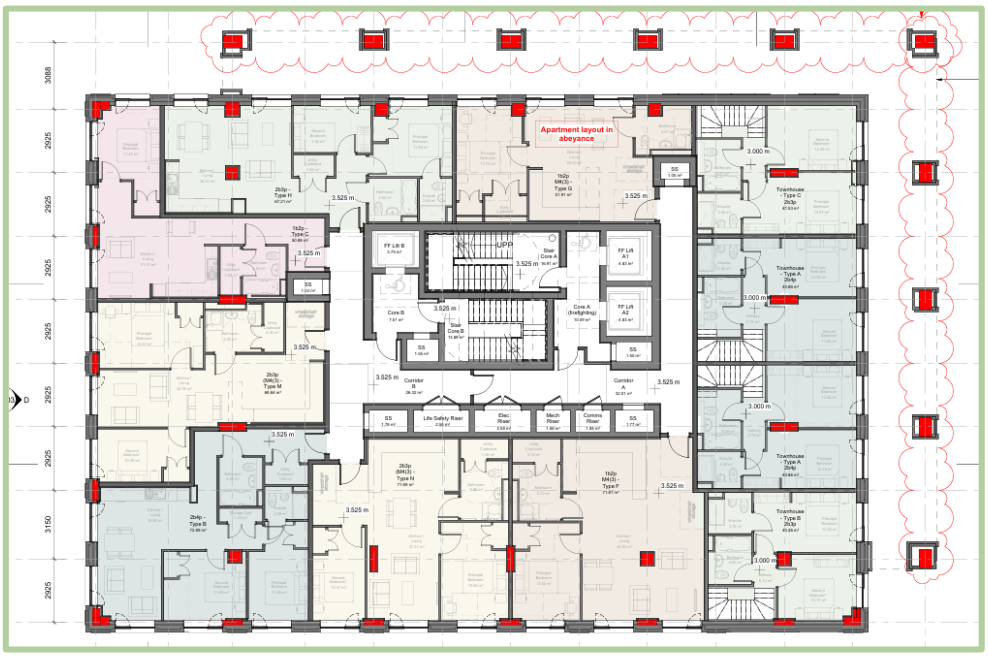


Figure 4.6 – Proposed Fifteenth Floor

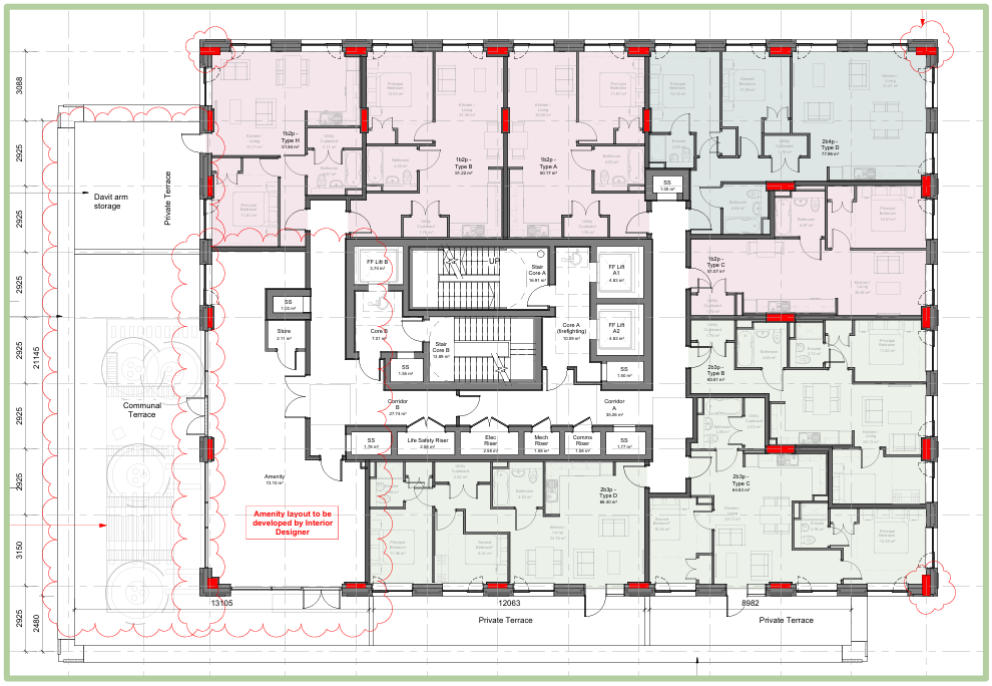


Figure 4.7 – Proposed Sixteenth to Twenty-Second Floor Layout

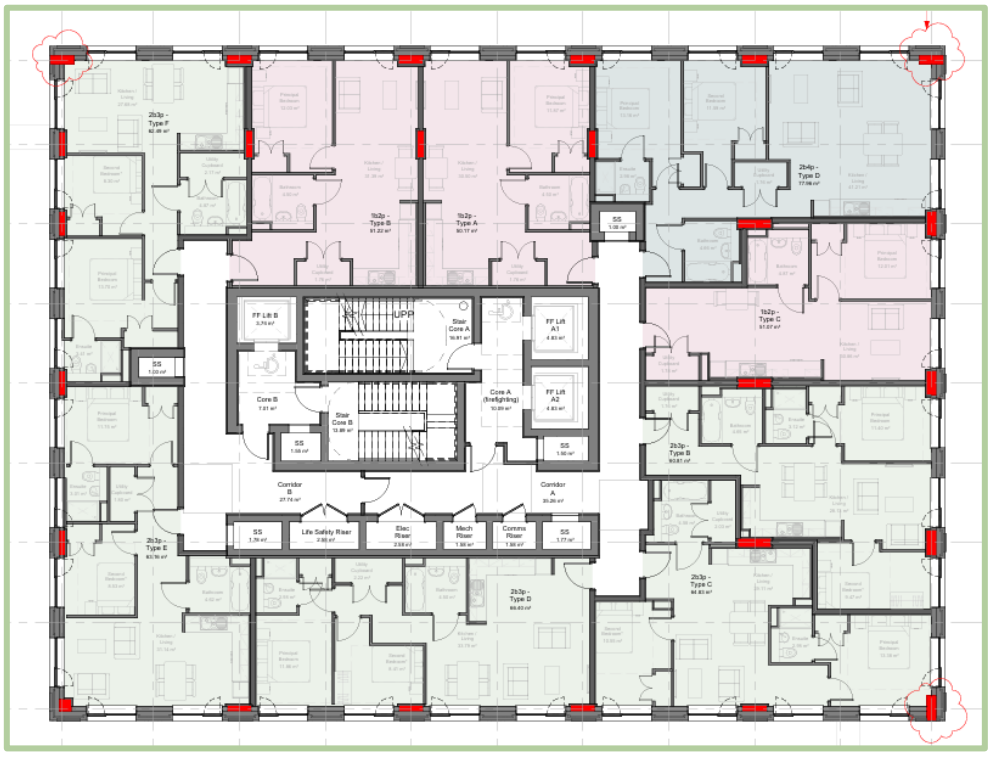


Figure 4.8 – Proposed Twenty-Third Floor Layout

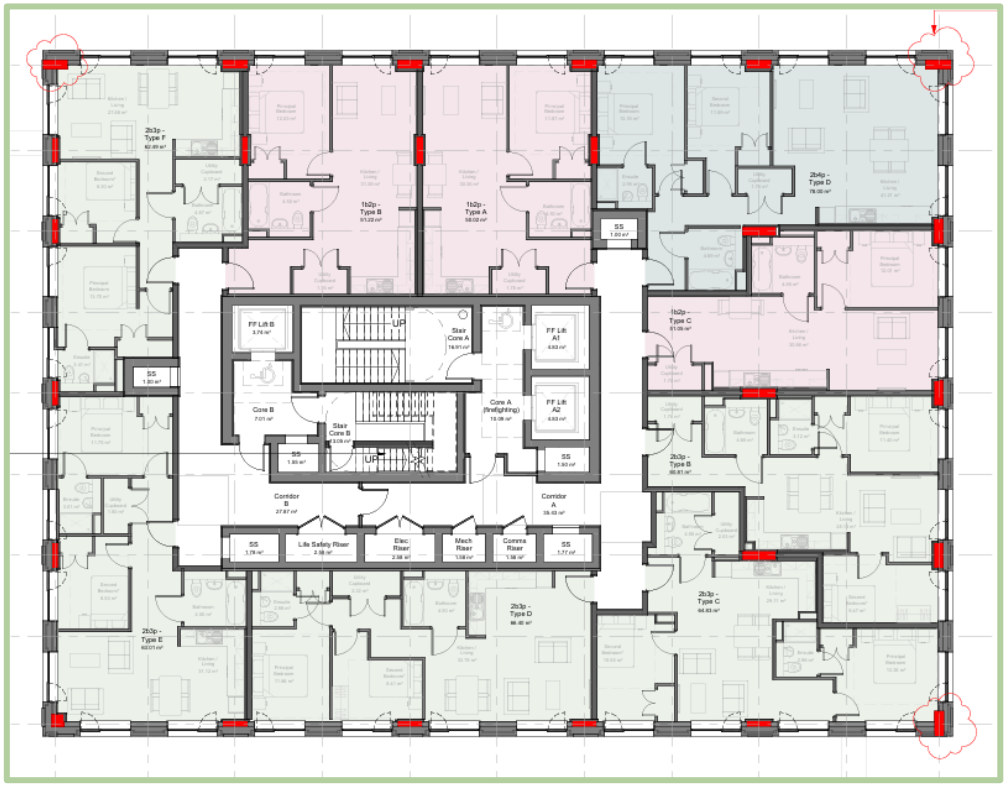


Figure 4.9 – Proposed Sixteenth to Twenty-Second Floor Layout

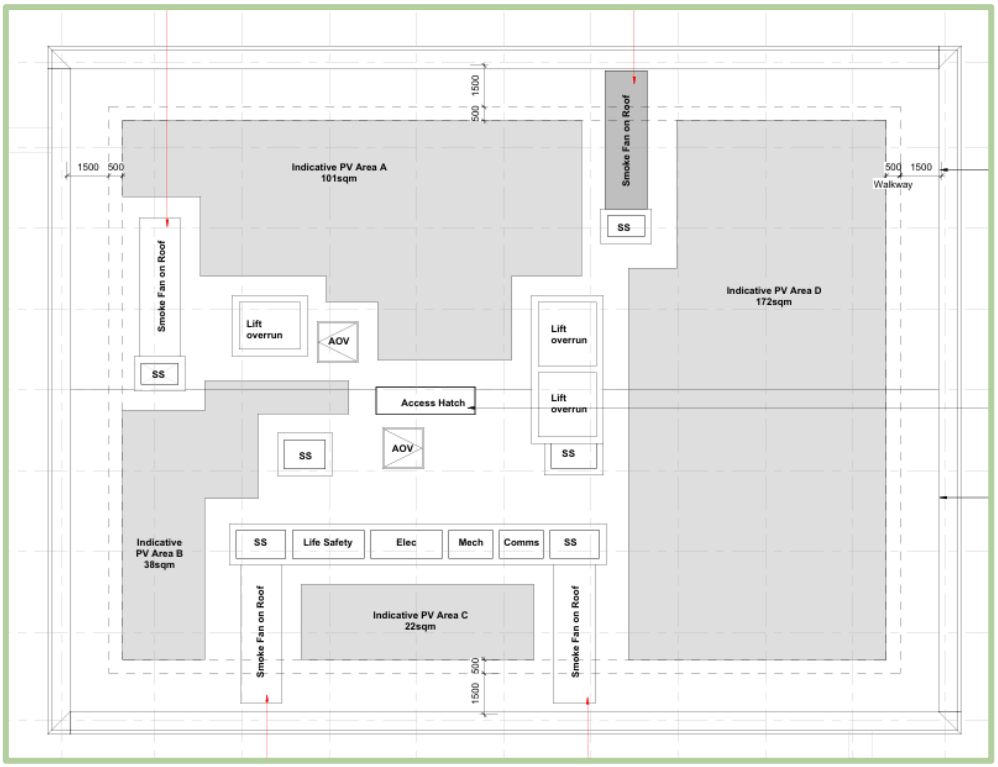


Figure 4.10 – Proposed Northern Elevation

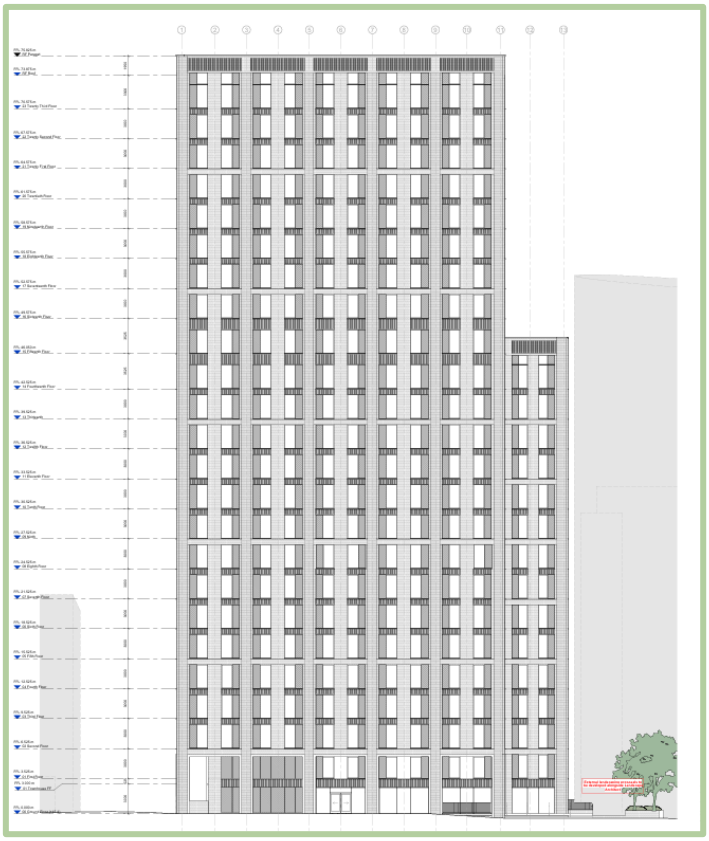


Figure 4.11 – Proposed Eastern Elevation

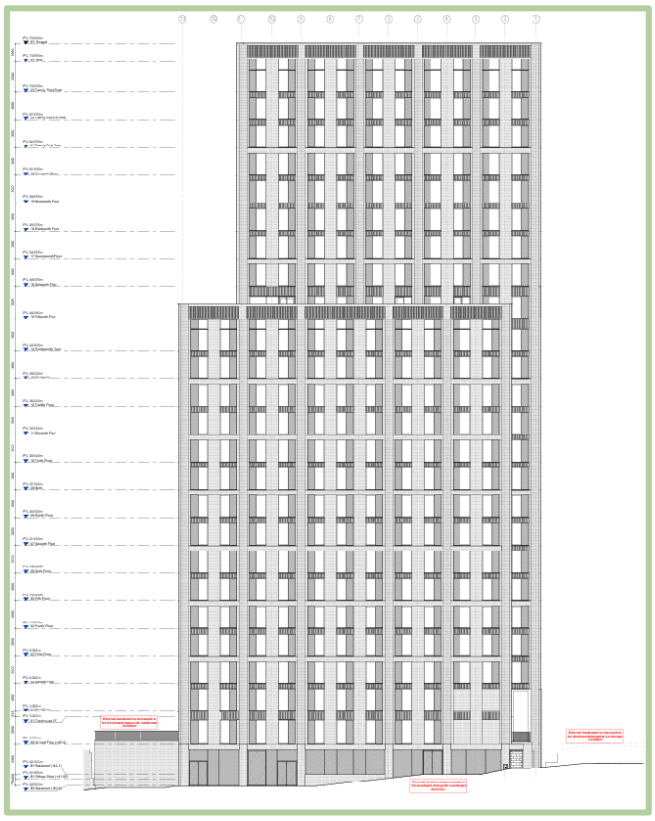


Figure 4.12 – Proposed Southern Elevation

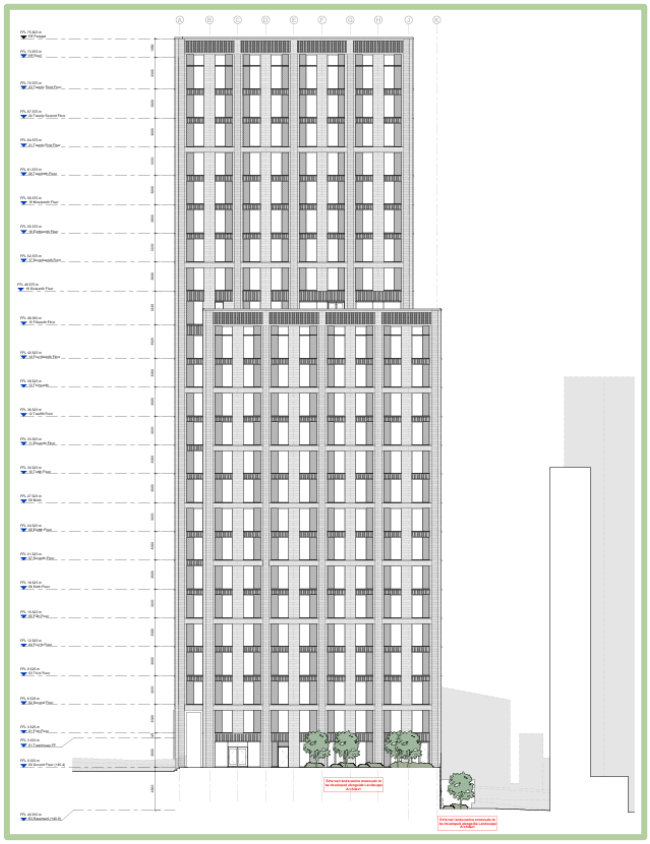
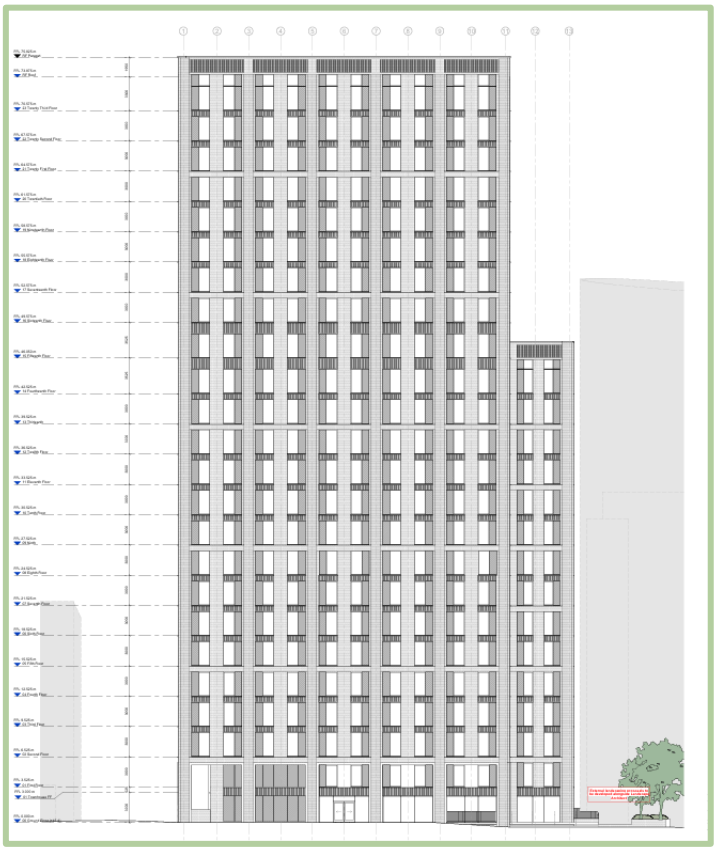


Figure 4.13 – Proposed Southern Elevation



5. POLICY REVIEW

5.1 National Planning Policy

The National Planning Policy Framework was revised on 12th December 2024 and sets out the government's planning policies for England and how these are expected to be applied.

The purpose of the planning system is to contribute to the achievement of sustainable development. The planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways, as set out below:

An economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

A social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations, and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

An environmental objective – to protect and enhance our natural, built and historic environment, including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this framework. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

5.2 Local Planning Policy

5.2.1 Manchester Core Strategy

most of this is not relevant to the energy / carbon appraisal – please review and retain only the polices which relate to this specific report. The rest will be covered off in the ESS.

Manchester's Core Strategy was adopted on the 11th July 2012 and remains the key document in the adopted Manchester Local Plan. It sets the out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against.

Policy EN 4 - Reducing CO_2 Emissions by Enabling Low and Zero Carbon Development: The council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO_2 emissions, and rising fossil fuel prices, through the following actions:

Where possible new development and retrofit projects will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings.

Where appropriate new development and retrofit projects will be required to connect to and / or make contributions to low or zero carbon energy schemes and / or to incorporate provision to enable future connection to any existing / potential decentralised energy schemes.
The use of building materials with low embodied carbon in new development and refurbishment schemes

Policy EN 5 - Strategic Areas for Low and Zero Carbon Decentralised Energy Infrastructure: Within Manchester it is considered that the following strategic areas, will have a major role to play in achieving an increase in the level of decentralised, low and zero carbon energy supplies available:

- The Regional Centre, which also includes the Oxford Road Corridor and Eastlands;
- District Centres and associated major development sites;
- Airport Strategic site;
- Strategic housing location; and,
- Strategic employment locations.

Within these areas new development, regeneration and retrofit projects will be expected to take place in the context of more detailed proposals for decentralised low and zero carbon energy infrastructure in the form of energy proposals plans.

Policy EN 8 – Adaption to Climate Change requires all new development to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:

- Reduction in urban heat island effect using green infrastructure such as green roofs, green walls, increased tree cover and waterways; and,
- The need to control overheating of buildings through passive design; and

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO_2 mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance.

Policy EN9 - Green Infrastructure: New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises, and in accordance with current green infrastructure strategies, the council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management.

Policy EN14 – Flood Risk: The council requires developments to:

- Be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).

Policy EN15 – Biodiversity and Geological Conservation: The council will seek to maintain or enhance sites of biodiversity and geological value throughout the city.

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:

- The Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk River valleys, the canals and disused railway lines, and areas of managed greenspace particularly in parks;

- The Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, including identifying large 'biodiversity opportunity areas' including the Moston Brook Corridor and Nutsford Vale;

    - Manchester's Climate Change Action Plan;
    - The Strategic Flood Risk Assessment (SFRA) for Manchester;
    - The River Basin Management Plan for the North West; and,
    - The Manchester Tree Strategy.

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other Local Development Framework policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and / or compensation. Development should, wherever possible, seek to maintain, enhance or restore existing geology.

Policy EN16 – Air Quality: The council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself.

Policy EN17 – Water Quality: The council require:

- New developments to avoid any adverse impact on water quality, including during the construction phase, and wherever possible should seek to enhance water quality, both chemical and ecological.

Policy EN19 – Waste: The council will:

- Require all developers, including those of new waste management facilities within the district, to demonstrate the proposal's consistency with the principles of the waste hierarchy (prevention, reduction, re-use, recycling/composting, energy recovery, final disposal);

- Require all developers to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised, and recycled on site wherever possible, and how the sustainable waste management needs of the end user will be met; and,

- Encourage communities to take responsibility for the waste they create through the provision of accessible facilities.

Policy DM1 – Development Management: All development should have regard to the following specific issues, for which more detailed guidance may be given within a supplementary planning document:

- Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes;
- Community safety and crime prevention;
- Design for health;
- Adequacy of internal accommodation and external amenity space;
- Refuse storage and collection;
- Effects relating to biodiversity, landscape, archaeological or built heritage;
- Green infrastructure including open space, both public and private;
- The use of alternatives to peat-based products in landscaping/gardens within development schemes;
- Flood risk and drainage and,
- Subject to scheme viability, developers will be required to demonstrate that new development incorporates sustainable construction techniques (In terms of energy targets this policy should be read alongside policy EN6 and the higher target will apply).

Policy T1 – Sustainable Transport: To deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking, to support the needs of residents and businesses and to prepare for carbon free modes of transport, the council will support proposals that:

- Improve choice by developing alternatives to the car;
- Facilitate modes of transport that reduce carbon emissions e.g by incorporating charging points for electric vehicles, subject to their appropriate design and location;
- Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties; and,
- Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:

    1. pedestrians and disabled people,
    2. cyclists, public transport,
    3. commercial access,
    4. general off peak traffic,
    5. general peak time traffic.

5.2.2 Places for Everyone - Addendum to Manchester Core Strategy

Following the adoption of the Places for Everyone (PfE) document, the subsequent Core Strategy (CS) policies have been partially replaced by PfE policies. Any part of the policy that is not replaced remains part of Manchester's Core Strategy.

Review and omit policies as necessary….

CS Policy T1 Sustainable Transport: The following bullet point details what has been replaced:

- Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:

    - Pedestrians and disabled people

- Cyclists, public transport,
- Commercial access,
- General off-peak traffic,
- General peak time traffic.

This policy was replaced by PfE Policy JP-CA1.

CS Policy EN4 Reducing CO_2 Emissions by Enabling Low and Zero Carbon Development: The following bullet point is what has been replaced:

- All development must follow the principle of the Energy Hierarchy.

  This policy was replaced by PfE Policy JP-S2.

CS Policy EN6 Target Framework for CO_2 Reductions from Low or Zero Carbon Energy Supplies: The following aspects of the policy have been replaced:

- The CO_2 emissions reduction targets and the target framework development locations

  This policy was replaced by PfE Policy JP-S2.

CS Policy EN8 Adaption to Climate Change: The following bullet point details what has been replaced:

- Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rainwater permeability; and,
- The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation.

  This policy was replaced by PfE Policies JP-S2, JP-S4 and JP-G8.

CS Policy EN14 Flood Risk: The following bullet point details what has been replaced:

- All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.

  This policy was replaced by PfE Policy JP-S4.

CS Policy EN15 Biodiversity and Geological Conservation: The following aspects of the policy have been replaced:

Development should wherever possible seek to maintain, enhance or restore existing geology.

This policy was replaced by PfE Policy JP-G8.

CS Policy EN17 Water Quality: The following bullet point details what has been replaced:

- Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses.

  Replaced by PfE Policy JP-S4

These elements of the above policies have therefore been removed from the previous Local Planning Policy section.

5.3 Regional Planning Policy

5.3.1 Places For Everyone

Places for Everyone (PfE) is the joint development plan of nine Greater Manchester local authorities (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan) dealing with strategic planning issues including jobs, homes, transport, and the natural environment.

All nine authorities adopted the PfE Plan on 21st March 2024. Therefore, this document now forms part of the statutory development plan for each of the nine PfE authorities.

As a result, the following polices have been considered as part of the proposed development:

Policy JP-S1: Sustainable Development: To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.

In bringing forward previously developed sites for development, particular attention will be paid to tackling land contamination and stability issues, ensuring that appropriate mitigation and remediation is implemented to enable sites to be brought back into use effectively.

Addressing Climate Change

Greater Manchester's Vision is to be at the forefront of action on climate change and to make its fair contribution to international commitments by becoming a carbon neutral city region by 2038.

To meet the carbon commitments, the following will be required:

- Be carbon neutral by 2038;
- Hold cumulative carbon dioxide emissions to within the council's carbon budget; and,
- Initiate a programme of mitigation to reduce emissions including by:
  - Significantly upscaling solar photovoltaic energy;
  - Reducing heat demand in homes;
  - Moving away from carbon intensive gas as the primary source of heat; and,
  - Increasing biofuel use.

- In supporting Greater Manchester's ambitions, climate change is a key theme running throughout the plan, rather than being reduced to a single policy, and it is only through this combination of actions that it can be properly addressed. In particular:

    - Methods to de-carbonise the city region through new and existing development, effective land management and through the provision of infrastructure and new technologies Policy JP-S2 'Carbon and Energy'; and,
    - The delivery of renewable and low carbon energy schemes Policy JP-S3 'Heat and Energy Networks'.

Carbon and Energy

- Meeting the 2038 carbon neutrality target will require a radical transformation across a range of sectors to drive carbon reduction. Within this, new development will have a critical role to play and all new homes and commercial/industrial buildings will need to achieve net zero carbon by 2028.

- It is expected that development in the plan area will apply a net zero carbon approach to operational emissions up until 2028, thereafter emissions in construction should be considered. Minimum carbon reduction targets will be set in line with the Future Homes Standard of 80% or until such a time this is superseded.

- From 2025, applicants will need to demonstrate carbon reductions have been maximised with an opportunity to offset any residual carbon to a carbon offset fund. The approach will be reviewed in line with future standards as they are introduced.

- By following the energy hierarchy, new development will need to achieve net zero carbon through the maximisation of on-site measures first. However, circumstances where a development has demonstrated that the hierarchy has been followed and there are no reasonable alternatives to meet the minimum carbon reductions, then payment to offset remaining emissions will also be required. Such payments should be expected to fund other carbon saving programmes within Greater Manchester to help meet the 5 Year Environment Plan targets.

Policy JP-S 2 – Carbon and Energy: The aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions, will be supported through a range of measures including:

- Promoting the use of life cycle cost and carbon assessment tools to ensure the long-term impacts from development can be captured;

- Taking a positive approach to renewable and low carbon energy schemes, particularly schemes that are led by, or meet the needs of local communities;
- An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable;

    - Be net zero carbon which applies:

        - From adoption – to regulated operational carbon emissions;

  - From 2025 development should also calculate and minimise carbon emissions from unregulated emissions alongside regulated emissions;

  - Development proposals should set out how this has been achieved in an energy statement in accordance with the energy hierarchy, which in order of importance seeks to:
    - Minimise energy demand;
    - Maximise energy efficiency;
    - Use renewable energy;
    - Use low carbon energy; and
    - Utilise other energy sources.

- From 2025 any residual carbon emissions that cannot be fully mitigated onsite should be offset, in agreement with the relevant local planning authority, through a financial contribution to a carbon offset fund;

- As an interim measure, development should be consistent with the 2021 Part L Building Regulations unless superseded by changes to building regulations and/or national or local planning policies.

  - Where practicable, prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date; and,

- For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced;

- For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the 'Ene 01 – reduction of energy use and carbon emissions' category rising to 'BREEAM outstanding' equivalent for ENE 01 from 2028;

- Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize reductions in carbon emissions in line with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible.

- Districts Local Plans may set out specific carbon emission reduction and energy demand targets within Local Plans.

Policy JP-STRAT14 - A Sustainable and Integrated Transport Network: New development will have a significant role in delivering a sustainable and integrated transport network in order to reduce car dependency and increase levels of walking, cycling and public transport.

Policy JP-S3 – Heat and Energy Networks: The provision of decentralised energy infrastructure is critical to the delivery of our objectives for low carbon growth, carbon reductions and an increase in local energy generation. The following measures will help to achieve this:

1. Delivery of renewable and low carbon energy schemes will be supported with particular emphasis on the use of decentralised energy networks in areas identified as "Heat and Energy Network Opportunity Areas". These have been identified where:

a. Existing heat/energy networks are operational or have been commissioned;
b. Sufficient density of existing heat demand occurs; and,
c. Significant future development is proposed at the strategic development locations.

2. Within the identified "Heat and Energy Network Opportunity Areas", unless it can be demonstrated that there are more effective alternatives for minimising carbon emissions or such connection is not practicable or financially viable.

Policy JP-S4 - Flood Risk and the Water Environment: An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk, by:

- Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
- Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
- Expecting developments to manage surface water runoff through sustainable drainage systems and as close to source as possible;
- Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable; and,
- Ensuring that sustainable drainage systems:

    - Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;
    - Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
    - Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and
    - Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.

- As a minimum, residential development should meet the mandatory water efficiency standard of 125 litres/person/day as set out in Building Regulations. District local plans may and should consider setting a tighter water efficiency standard of 110 litres/person/day where there is a clear local need with reference to national guidance on housing optional technical standards.

Policy JP-S6 - Resource Efficiency: The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester's ambition of becoming a leading green city region by 2038. The following measures will help achieve this:

- Development and implementation of the Zero Waste Strategy for Greater Manchester which promotes overall reduction in the level of waste produced and supports resource efficiency within the Plan area in order to gain the maximum value from the things we produce;
- Recognition of the role of existing infrastructure in managing our waste and protecting such facilities to ensure adequate waste management capacity is maintained; and
- Using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.

Policy JP-G2 – Green Infrastructure Network: A strategic approach will be taken to the protection, management and enhancement of Greater Manchester's Green Infrastructure in order to protect and enhance the ecosystem services which the Green Infrastructure Network provides, including flood management, climate change mitigation and adaptation.

Wherever practicable, opportunities to integrate new and existing green infrastructure into new development will be taken to protect, enhance and expand the green infrastructure network.

Policy JP-G6: Urban Green Space: To ensure there is an appropriate scale, type, quality and distribution of accessible urban green space that can support a high quality of life and other important green infrastructure functions:

- Existing urban green space will be protected and enhanced in balance with other considerations; and
- Developers and other stakeholders will be required to deliver new high quality urban green spaces.

Development should be designed to support the positive use of nearby green spaces, such as by offering a high-quality setting, providing natural surveillance, and facilitating easy access by walking and cycling.

Policy JP-G7 - Trees and Woodland: the aims and objectives of the Greater Manchester Tree and Woodland Strategy, aiming to significantly increase tree cover, protect and enhance woodland, and connect people to the trees and woodland around them.

This will be done through local planning and associated activities such as:

- Where development would result in the loss of existing trees, requiring replacement on the basis of two new trees for each tree lost, or other measures that would also result in a net enhancement in the character and quality of the treescape and biodiversity value in the local area, with a preference for on-site provision; and
- Protecting trees and woodland during the construction phase of development.

Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity: Through local planning and associated activities a net enhancement of biodiversity resources will be sought, including, where relevant, by:

- Increasing the quality, quantity, extent and diversity of habitats, particularly priority habitats identified in national or local biodiversity action plans and those that support priority species;
- Improving connections between habitats, to protect and enhance the provision of corridors, ecological networks (including Nature Recovery Networks) and steppingstones that enable the movement of species, especially as the climate changes;
- Enhancing the management of existing habitats, including through habitat restoration, avoiding habitat fragmentation and combating invasive species;
- Protecting sites designated for their nature conservation and/or geological importance, with the highest level of protection given to international and then national designations;
- Facilitating greater access to nature, particularly within urban areas;
- Supporting the development and implementation of the Great Manchester Wetlands Nature Recovery Network; and
- Safeguarding, restoring and sustainably managing our most valuable soil resources, tackling soil degradation/erosion and recovering soil fertility.

Development will be expected to:

- Follow the mitigation hierarchy of:
    - Avoiding significant harm to biodiversity, particularly where it is irreplaceable, through consideration of alternative sites with less harmful impacts, then
    - Adequately mitigating any harm to biodiversity, then
    - Adequately compensating for any remaining harm to biodiversity.
- Achieve a measurable net gain in biodiversity of no less than 10%; and,
- Development proposals should be informed by the findings and recommendations of the appropriate biodiversity/ecological assessment(s) in the PfE evidence base and/or any updated or appropriate biodiversity/ecological assessments submitted as part of the planning application process.

Policy JP-P1 - Sustainable Places: The aim is to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

- Distinctive, with a clear identity that:
    - Conserves and enhances the natural environment, landscape features, historic environment and local history and culture;
    - Enables a clear understanding of how the place has developed; and
    - Respects and acknowledges the character and identity of the locality in terms of design, siting, size, scale and materials used.
- Resilient, capable of dealing with major environmental events;
- Adaptable, able to respond easily to varied and changing needs and technologies;
- Durable, being built to last and using robust materials that reflect local character, weather well and are easily maintained;
- Resource-efficient with:
    - A low carbon footprint;
    - Efficient use of land;
    - Minimised use of new materials; and,
    - High levels of recycling,
- Supported by critical infrastructure, such as energy, water and drainage and green spaces; and,
- Functional and convenient, enabling people and uses to act efficiently with minimal effort, and responding to needs relating to servicing, recycling facilities, refuse collection and storage.

The success of the Net Zero Carbon design and construction is measured in Policy JP-S2 through a series of metrics and key performance indicators (KPIs). These metrics and KPIs provide an indication of how the design has influenced the performance of the building.

This project is classified as a large major residential scheme as it is to provide over 150 homes. This triggers a specific set of KPIs the scheme must comply with, these can be seen in Chapter 2, Energy and Carbon Proforma.

5.4 Regulatory Framework

Building Regulations, Part L - Conservation of Fuel and Power sets the compliance standards for energy demand and carbon dioxide emissions from buildings. Guidance on how to meet the requirements of this regulation is provided within a number of approved documents. The relevant document is referenced below:

Approved Document Volume 1: Dwellings (2021 Edition) provides guidance on how to comply with Part L of Schedule 1 to the Building Regulations and the energy efficiency requirements for dwellings.

The minimum energy performance requirements shall be approved and expressed in accordance with the methodology for:

- New dwellings, in the form of target CO_2 emission rates;
- New dwellings, in the form of target fabric efficiency rates; and,
- New dwellings in the form of target primary energy rates.

5.5 Applicable Targets

Based upon a review of relevant planning policy requirements, legislative drivers, and client priorities, the following list provides a brief precis of the key criteria that should be targeted for this development:

Places for Everyone

- **Policy JP-S1:** Sustainable Development
- **Policy JP-S2:** Carbon & Energy
- **Policy JP-S3:** Heat and Energy Networks
- **Policy JP-S6:** Resource Efficiency
- **Policy JP-P1** Sustainable Places

Manchester Core Strategy

- **Policy EN 4 -** Reducing CO_2 Emissions by Enabling Low and Zero Carbon Development
- **Policy EN 5 -** Strategic Areas for low and zero carbon decentralised energy infrastructure
- **Policy EN 6 -** Target Framework for CO_2 Reductions from Low or Zero
- **Policy EN 8** – Adaption to Climate Change
- **Policy EN16** – Air Quality

Guide to Development in Manchester, Supplementary Planning Document

Manchester City Council Climate Emergency Declaration

Building Regulations, Part L

- **Approved Document Volume 1**: Dwellings (2021 edition)

6. ENERGY HIERARCHY

6.1 The Energy Hierarchy

The energy strategy for this development prioritises an enhanced 'fabric led' solution coupled with a fossil fuel free (that is, full electric) mechanical and electrical system provision. An enhanced building fabric specification throughout the scheme allied to efficient servicing and controls will achieve compliance with the new build carbon dioxide emission reduction and fabric energy efficiency targets stipulated by Building Regulation Part L, Manchester City Council, and Places for Everyone.

The Energy Hierarchy (see Figure 6.1) provides a framework to guide energy policy and decision making to achieve practical and cost-effective carbon emission reductions. The energy hierarchy is built upon the following guiding principles:

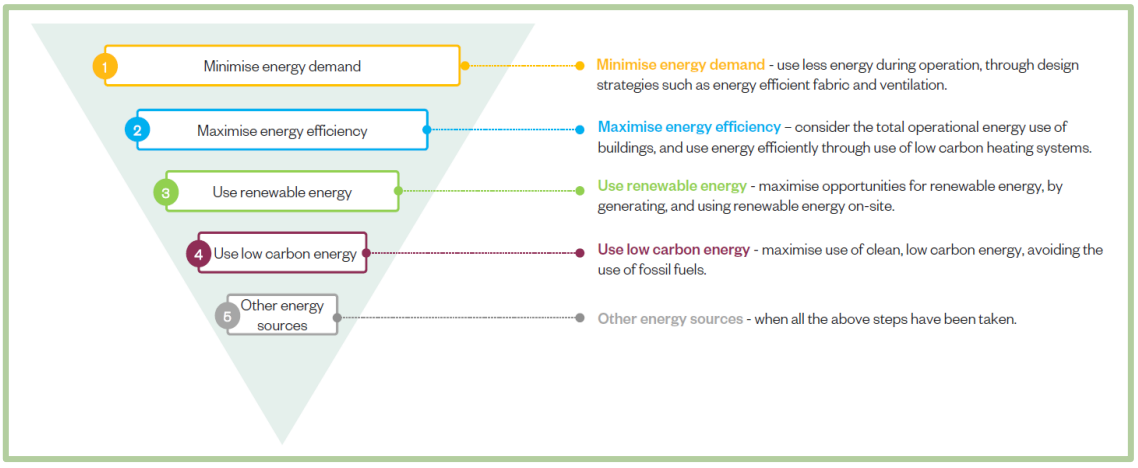
i. First Principle
   - Reduce the need for energy.

ii. Second Principle
   - Use energy more efficiently.

iii. Third Principle
   - Supply energy from renewable sources.

iv. Fourth Principle
   - Ensure that any continuing use of fossil fuels should use clean technologies and be efficient.

Figure 6.1 – The Energy Hierarchy



Source: GMCA PfE Guidance

The Energy Hierarchy has been used as a framework to guide the energy strategy to achieve practical and cost-effective carbon emission reductions for this building. It is intended that the construction, design and specification proposed for this scheme will deliver dwellings that are inherently efficient and cost-effective during occupation.

The proposed, detailed energy strategy is presented in Section 7.

7. ENERGY STRATEGY

7.1 CIBSE TM54 Modelling and Energy Demand

To demonstrate the energy performance of the proposed development, CIBSE TM54 assessments have been carried out for eight representative dwelling types. The modelling provides a robust indication of the expected space heating and overall energy demand.

7.1.1 Overview

The climate emergency is driving a critical need to deliver high-performance buildings, with operational energy use aligned to net-zero targets. To achieve this, design teams require tools and techniques that can reliably model in-use energy performance based on design proposals and guide the development of more efficient design strategies.

Traditional compliance modelling, such as Part L SAP and SBEM calculations, focus only on regulated energy use and therefore do not provide an accurate prediction of how buildings will perform once occupied. This gap between compliance predictions and real-world energy consumption has led to significant performance shortfalls.

The CIBSE TM54 assessment methodology addresses this issue by providing a structured methodology for producing more realistic estimates of operational energy use. It enables engineers and consultants to account for the factors typically overlooked in compliance modelling, including:

- Unregulated loads (small power, equipment, IT)
- Occupant behaviour (schedules, density, usage patterns)
- Heating, cooling, ventilation and domestic hot water performance
- Lighting and controls
- HVAC efficiencies and part-load operation
- Variations in system assumptions and scenarios

By incorporating these elements, TM54 helps to close the gap between Part L predictions, expected operational performance, and actual in-use energy consumption.

7.1.2 Geometry and Site Details

Eight representative dwellings were chosen to reflect the range of apartment and townhouse layouts across the development. These have been listed out in Table 7.1.

Table 7.1 – Representative Dwellings

Reference	Floor area (m^2)	Description	Façade Aspect
Ground Floor Townhouse Type A	81.72	Ground floor mid terrace	North
Ground Floor 2B4P Type B	73.91	Ground floor corner apartment	South & East
Second Floor 2B4P Type D	78.03	Mid floor corner apartment	North & west
Second Floor 1B2P Type B	51.22	Mid floor mid terrace apartment	West
Fourteenth Floor 2B4P Type E	73.20	Mid floor corner apartment with partially exposed roof.	North & East
Fifteenth Floor 2B3PType B	60.81	Mid floor mid terrace apartment	North
Sixteenth Floor 2B3P Type F	62.49	Mid floor corner apartment	South & West
Twenty-Third Floor 2B3P Type D	66.40	Top floor mid terrace apartment	East

The energy demand for these dwellings was calculated in DesignBuilder, a dynamic building simulation modelling (DSM) software package widely used for TM54 assessments. This software allows detailed modelling of building fabric, ventilation, internal gains and heating system performance to produce predictions of regulated energy use.

Figure 7.1 – Example Apartment 3D Energy Model

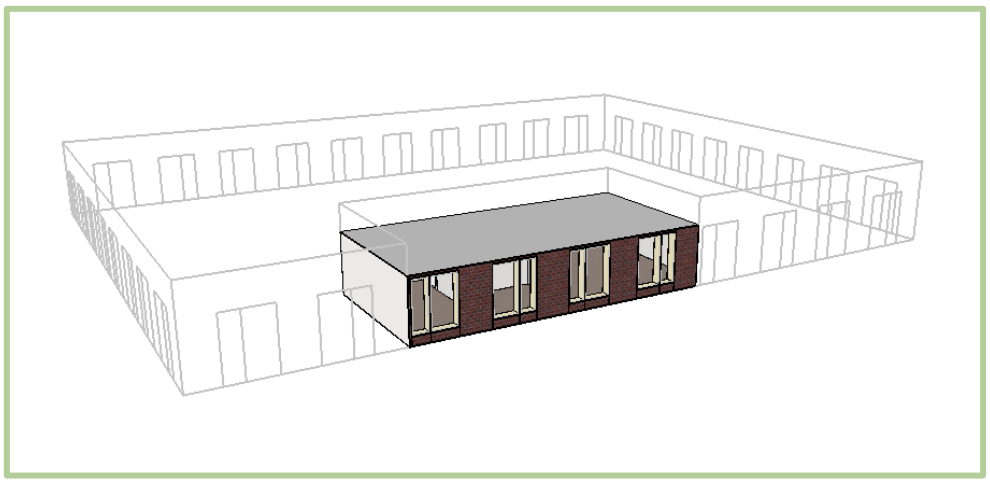
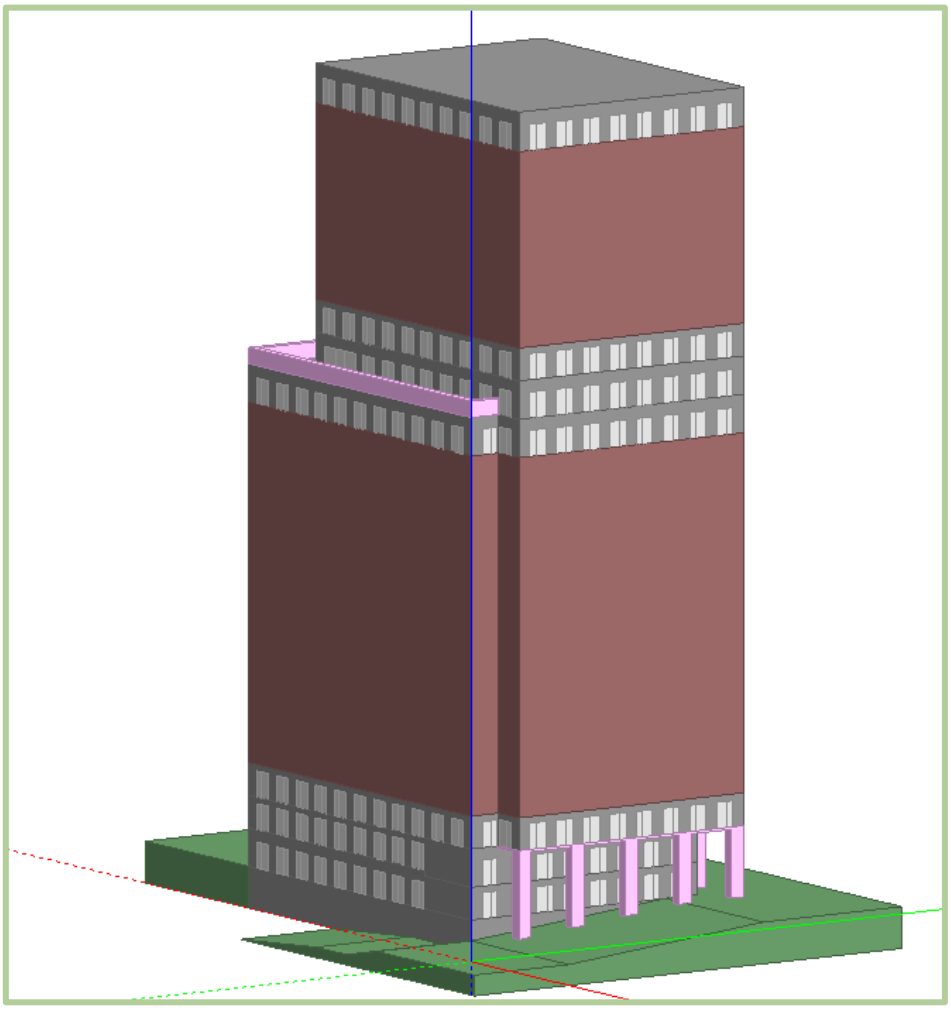


Figure 7.2 – 3D Energy Model



7.1.3 Data Inputs and Internal Gains

Tables 7.2 to 7.4 present the proposed specifications and data inputs used within the dynamic simulation modelling calculations, which underpin the energy performance results in Table 7.5.

Table 7.2 – Proposed Fabric Specification

Item	Proposed Specification
Exposed Floor	U=0.12 W/m^{2}K
External Wall	U=0.17 W/m^{2}K
Windows	U=1.20 W/m^{2}K
Roof	U=0.12 W/m^{2}K
Air Permeability	3.00m^3/hm^2 (@50Pa.)
Cold Bridge	y=0.09

Table 7.3 – Proposed Mechanical and Electrical Specification

Item	Proposed Specification
Lighting	100% LEDs
Ventilation	MVHR *Heat recovery efficiency: 89%*
Space Heating	Electric Panel Heaters *CoP 1.00*
Water Heating	Hot Water Heat Pump *CoP 3.02*

Table 7.4 – Internal Gains

Item	Description	Note
Occupancy	Internal heat gains from people, based on occupancy density, activity level, and operational schedules.	Model inputs for density and schedules are defined on a zone-by-zone basis. Occupancy density has been based off the number of assumed residents, for example a 2 bed four-person apartment is to house four people.
Lighting	Heat gains from fixed lighting systems, estimated using defined lighting loads, control strategies, and operating hours. Lighting schedules should be aligned with occupancy patterns.	The building has been specified with efficient LEDs. The lighting in the apartments has been modelled with a power density of 1.5 W/m^2 -100 Lux.
Small Power	Heat gains from plug loads and equipment, which can be highly variable and are often difficult to predict, particularly when future occupiers are unknown. For this TM54 encourages the use of benchmark data.	Power density of the equipment varies between room type, for bedrooms this has been set to 2 W/m^2 with a radiant fraction of 0.20 and for the kitchen living spaces this has been set to 10 W/m^2 with a radiant fraction of 0.50.

7.1.4 Results

Table 7.5 presents the predictive energy demand results.

Table 7.5 – TM54 Predictive Energy Demand Results

Reference	Space Heating (kWh/m²/year)	Lighting (kWh/m²/year)	Small Power (kWh/m²/year)	DHW (kWh/m²/year)	Total (kWh/m²/year)
Ground Floor Townhouse Type A	3.38	3.01	12.66	4.38	23.43
Ground Floor 2B4P Type B	4.36	2.73	17.94	3.30	28.33
Second Floor 2B4P Type D	9.27	2.64	18.40	3.35	33.66
Second Floor 1B2P Type B	6.66	2.74	19.68	3.39	32.47
Fourteenth Floor 2B4P Type E	6.81	3.29	17.80	3.29	31.19
Fifteenth Floor 2B3P Type B	5.50	2.97	16.51	3.26	28.24
Sixteenth Floor 2B3P Type F	5.98	2.81	15.98	3.28	28.05
Twenty-Third Floor 2B3P Type D	10.12	2.92	17.50	3.29	33.83

Table 7.6 presents the averaged space heating demand and total energy usage intensity (EUI) for the representative dwellings, benchmarked against the Places for Everyone (PfE) targets.

Table 7.6 – TM54 Predictive Energy Demand Results

	Space Heating Demand	Energy Use Intensity
Average of representatives (kWh/m²/year)	6.51	29.90
Places for Everyone Target (kWh/m²/year)	15	35

7.2 Part L Calculations

Approved SAP 10 software has been used to generate a representative energy demand model for the development. SAP software calculates the regulated energy demand and associated carbon dioxide emissions in accordance with the requirements of Building Regulations, Part L Approved Document Volume 1 (2021) that this development will be constructed in compliance with.

The SAP outputs have not been used to demonstrate compliance with the policy targets; instead, they have been used to confirm Part L compliance and to ensure the dwellings achieve an EPC rating of 'B'.

Block compliance of representative apartments:

- % Dwelling emission rate over AD: Volume 1 (2021): 68.96
- % Dwelling fabric energy efficiency reduction over AD: Volume 1 (2021): 0.26
- % Dwelling primary energy reduction over AD: Volume 1 (2021): 40.59

All representative apartments are achieving EPC 'B' ratings.

7.3 Building Fabric and Ventilation

The standard measurement of heat transfer through a given building material or construction type is the U-value (W/m^2K). The lower the U-value, the more slowly heat transfers and is lost out of a building. In buildings, heat loss generally occurs through the following main areas and elements of the construction:

- Ground floor;
- External walls;
- Roofs;
- Doors and windows;
- Thermal bridging; and,
- Uncontrolled ventilation.

This development will benefit from a material and design specification that is aligned with Building Regulation standards and will include numerous efficiency measures designed to reduce heat losses and minimise energy demand in accordance with the first principle of the energy hierarchy, including:

- ✓ High performance U - values;
- ✓ Reduced thermal bridge heat losses;
- ✓ Efficient form of construction; and,
- ✓ Low design air permeability target.

This 'fabric led' approach to minimising energy demand and associated carbon dioxide emissions through the performance of the thermal envelope is aligned with the first principle of the energy hierarchy, which states that reduction in energy demand should be achieved initially by energy efficiency.

7.1.1 - Building Form and Heat Loss Envelope

The form of the dwellings proposed for the scheme is as follows:

- The Townhouses are two storey dwellings; and,
- The remaining apartment types consist of, ground, mid and top floor units.

The calculated form factors for the representative apartment types have been calculated, as follows:

- Townhouse Type A: 0.9
- Level 00, 2B4P Type B: 1.5
- Level 02, 1B2P Type B: 0.6
- Level 02, 2B4P Type D: 0.3
- Level 14, 2B4P Type E: 0.7
- Level 15, 2B3P Type B: 0.3
- Level 16, 2B3P Type F: 0.7
- Level 23, 2B3P Type D: 1.4

7.1.2 - Elevation Design and Window Proportions

The dwellings are of bespoke architectural design with a range of high specification design features and materials palette, allied to generous proportions and detailing.

Is it possible to calc / ask AEW if they know what the glazing ratio is please and then to include here .

7.1.3 Heated Spaces

The apartment block has an unheated, partially exposed basement. The exposed floor to ground floor apartments and townhouses will be well insulated to minimise heat loss.

7.1.4 Building Fabric Specifications and Air Permeability

The proposed material specification that will be incorporated within the dwellings to limit heat loss and ensure efficient operation is presented in Table 7.2 above.

7.1.5 Ventilation System

The apartments and townhouses will benefit from whole house balanced mechanical ventilation with heat recovery. This system will maintain a healthy living environment and further reduce the heat losses and energy demand of the dwellings.

MVHR systems can recover up to 90% of heat from the extracted stale air from the dwelling by using a counter flow heat exchanger which 'pre-heats' cool incoming, fresh air. The outgoing and incoming air pass next to each other, but do not mix.

7.1.6 Space Heating Demand

To demonstrate the environmental performance of the proposed new-build dwellings, CIBSE TM54 assessments have been undertaken for eight representative dwelling types. This sample provides a robust and reliable indication of the overall expected performance of the development.

The space heating demand for the dwelling types has been calculated, as follows:

- Townhouse Type A = 3.38 kWh/m^2/year
- Level 00, 2B4P Type B = 4.36 kWh/m^2/year
- Level 02, 1B2P Type B = 9.27 kWh/m^2/year
- Level 02, 2B4P Type D = 6.66 kWh/m^2/year
- Level 14, 2B4P Type E = 6.81 kWh/m^2/year
- Level 15, 2B3P Type B = 5.50 kWh/m^2/year
- Level 16, 2B3P Type F = 5.98 kWh/m^2/year
- Level 23, 2B3P Type D = 10.12 kWh/m^2/year

- Average space heating demand = **6.51 kWh/m^2/year**

From 2025, the Places for Everyone policy sets maximum space-heating demand thresholds of 15 kWh/m²/year for flats and 20 kWh/m²/year for houses. The representative dwellings in this development have been calculated to perform with an average space-heating demand of 6.51 kWh/m²/year, well below these targets.

7.4 Maximise Energy Efficiency

7.4.1 Energy Use Intensity

Representative CIBSE TM54 models have been calculated for eight dwelling types. This provides the regulated energy demand of the house types within the scheme.

The energy use intensity (EUI) of a home or building is the total amount of energy (regulated and unregulated) it uses for all purposes in kWh/year, divided by the gross internal floor area (GIA) in m^2. The EUI has been calculated prior to the inclusion of the PV array.

Both regulated plus unregulated energy demand have been calculated for the purposes of the Energy Use Intensity (EUI) calculation. The EUI for the representative dwelling types has been calculated, as follows:

- Townhouse Type A = 23.43 kWh/m^2/year
- Level 00, 2B4P Type B = 28.33 kWh/m^2/year
- Level 02, 1B2P Type B = 33.66 kWh/m^2/year
- Level 02, 2B4P Type D = 32.47 kWh/m^2/year
- Level 14, 2B4P Type E = 31.19 kWh/m^2/year
- Level 15, 2B3P Type B = 28.24 kWh/m^2/year
- Level 16, 2B3P Type F = 28.05 kWh/m^2/year
- Level 23, 2B3P Type D = 33.83 kWh/m^2/year

- Average Energy usage intensity = **29.90 kWh/m^2/year**

The updated *Places for Everyone* guidance sets a target for Truly Affordable Net Zero (TANZ) social rent homes to achieve a maximum energy use intensity of 35 kWh/m^2/year.

We understand that the intent of the Energy Use Intensity target is to set out, for all developments (excluding small minor developments) the EUI value of 35kWh/m2GIA.yr as a target through which applicants can demonstrate compliance with the 'Maximise energy efficiency' element of policy JP-S2 (which applies to all new development).

The One Lord Street scheme has been demonstrated to improve upon this key performance indicator.

7.4.2 Efforts to Reduce Energy Use of Equipment

In order to limit energy demand and carbon dioxide (CO2) emissions from the operation of the building, a number of design features will be integrated that will collectively contribute towards emission reductions for the scheme.

Detailed measures are presented in Chapter 7 of this report, but in essence, the energy strategy focuses on a holistic approach to improving the buildings' performance by applying a fabric-led strategy, allied to renewable and low carbon technology.

The reduction in energy demand to meet the carbon reduction targets will be achieved through the following design measures and low carbon technology:

- High performance thermal insulation;
- Low air permeability;
- Hot Water Heat Pumps;
- Mechanical Ventilation with Heat Recovery;
- Solar photovoltaic array;
- Sophisticated heating controls;
- Appliances and white goods specified will be highly energy efficient; and,
- Each dwelling will be specified with a smart meter to enable occupant to effectively monitor and manage their energy consumption.

The proposed specification will improve upon the metrics and key performance indicators stipulated within Greater Manchester Combined Authority, Places for Everyone documents.

7.5 Renewable Energy Generation

The operational efficiency of the development will be optimised via the use efficient mechanical and electrical (M&E) systems allied to low carbon and renewable energy generation.

The proposed building services that will be incorporated in the development to ensure efficient servicing is presented in Table 7.7. The exact M&E specification will be refined further into the development cycle at the technical design stage (RIBA Stage 4), post planning approval.

Table 7.7 – Proposed Mechanical and Electrical Specification

Item	Specification
Lighting	100% LED (120lm/cW)
Ventilation	Mech. Vent. Heat Recovery *Nuaire MRXBOX ECO 5*
Space Heating	Electric Panel Heaters
Water Heating	Hot Water Heat Pump *Dimplex EDEL EDL170-520RF*
Heating Controls	Time and Temperature zone control
Renewables	Photovoltaic Array

7.5.1 Proposed Renewable Energy Generation System

Photovoltaic Array

Photovoltaic (PV) arrays have been selected as an appropriate renewable energy technology to contribute to the CO_2 emission reduction target for the development and to support the requirements stipulated within Places for Everyone. PV arrays are relatively straightforward to install, benefit from

low maintenance costs and will reduce the operational cost of the building. The use of PV in general at this site would provide the following benefits:

- Reducing the buildings electrical energy grid load;
- Simple installation and commissioning;
- Low maintenance; and,
- Reliable, proven technology.

Proposed System Details –

- It is proposed that PV panels will be mounted on the roof.

Figure 7.3 presents the proposed PV layout on the roof of the scheme which demonstrates alignment with the Places for Everyone policy criteria.

Figure 7.3 – Proposed Roof Layout for Renewable Generation

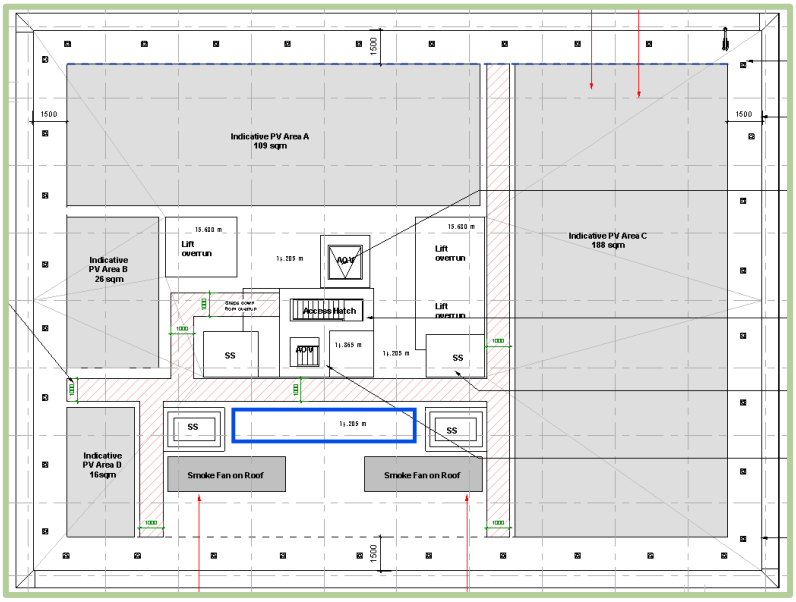


Table 7.8 – Proposed PV Area

	Solar PV
Ground Floor Area (m^2)	826
Proposed PV Area (m^2)	339
PV Footprint area (% of ground floor area)	**41%**

Land Use –

- There are no land use issues associated with PV technology at this site;
- The development has sufficient roof area to accommodate the PV arrays; and,
- The PV arrays can be installed as part of the roof system in order to minimise the visual impact.

Local Planning Issues –

- There are no planning policy issues associated with this technology and this type of technology is favoured under the PfE requirements.

Noise Issues –

- PV is silent in operation.

Whole life cost and lifecycle impact –

- Current installed costs for PV are approximately £1,500 / kWp installed.
- Additional costs throughout the system's thirty-year lifecycle are limited to:
  - Cleaning of the arrays; and,
  - Replacement of the DC / AC inverter unit which typically have a lifespan of around ten years.

Air Source Heat Pumps

The proposed Air Source Heat Pump (ASHP) system is a highly energy efficient means of meeting the dwellings' hot water demand. The system comprises a hot water storage cylinder with an integrated heat exchanger and a compact heat pump unit that extracts heat from the surrounding air. Designed specifically for domestic hot water production, it efficiently transfers ambient heat to the water, reducing energy consumption compared to conventional electric or gas water heating systems.

The proposed packaged hot water heat pump cylinder system provides the following benefits:

- Highly energy-efficient system, thus limiting electrical energy demand and associated carbon dioxide (CO_2) emissions;

- This technology benefits from a low 'carbon footprint' due to the inherent efficiency of the heat pump process. It is a well-established technology with an anticipated long lifespan - with proper care they can be operational for up to twenty years;

- Omission of fossil fuel connection from the proposed scheme will enable the development to track the decarbonisation of the UK electricity grid over time and reduce operational carbon emissions as a consequence; and,

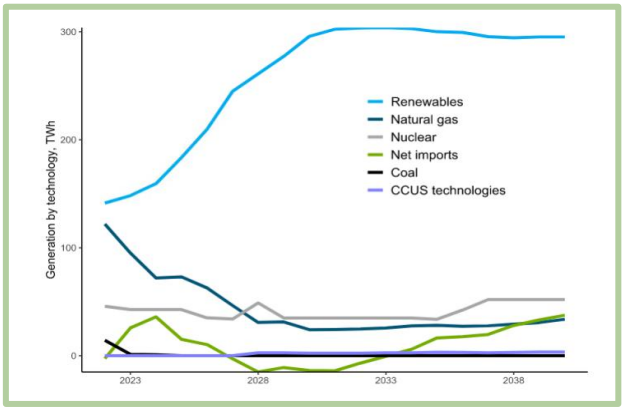
- ASHPs primarily consume grid mix electricity which is, in part (albeit diminishing) sourced from a mix of fossil fuels / LZC and nuclear.

7.6 Low Carbon Heating

7.6.1 Fossil Fuel Free

The scheme will be fossil fuel free. As the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme, which benefits from highly efficient systems.

Figure 7.4 - Electricity Generation by Fuel Source, TWh



Source – BEIS, Energy and Emissions Projections (2022)

UK grid mix electricity carbon emissions will decrease significantly by 2035, with the carbon intensity of electricity generation falling by 93% between 2020 and 2035. This is due to the progressive shift away from fossil fuels as demonstrated in Figure 7.4.

The energy strategy proposed for the scheme uses a combination of air source heat pumps and photovoltaics. The air source heat pumps are highly efficient systems that utilise grid electricity to provide water heating. The use of heat pumps will ensure that fossil fuels converted and distributed through the National Grid as electrical energy will be consumed cleanly and efficiently.

Therefore, this will further support the schemes move towards operational net zero carbon in accordance with the Places for Everyone requirements.

7.6.2 Proposed Heating and Hot Water System

The proposed specification includes a Hot Water Heat Pump (*Dimplex EDEL EDL170-520RF*) providing hot water. This system operates with a COP of 302% efficiency. Space heating will provided by electrical panel heating which is 100% efficient at the point of consumption.

7.6.3 Proposed Cooling System

There will be no active cooling measures within the properties. Purge ventilation will be provided by openable windows. Compliance has been demonstrated with Building Regulations Approved Document O: Overheating and CIBSE TM59: Design Methodology for the Assessment of Overheating Risk in Homes without the requirement of active cooling.

8. ENHANCED LOW CARBON HEAT APPRAISAL

This Enhanced Low-Carbon Heat Appraisal has been prepared to support the planning application for the proposed development.

It assesses the predicted performance of a number of potentially suitable heating system options, against the required Key Performance Indicators (KPIs) for major-large scale developments such as this.

The development falls under Places for Everyone **Location Case 3,** which applies to sites located within a low carbon heat network opportunity area. This appraisal includes consideration of a notional **low-carbon heat network** in addition to building-level options.

As this scheme is to provide over 150 homes it is considered a Large Major application. This triggers the need for an enhanced Low Carbon Heat Appraisal comparing different systems against a set of Key Performance Indicators (KPIs) and identifying the proposed system. This can be seen in Table 8.1.

For Major applications, the energy carbon requirements, are as follows:

1. Non fossil fuel based system proposed
2. The carbon content of heat (delivered) is less than 100gCO_2/kWh

The appraisal also addresses broader technical, operational, infrastructure, and carbon-related considerations as recommended for large major applications. The proposed heating options for this appraisal are as follows:

- Option 1 – Electric panel heaters and Hot water heat pump
- Option 3 – Communal Air Source Heat Pump (direct electric)
- Option 2 – Electric storage heaters and Electric immersion
- Option 4 – Exhaust Air Heat Pump

Policy JP-S3 is clear that there is an expectation that connection to a low carbon heat network is proposed 'unless it can be demonstrated that there are more effective alternatives for minimising carbon emissions or such connection is not practicable or financially viable'.

There are four key grounds for exemption, these are as follows:

1. **Carbon Grounds:** An alternative on-site heating system would be lower carbon than the carbon content of heat (delivered) of the low carbon heat network.

2. **Heating costs grounds:** Connection to the low carbon heat network would lead to heating costs for the residents which are more than 10% higher than an on-site heating system with an equal or lower carbon content of heat.

3. **Cost effectiveness grounds:** Connection to the low carbon heat network (and the installation of on-site interim heating plant if needed) would not be as cost effective as installing an on-site heating system with an equal or lower carbon content of heat.

4. **Technical/practical grounds:** There are significant technical/practical reasons why the development cannot connect.

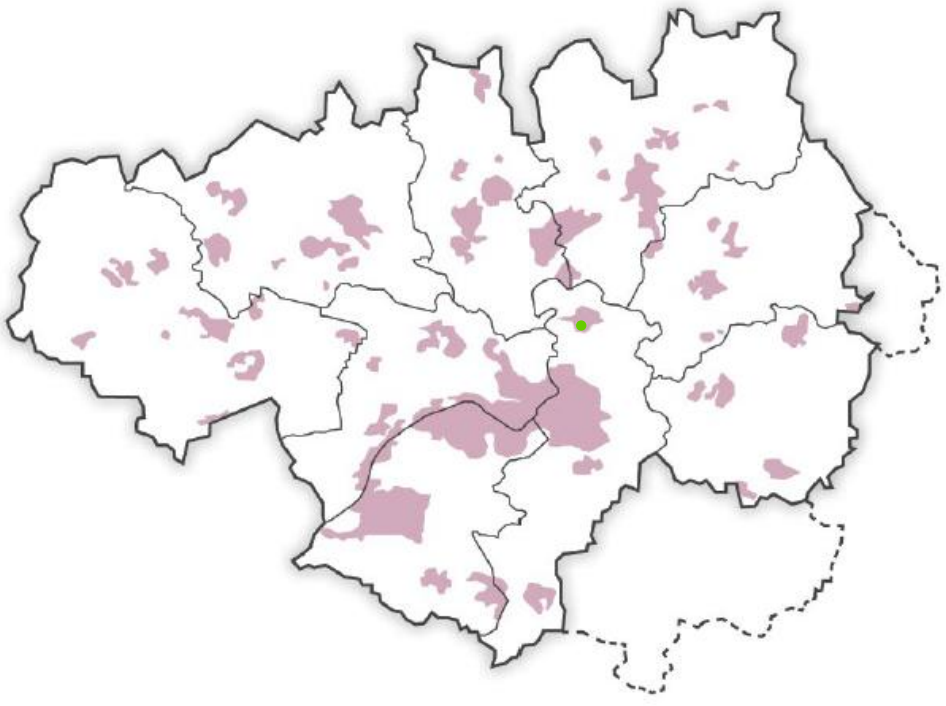
An initial investigation was undertaken to determine whether the site lies within a District Heat Network, in accordance with the Places for Everyone guidance for Manchester. It was determined that the site is not located within 500 m of an existing or planned low-carbon heat network; however, it does fall within a low-carbon heat network opportunity area and is therefore classified as Case 3, as noted above.

As the development falls under the Case 3 classification, there is no requirement to connect to a future district heat network due to the uncertainty surrounding if or when such a network will be installed. However, because the development is categorised as a Large Major scheme, it is still necessary to assess four different heating options (including a district heat network).

From the four different heating options as mentioned above, Option 1 electric panel heaters with a hot-water heat pump was selected as the most feasible and cost-effective solution for the development. Factors such as running costs, installation costs, practicality, carbon intensity of heat, and the use of fossil-fuel-free technology contributed to its selection. Another reason for selecting Option 1 is that there are currently no planned heat networks in the area, and there is uncertainty regarding if or when one will become available. As a result, a heating solution is required that can be implemented and fully operational when the development is completed.

Figure 8.1 – Map of Heat and Energy Network Opportunity Areas

The green dot in Figure 8.1 below shows the approximate site location in relation to the heat and energy network opportunity areas.



Map of Heat and Energy Network Opportunity Areas

(created from GMCA Places for Everyone Joint Development Plan Document, March 2024)

8.1 KPI Assessment Summary

Table 8.1 below summarises the required key performance indicators (KPIs) for each heating option.

Table 8.1 – KPI Performance Assessment formatting

Performance Area	Key Performance Indicator	Direct Electric & Heat Pump	Direct Electric	Communal Air Source Heat Pump	EAHP[2]
Environmental Performance	1. Fossil Fuel	No	No	No	No
	2. Carbon Content of Heat gCO_2/kWh)	142.50	177.00	53.15	64.78
	3. Local Pollution	None, system is 'full electric'	None, system is 'full electric'	None, system is 'full electric'	None, system is 'full electric'
Impact on residents / users	4. Estimated Running Costs for heating & Hot water (£/yr/apartment)	£377.94	£557.02	£289.22	£306.60
	5. Estimated maintenance costs £/yr[3]	0	0	???	0
	6. Estimated replacement costs £/yr/apartment[4]	£208.50	£287.33	???	£400.00
	7. Additional costs compared to benchmark low carbon heating system +/- %	-47.88%	-28.17%	???	-
Impact on Viability	8. Estimated capital cost £/Building	£1,282,610	£429,210	£3,012,000	£2,510,000
	9. Additional cost compared with benchmark low carbon heating system +/- %	-95.70%	-484.80%	+16.67%	-
Infrastructure development	10. Connection to low carbon Heat network	No	No	Yes	No
	11. Scale of application GIA m^2	22,200	22,200	22,200	22,200

Please can CAD21 comment on communal heat pump annual maintenance and replacement costs

[2] The Exhaust Air Heat Pump has been selected as a 'benchmark' low carbon heating system.
[3] The maintenance cost for direct electric heaters and heat pumps has been set to zero, as any required upkeep can be carried out by residents and is limited to basic tasks such as general cleaning and replacing heat pump air filters.
[4] The estimated replacement cost has been calculated by dividing the current system cost by its expected lifetime.

8.2 Option 1 (Proposed): Direct Electric & Heat Pump

8.2.1 Overview

Space heating and domestic hot water (DHW) are provided as separate systems. This setup is "full electric" and therefore fossil fuel free.

Assume that you have cross referenced to the PfE tech guidance docs for these descriptions and notes? If not, pls review and add as required.

Space Heating:

- Delivered via electric panel heaters
- Is 100% efficient at the point of consumption.
- Generates a reduced overheating potential – electric space heating delivers virtually instantaneous heating at the location where it is required. Unlike a 'wet system' associated with communal gas boilers which inherently have a long lag time for the heat to be generated and then dissipated when no longer needed. This lag time can lead to the dwelling overheating as the hot water remains in the radiators for a considerable time after the heat demand is required.
- More flexible demand management compared to storage heaters due to their diversified electrical load.

Domestic Hot Water (DHW):

- Supplied through a packaged hot water heat pump installed inside the dwelling.
- The heat pump is ducted to the outside, drawing in ambient air and expelling air after heat extraction.
- Low-grade heat from internal air is passed over the integrated heat exchanger and recovered energy is upgraded by the heat pump to provide very low carbon potable hot water.
- The proposed Dimplex Edel heat pump that this analysis is based upon has a high operating efficiency of 302%.
- Hot water is stored locally in an individual tank for each apartment.
- DHW systems are independent and not interconnected between dwellings.

Installation Considerations:

- Space Constraints: Hot water heat pumps require sufficient internal space and should ideally be located close to an external wall to allow ducting for air intake and exhaust.
- Suitability: This configuration is well-suited to high-density apartment buildings where outdoor space is limited, and space heating loads are relatively low.
- Energy Efficiency: The systems can be integrated with energy-demand reduction technologies (e.g., smart thermostats, photovoltaic array or energy storage) to optimise performance, support low carbon transition plans, and reduce operational costs.
- Space planning: makes efficient use of the building's floor area and does not require a dedicated plant room or internal riser.

8.2.2 Operation and Maintenance

Sophisticated heating controls including appliance programmer and appliance thermostats will ensure the efficient delivery of heat from electric panel heaters to further reduce the dwellings' energy demand.

Maintenance considerations include minimal servicing requirements of electric panel heaters and the standard annual checks needed for the hot-water heat pump. Maintenance arrangements can be incorporated into a range of management models, such as council, build-to-rent, owner-occupier, or third-party providers. Although the exact approach will depend on the final management structure of the development. Supply chain

DRAFT

availability for replacement components is currently assessed as low to medium risk, but this remains subject to change based on market conditions and manufacturer availability at the time of procurement.

Table 8.2 – Estimated Running Cost[5]

Estimated heating demand (Space & Water) kWh/year	Standing Charge £/year	Day rate cost £/year	Estimated running Cost £/year/typical apartment
828.18	195.93	182.01	377.94

8.2.3 Carbon Emissions

This option is considered fossil-fuel-free as it is fully electric, resulting in no local pollution at the point of use. Unlike gas boilers, which burn fossil fuels within the dwelling, producing local emissions. Furthermore, as the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme, which benefits from highly efficient systems.

The carbon content[6] of the proposed heating strategy is specified below:

Electric Panel heaters:

- Efficiency of system 100% (SCOP of 1.0)
- Carbon content of delivered heat: 177 gCO_2/kWh

Hot Water Heat Pump (Dimplex EDEL):

- Efficiency of system 302% (SCOP of 3.02)
- Carbon content of delivered heat: 58.61 gCO_2/kWh

Weighted average of Carbon content:

- Space heating is 71% of heating demand
- Water heating is 29% of heating demand
- Carbon content of the proposed system is 142.50 gCO_2/kWh

Furthermore, the refrigerant used in the proposed Dimplex Edel hot-water heat pump is R290, which has a very low global warming potential, contributing only 0.06 $kgCO_2e$ and having a GWP rating of just 3, well below the F-Gas Regulation target of 750. Combined with the relatively low carbon intensity of electricity, the use of this low-GWP refrigerant reinforces the suitability of this option as a genuinely low-carbon hot water solution for the development.

[5] The estimated running cost is based on the average space heating and hot water demand derived from the representative CIBSE TM54 predictive energy calculations, multiplied by the average electricity prices for July to September 2025 as published by the House of Commons Library These figures can be seen below:

- Average Standing charge: £0.5368/day
- Average Day rate: £0.2635/kWh

[6] According to the 2025 Government Greenhouse Gas (GHG) Conversion Factors published by DESNZ, the carbon content of grid electricity is 0.177 $kgCO_2$ per kWh. This emission factor has been used to estimate the operational carbon performance of the proposed full electric heating system.

8.3 Option 2: Direct Electric

8.3.1 Overview

Space heating and domestic hot water (DHW) are provided as separate systems. This setup is "full electric" and therefore fossil fuel free.

Space Heating:

- Delivered via electric storage heaters
- Operate at close to 100% efficiency at the point of use.
- Reduce overheating risk, as heat is delivered directly where required without the residual heat associated with wet systems served by communal boilers, which can continue emitting heat long after demand has ceased.
- Provide straightforward, predictable operation with no reliance on pumps, pipework, or circulating hot water.

Domestic Hot Water (DHW):

- Supplied via an electric immersion heater within the water calorifier located inside each dwelling.
- Simple, robust technology with minimal servicing requirements and no refrigerants or external plant.
- Hot water is stored locally in an individual cylinder for each unit, ensuring systems are independent and not interconnected between dwellings.
- Performance is predictable and unaffected by external temperatures.

Installation Considerations:

- Suitability: This configuration is well-suited to high-density apartment buildings where outdoor space is limited, and heating loads are relatively low.
- Energy Efficiency: Can be paired with energy-demand reduction technologies (e.g., smart controls, photovoltaic systems, or battery storage) to optimise electricity use, particularly during off-peak periods for storage heaters.
- Space planning: makes efficient use of the building's floor area and does not require a dedicated plant room or internal riser.
- Electrical Load Constraints: Storage heaters typically charge during a fixed off-peak window, resulting in all units drawing power simultaneously. This lack of load diversification can create a concentrated electrical demand that may exceed the building's available connection capacity and increase strain on the local network.

8.3.2 Operation and Maintenance

Sophisticated heating controls including appliance programmer and appliance thermostats will ensure the efficient delivery of heat from electric panel heaters to further reduce the dwellings' energy demand.

Maintenance considerations for electric storage heaters and electric immersion units are minimal, as these technologies require little more than basic user checks and occasional component replacement. Maintenance arrangements can be integrated into any management model, whether council-led, build-to-rent, owner-occupier, or third-party providers. Although the chosen approach will depend on the final management structure of the development. Replacement components for storage heaters and immersion units are generally widely available, so supply-chain risk is assessed as low to medium, subject to normal market fluctuations and manufacturer availability.

DRAFT

Table 8.3 – Estimated Running Cost

Estimated heating demand (Space & Water) kWh/year	Standing Charge £/year	Day rate cost £/year	Estimated running Cost £/year/typical apartment
1507.80	195.93	361.09	557.02

8.3.3 Carbon Emissions

This option is considered fossil-fuel-free as it is fully electric, resulting in no local pollution at the point of use. Unlike gas boilers, which burn fossil fuels within the dwelling, producing local emissions. Furthermore, as the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme, which benefits from highly efficient systems.
The delivered heat carbon content of the direct electric heating strategy is specified below:

Direct Electric heating:

- Efficiency of system 100% (SCOP of 1.0)
- Carbon content of delivered heat: 177 gCO_2/kWh

8.4 Option 3: Communal Heat Pump

8.4.1 Overview

Space heating and domestic hot water (DHW) are provided via a roof mounted communal air source heat system. This setup is "full electric" and therefore fossil fuel free.

Space Heating and Domestic Hot Water (DHW):

- Supplied via a communal air-source heat pump (ASHP) system.
- The ASHP extracts heat from the outdoor air and upgrades it to provide low-temperature water, which is distributed via a heat loop to heat interface units (HIUs) within each apartment, providing both space heating and DHW.
- Centralised heat generation allows coordinated management of overall building energy demand, but local control is limited to the HIU settings.
- Efficiency is high at the plant level, but pipework can lead to significant distribution losses.
- Each HIU provides space heating and instantaneous hot water to the dwelling.
- Delivery is effective, though response times can be slower than fully independent systems due to distribution lag and thermal inertia in the communal network.

Installation Considerations:

- Plant Space: Requires a central plant room to house the communal heat pump, buffer tanks, pumps, and controls.
- Infrastructure: Demands well-insulated pipework and risers throughout the building to deliver heat efficiently to each apartment.
- Energy Efficiency: Can integrate with demand management technologies and renewable generation; however, heat storage in the network may reduce responsiveness to dynamic control.
- Overheating Risk: The combination of stored heat in communal pipework and limited local modulation through HIUs increases the potential for apartments to overheat, particularly in low-load periods

DRAFT

8.4.2 Operation and Maintenance

Centralised plant controls and individual apartment HIU thermostats, enabling local regulation of space heating and hot water. While centralised control allows optimisation of plant efficiency, the system carries less flexibility than independent electric heaters, and the stored heat in the network can increase the risk of overheating in dwellings, particularly during low-load periods.

Maintenance requirements for the communal heat pump are relatively low but more complex than individual electric heaters, as the central plant requires periodic inspections, pump servicing, and system checks. HIUs within apartments require minimal servicing, typically limited to annual checks and occasional component replacement. Supply chain availability for replacement components in the communal heat pump system is considered medium to high risk due to the complexity of the plant and specialised HIU components. Availability may vary depending on market conditions and manufacturer lead times at the time of procurement.

Table 8.4 – Estimated Running Cost

Estimated heating demand (Space & Water) kWh/year	Standing Charge £/year	Day rate cost £/year	Estimated running Cost £/year/typical apartment
390.83	195.93	93.29	289.22

8.4.3 Carbon Emissions

This option is considered fossil-fuel-free as it is fully electric, resulting in no local pollution at the point of use. Unlike gas boilers, which burn fossil fuels within the dwelling, producing local emissions. Furthermore, as the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme, which benefits from highly efficient systems.

A communal heat-pump system would typically employ a modern refrigerant in line with current industry practice, all of which are required to comply with the latest F-Gas Regulation standards and generally offer a much lower global warming potential than older refrigerants. Although the specific refrigerant cannot be identified at this stage, communal heat-pump systems typically use lower-GWP refrigerants that help to minimise embodied carbon impacts. Coupled with the relatively low carbon intensity of electricity, such systems are generally considered to provide an effective and robust low-carbon heating approach.

The carbon content of the communal heat pump heating strategy is specified below:

Communal Heating:

- Efficiency of system 350% with delivery efficiency of 95% (SCOP of 3.33)
- Carbon content of heat: 53.15 gCO_2/kWh

8.5 Option 4: Exhaust Air Heat Pump

8.5.1 Overview

Space heating and domestic hot water (DHW) are provided by the same local unit. This setup is "full electric" and therefore fossil fuel free.

Space Heating and Domestic Hot Water (DHW):

- Supplied via individual exhaust air heat pumps (EAHPs) installed in each apartment.
- Each EAHP extracts heat from the dwelling's exhaust air via a heat exchanger, upgrading low-grade energy to provide space heating and hot water efficiently.
- Space heating is delivered via low-temperature radiators or underfloor heating connected to the EAHP. Where exhaust air alone is insufficient, a direct electric top-up ensures demand is met.
- Heat delivery is on-demand and modulated, reducing the risk of overheating compared with centralised wet systems, which may continue to radiate heat after demand has ceased.
- Hot water is stored locally in an individual tank for each dwelling, ensuring each apartment has independent DHW supply.
- High efficiencies are achievable, typically 250–300% COP, depending on usage patterns and internal/external conditions.
- The system is self-contained per apartment, with no interconnection between dwellings, providing flexible and responsive control for both space heating and DHW.

Installation Considerations:

- Space Constraints: EAHP units are quite large internal and need to be installed relatively close to an external wall
- Single point of failure: if the air outlets and/or filters are not maintained, both ventilation and heating system performance could be affected.
- Higher ventilation rates: The heat pump may require higher ventilation rates to operate efficiently, which could necessitate several ducts and facade penetrations, fans, or overall ventilation capacity to meet the system's heating and hot water demands.

8.5.2 Operation and Maintenance

Advanced heating controls such as integrated heat-pump programmers, weather-compensated flow regulation, and room thermostats optimise the performance of exhaust air heat pumps to ensure efficient recovery and utilisation of warm, extract air. These controls help to maximise heat-pump efficiency, maintain stable indoor comfort levels, and reduce the overall energy demand of the dwelling.

Maintenance requirements for exhaust air heat pumps are relatively modest, typically involving annual inspections to assess refrigerant integrity, ventilation airflow rates, filter cleanliness, and general unit performance. Routine filter replacement is essential to maintain ventilation efficiency and protect the heat-pump components. Maintenance responsibilities can be incorporated into a variety of management structures, including local authority housing, build-to-rent portfolios, owner-occupied homes, or arrangements with specialist third-party maintenance suppliers. The precise model adopted will depend on the operational strategy and long-term management approach of the development. Supply chain resilience for EAHP units and key components such as fans, filters, and compressor parts is generally considered medium risk due to the still-maturing UK and European market. Availability may vary with manufacturer lead times and wider market conditions, so procurement should be monitored throughout design and delivery.

Table 8.5 – Estimated running cost for electric panel heaters & hot water heat pump

Estimated heating demand (Space & Water) kWh/year	Standing Charge £/year	Day rate cost £/year	Estimated running Cost £/year/typical apartment
469.28	195.93	110.67	306.60

8.5.3 Carbon Emissions

This option is considered fossil-fuel-free as it is fully electric, resulting in no local pollution at the point of use. Unlike gas boilers, which burn fossil fuels within the dwelling, producing local emissions. Furthermore, as the UK electricity grid's CO_2 footprint continues to improve, so too would the carbon dioxide emissions associated with the operational phase of the proposed scheme, which benefits from highly efficient systems.

Exhaust air heat pumps typically utilise refrigerants that align with current industry standards, all of which must comply with the latest F-Gas Regulation requirements and generally exhibit significantly lower global warming potential than older refrigerant types. Although the exact refrigerant cannot be confirmed at this stage, exhaust air heat pumps are commonly designed to operate with lower-GWP refrigerants, resulting in only a limited embodied carbon impact. When paired with the relatively low carbon intensity of electricity, exhaust air heat-pump systems are regarded as an effective and robust low-carbon solution for providing space heating and hot water.

The carbon content of the exhaust air heat pump heating strategy is specified below:

Heat pump space heating:

- Efficiency of system 250% (SCOP of 2.50)
- Carbon content of heat: 70.8 gCO_2/kWh

Heat pump water heating:

- Efficiency of system 300% (SCOP of 3.00)
- Carbon content of heat: 59 gCO_2/kWh

Weighted average of Carbon content:

- Space heating is 49% of heating demand
- Water heating is 51% of heating demand
- Carbon content of the proposed system is 64.78 gCO_2/kWh

8.6 Viability of Heating Strategy Options

Tables 8.6 & 8.7 below demonstrate a comprehensive comparison of the considered heating options. The results show how each option performs in terms of carbon emissions, running costs, maintenance considerations, and overall capital investment, providing a clear rationale for selecting the preferred system.

Table 8.6 – Summary of Key Performance Indicators

KPI	Direct electric & heat pump	Direct electric	Communal heat pump	EAHP (Benchmark)
Carbon Content of Delivered Heat (gCO_2/kWh)	142.5	177	53.15	64.78
Annual Running Cost (£/year/apartment)	£414.16	£593.24	£298.92	£319.59
Annual Maintenance Cost	Minimal	Minimal	???	Minimal
Annual Replacement (£/year/apartment)	£208.50	£287.33	???	£400.00
Capital Cost (£/Building)	£1,282,610	£429,210	£3,012,000	£2,510,000
Relative to Benchmark (capital cost as %)	-95.7%	-484.8%	+16.7%	Benchmark (0%)

Please can CAD21 comment on communal heat pump annual maintenance and replacement costs

DRAFT

Table 8.7 – Viability Assessment Summary

Criterion	Direct Electric & DHW Heat Pump	Direct Electric	Communal Heat Pump	EAHP (Benchmark)	Notes
Carbon Performance vs Benchmark	Moderate	Poor	Best	Good	Communal heat pump performs best but very high upfront CAPEX cost
Resident Running Cost	Low	Highest	Very Low	Low	Proposed option balances operational cost & performance
Maintenance requirements	Minimal	Minimal	???	Minimal	Communal system requires specialist servicing
Replacement Costs	Moderate	Moderate	???	Highest	EAHP has more complex components
Upfront Cost	Low	Lowest	Very High	High	Communal heat pumps require large plantrooms & infrastructure
Cost-benefit analysis	Strong	Weak	Weak	Moderate	Proposed option balances operational cost & performance
Overall Viability	**High (recommended)**	Low	Low	Medium	Proposed option provides best combined outcome

The tables above demonstrate that the **proposed system offers the most balanced solution, combining low capital cost, competitive running costs, minimal maintenance, and acceptable carbon performance.**

While communal and EAHP systems achieve lower operational carbon dioxide emissions, their significantly higher capital cost and operational complexity reduce overall scheme viability. Direct electric systems offer low capital cost but perform poorly for residents and in carbon terms.

On balance, the proposed energy strategy (hot water heat pump allied to electric panel space heating) provides the most feasible and cost-effective outcome for the development.

9. OVERHEATING RISK

9.1 Overheating Risk Assessment

An overheating analysis has been undertaken for this apartment block containing two-hundred and fifty-one apartments, covering six representative floorplates in accordance with Building Regulations Approved Document O: Overheating and CIBSE TM59: Design Methodology for the Assessment of Overheating Risk in Homes. The dynamic thermal modelling method for demonstrating compliance with requirement O1 has been followed as stipulated within the Places for Everyone guidance and Approved Document O.

Design Builder v7.2.0.032 Dynamic Simulation Modelling (DSM) Software has been used to assess the overheating risk, using the internationally approved Energy Plus Simulation Engine and the following guidance has been followed:

- CIBSE's TM59 methodology for predicting overheating risk;
- The limits on the use of CIBSE's TM59 methodology; and,
- The acceptable strategies for reducing overheating risk.

The following floorplates have been assessed, incorporating multiple apartments of differing design, opening restrictions and orientations:

- Ground floor
- First Floor
- Second Floor
- Fourteenth Floor
- Fifteenth Floor
- Sixteenth Floor
- Twenty-third floor

9.2 Data Inputs and Building Model

Table 9.1 below summarises the building fabric specification which has been applied to the thermal simulation model for the dwellings. This specification is based on the fabric performance figures agreed with the design team and includes the solar transmission g-value of the glazing, which is fundamental to the results.

Table 9.1 – Thermal Fabric Performance Levels

Building Element	U-Value (W/m^2K)
Walls (external)	0.17
Ground Floor	0.12
Roof	0.12
Glazing (Standard)	1.20 (g-value of 0.40)
Air Permeability m^3/hm^2 (@50Pa.)	3.00

DRAFT

The application site is situated at the junction between Fernie Street and Lord Street in Cheetham Hill, Manchester. The proposed development consists of a residential tower providing two-hundred and fifty-one apartments.

The weather data used in this study is **the CIBSE DSY1 2020's, high emissions 50th percentile for Manchester** as this is the most applicable to the site.

The key floorplates that have been assessed are highlighted in Figures 9.1 & 9.2 below. These have been selected as they align with the predictive energy appraisal and provide a robust representation of the entire scheme in terms of apartment size, exposure, orientation, and location within the building.

Figure 9.1 – North & East Elevations

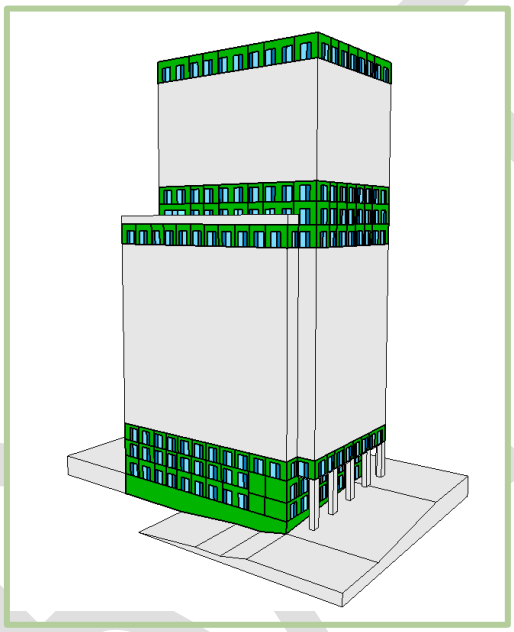
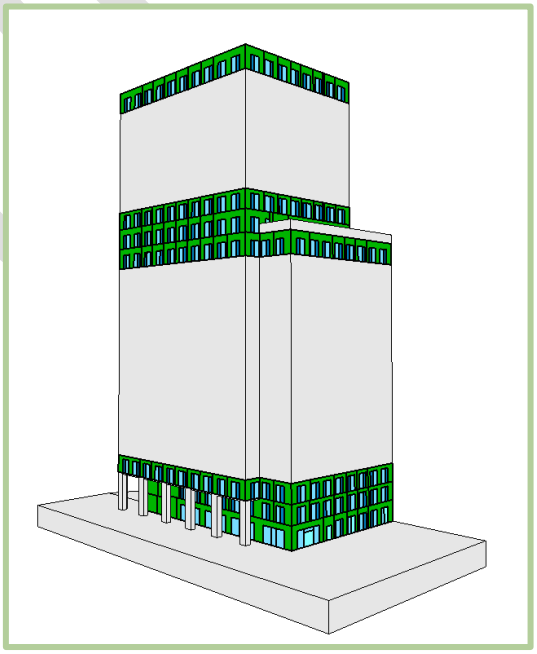


Figure 9.2 – South & West Elevations



9.3 Ventilation Strategy

The dwellings will be ventilated using Mechanical Ventilation with Heat Recovery (MVHR). MVHR is a whole-house ventilation system that continuously supplies fresh, filtered air to living spaces while extracting stale, moisture-laden air from wet rooms such as kitchens and bathrooms. MVHR is recognised as a low-energy ventilation solution suitable for the Future Homes Standard, as its balanced system configuration supports the specification of low-air-permeability dwellings.

Additionally, the apartments will be equipped with openable purge vents. In accordance with Building regulation Part O and Manchester City Council's Acoustic Ventilation Overheating (AVO) guidance, the following restrictions have been applied to these vents:

Table 9.2 – Opening Restrictions

Room Reference	Part O Nighttime Opening (23:00-07:00)	MCC AVO Guidance (07:00-23:00)
Bedroom Levels 0-2	Not Openable	Limited to 12.5hr per day
Living / kitchen Levels 0-2	Openable (No limitation on opening)	Limited to 12.5hr per day
Bedroom Levels 3+	Not openable (exception of terrace floors)	Openable (No limitation on opening)
Living / kitchen Levels 3+	Openable (No limitation on opening)	Openable (No limitation on opening)

9.4 TM59 Results

This assessment has determined the thermal comfort performance of occupied areas against the performance requirements of CIBSE TM59 for predominantly naturally ventilated homes. The results obtained from the Part O assessment of overheating risk can be seen in Table 9.3. below:

Table 9.3 – Results

Level	Reference	Zone	Criterion A (%)	Criterion B (hr)	Pass/Fail
Level 00 - Ground Floor	TH Type A	LIVING/KITCHEN	0.00	n/a	Pass
	TH Type B	LIVING/KITCHEN	0.00	n/a	Pass
	TH Type C	LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type E	BEDROOM	0.00	11.50	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type M	BEDROOM 1	0.49	31.83	Pass
		BEDROOM 2	0.99	31.67	Pass
		LIVING/KITCHEN	1.82	n/a	Pass
	2B3P Type N	BEDROOM 1	0.00	21.33	Pass
		BEDROOM 2	0.31	20.50	Pass
		LIVING/KITCHEN	0.11	n/a	Pass
	2B3P Type B	BEDROOM 1	0.31	25.17	Pass
		BEDROOM 2	0.40	23.83	Pass
		LIVING/KITCHEN	1.02	n/a	Pass

Level	Reference	Zone	Criterion A (%)	Criterion B (hr)	Pass/Fail
Level 01 - First Floor	TH Type A	BEDROOM 1	0.00	1.33	Pass
		BEDROOM 2	0.00	1.67	Pass
	TH Type B	BEDROOM 1	0.00	5.67	Pass
		BEDROOM 2	0.00	5.17	Pass
	TH Type C	BEDROOM 1	0.00	1.33	Pass
		BEDROOM 2	0.00	0.67	Pass
	1B2P Type C	BEDROOM	0.70	21.00	Pass
		LIVING/KITCHEN	0.45	n/a	Pass
	1B2P Type F	BEDROOM	0.00	8.17	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type G	BEDROOM	0.12	14.67	Pass
		LIVING/KITCHEN	0.24	n/a	Pass
	2B3P Type H	BEDROOM 1	0.12	28.33	Pass
		BEDROOM 2	0.32	29.00	Pass
		LIVING/KITCHEN	0.60	n/a	Pass
	2B3P Type M	BEDROOM 1	0.36	27.00	Pass
		BEDROOM 2	0.60	18.83	Pass
		LIVING/KITCHEN	0.17	n/a	Pass
	2B3P Type N	BEDROOM 1	0.00	18.67	Pass
		BEDROOM 2	0.05	19.00	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type B	BEDROOM 1	0.09	21.33	Pass
		BEDROOM 2	0.16	20.67	Pass
		LIVING/KITCHEN	0.45	n/a	Pass
Level 02 - Second Floor	1B2P Type B	BEDROOM	0.71	15.67	Pass
		LIVING/KITCHEN	0.05	n/a	Pass
	1B2P Type C	BEDROOM	0.00	5.00	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type D	BEDROOM	0.63	19.17	Pass
		LIVING/KITCHEN	0.23	n/a	Pass
	2B3P Type A	BEDROOM 1	0.42	20.50	Pass
		BEDROOM 2	1.15	21.33	Pass
		LIVING/KITCHEN	0.80	n/a	Pass
	2B3P Type B	BEDROOM 1	0.00	7.67	Pass
		BEDROOM 2	0.00	8.67	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type A	BEDROOM 1	0.00	23.83	Pass
		BEDROOM 2	0.00	20.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type B	BEDROOM 1	0.06	24.00	Pass
		BEDROOM 2	0.14	20.50	Pass
		LIVING/KITCHEN	0.33	n/a	Pass
	2B4P Type C	BEDROOM 1	0.41	24.50	Pass
		BEDROOM 2	0.55	16.83	Pass
		LIVING/KITCHEN	0.15	n/a	Pass

DRAFT

Level	Reference	Zone	Criterion A (%)	Criterion B (hr)	Pass/Fail
Level 02 - Second Floor	2B4P Type D	BEDROOM 1	0.72	31.33	Pass
		BEDROOM 2	0.80	28.83	Pass
		LIVING/KITCHEN	0.70	n/a	Pass
	2B4P Type E	BEDROOM 1	0.05	7.50	Pass
		BEDROOM 2	0.00	12.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
Level 14 - Fourteenth Floor	1B2P Type B	BEDROOM	0.22	8.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type C	BEDROOM	0.00	1.17	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type D	BEDROOM	0.46	14.17	Pass
		LIVING/KITCHEN	0.10	n/a	Pass
	2B3P Type A	BEDROOM 1	0.30	16.50	Pass
		BEDROOM 2	0.42	10.67	Pass
		LIVING/KITCHEN	0.22	n/a	Pass
	2B3P Type B	BEDROOM 1	0.00	0.50	Pass
		BEDROOM 2	0.00	1.00	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type A	BEDROOM 1	0.00	12.33	Pass
		BEDROOM 2	0.00	11.00	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type B	BEDROOM 1	0.00	15.17	Pass
		BEDROOM 2	0.00	15.00	Pass
		LIVING/KITCHEN	0.03	n/a	Pass
	2B4P Type C	BEDROOM 1	0.28	20.67	Pass
		BEDROOM 2	0.40	14.33	Pass
		LIVING/KITCHEN	0.08	n/a	Pass
	2B4P Type D	BEDROOM 1	0.25	18.00	Pass
		BEDROOM 2	0.35	14.50	Pass
		LIVING/KITCHEN	0.12	n/a	Pass
	2B4P Type E	BEDROOM	0.00	0.17	Pass
		LIVING/KITCHEN	0.00	10.17	Pass
		BEDROOM	0.00	n/a	Pass
Level 15 - Fifteenth Floor	1B2P Type B	BEDROOM	0.26	5.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type C	BEDROOM	0.00	1.50	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type H	BEDROOM	0.34	8.33	Pass
		LIVING/KITCHEN	0.65	n/a	Pass
	2B3P Type B	BEDROOM 1	0.00	1.17	Pass
		BEDROOM 2	0.00	1.50	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type C	BEDROOM 1	0.00	0.33	Pass
		BEDROOM 2	0.00	3.33	Pass
		LIVING/KITCHEN	0.00	n/a	Pass

DRAFT

Level	Reference	Zone	Criterion A (%)	Criterion B (hr)	Pass/Fail
Level 15 - Fifteenth Floor	2B3P Type D	BEDROOM 1	0.00	7.50	Pass
		BEDROOM 2	0.00	8.17	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B4P Type D	BEDROOM 1	0.28	18.00	Pass
		BEDROOM 2	0.35	14.33	Pass
		LIVING/KITCHEN	0.12	n/a	Pass
Level 16 - Sixteenth Floor	1B2P Type B	BEDROOM	0.39	6.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	1B2P Type C	BEDROOM	0.00	1.67	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type B	BEDROOM 1	0.00	1.83	Pass
		BEDROOM 2	0.00	1.50	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type C	BEDROOM 1	0.00	1.33	Pass
		BEDROOM 2	0.00	5.83	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type D	BEDROOM 1	0.00	7.83	Pass
		BEDROOM 2	0.00	10.33	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type E	BEDROOM 1	0.43	14.67	Pass
		BEDROOM 2	0.66	13.83	Pass
		LIVING/KITCHEN	0.08	n/a	Pass
	2B3P Type F	BEDROOM 1	0.39	16.17	Pass
		BEDROOM 2	0.64	15.50	Pass
		LIVING/KITCHEN	0.90	n/a	Pass
	2B4P Type D	BEDROOM 1	0.39	20.17	Pass
		BEDROOM 2	0.44	15.67	Pass
		LIVING/KITCHEN	0.18	n/a	Pass
Level 23 - Twenty-third Floor	1B2P Type B	BEDROOM	0.49	18.33	Pass
		LIVING/KITCHEN	0.05	n/a	Pass
	1B2P Type C	BEDROOM	0.00	7.00	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type B	BEDROOM 1	0.00	8.83	Pass
		BEDROOM 2	0.00	7.50	Pass
		LIVING/KITCHEN	0.00	n/a	Pass
	2B3P Type C	BEDROOM 1	0.00	4.17	Pass
		BEDROOM 2	0.00	12.50	Pass
		LIVING/KITCHEN	0.08	n/a	Pass
	2B3P Type D	BEDROOM 1	0.00	14.17	Pass
		BEDROOM 2	0.14	14.17	Pass
		LIVING/KITCHEN	0.07	n/a	Pass
	2B3P Type E	BEDROOM 1	0.43	21.17	Pass
		BEDROOM 2	0.52	15.33	Pass
		LIVING/KITCHEN	0.08	n/a	Pass

DRAFT

Level	Reference	Zone	Criterion A (%)	Criterion B (hr)	Pass/Fail
Level 23 - Twenty-third Floor	2B3P Type F	BEDROOM 1	0.43	29.67	Pass
		BEDROOM 2	0.70	30.17	Pass
		LIVING/KITCHEN	0.96	n/a	Pass
	2B4P Type D	BEDROOM 1	0.41	30.67	Pass
		BEDROOM 2	0.49	31.50	Pass
		LIVING/KITCHEN	0.17	n/a	Pass

Overheating Mitigation Strategy

- The g-value for the apartments is **0.40.**
- MVHR to achieve the flowrates set out below:
  - 1 Bed apartments
    - Bedroom: 40 l/s
    - Living/Kitchen: 30 l/s
  - Level 00 2B3P Type M
    - Bedroom 1: 33 l/s
    - Bedroom 2: 17 l/s
    - Living/Kitchen: 20 l/s
  - Level 02 2B4P Type D
    - Bedroom 1: 27 l/s
    - Bedroom 2: 23 l/s
    - Living/Kitchen: 20 l/s
  - Level 23 2B4P Type D
    - Bedroom 1: 30 l/s
    - Bedroom 2: 20 l/s
    - Living/Kitchen: 20 l/s
  - All other 2 Bed apartments and Townhouses
    - Bedroom 1: 25 l/s
    - Bedroom 2: 25 l/s
    - Living/Kitchen: 20 l/s

The results above indicate that all assessed building areas achieve a 'pass' rating when a g-value of 0.40 is applied across all plots. Additionally, MVHR has been confirmed to achieve the flow rates specified above.

With these measures in place, the dwellings are considered **compliant with CIBSE TM59**.

To Note:
Enhanced mechanical ventilation will be prioritised as the primary mitigation measure. However, where site-specific constraints make this solution impracticable, peak-lopping cooling units will be used as the alternative approach.

DRAFT

DRAFT

10. MATERIALS

10.1 Whole Life Cycle Assessment & Upfront Embodied Carbon

An LCA has been prepared to show compliance with Greater Manchester Combined Authority 'Places for Everyone' (PfE) Design Guidance for Net Zero requirements. This assessment aims to show compliance with the net zero design and carbon reporting requirements set out in the 2025 guidance.

The purpose of this assessment is to assess the whole life carbon impact of the proposed scheme, in line with the Royal Institute of Chartered Surveyors (RICS) Professional Statement 2nd Edition (incorporating all life cycle modules), and to separately report on the upfront embodied carbon (lifecycle modules A1–A5), whole life cycle carbon (lifecycle modules A-C, excluding B6, B7 and D), and life cycle module D.

The Places for Everyone guidance outlines various metrics and key performance indicators (KPIs). These are used to measure success of Net Zero Carbon design and construction to provide an indication of how design decisions have influenced the carbon performance of the building.

Below are the upfront embodied carbon ($kgCO_2e/m^2$) targets outlined for residential developments in section 2: Energy and Carbon requirements of the Design Guidance for Net Zero, Places for Everyone policies.

Table 10.1 – Places for Everyone, Upfront Embodied Carbon Targets

	Minor development		Major development	
	Small minor Single home and XL extensions	**Minor** 2-9 homes	**Major** 10-149 homes	**Large major** +150 homes
Upfront embodied carbon ($kgCO_2e/m^2_{GIA}$) *Minimise embodied carbon*	Summary of efforts	Summary of efforts	≤500	≤600

As the proposed One Lord Scheme has 251 apartments it is classified as a 'Large Major' development under PfE and therefore has the upfront embodied carbon target of ≤600 kgCO2e/m^2. Which as shown in Table 10.1 the One Lord Street development improves upon with a total of 593.69 $kgCO_2/m^2$.

The purpose of the Life Cycle Assessment is to quantify the environmental impacts of the proposed One Lord Street scheme in accordance with the methodology expressed within the RICS Professional Statement – 2nd Edition (2021), and to benchmark the results against the PfE Design Guidance for Net Zero targets.

DRAFT

The total global warming potential for the scheme has been calculated as follows:

Table 10.2 – Results Summary

	Total – $kgCO_2e$	$kgCO_2e/m^2$
Upfront Carbon	15,420,604.25	593.69
Whole Life Carbon Assessment	20,601,528.04	699

	Targets	
	PfE Benchmark - $kgCO_2e/m^2$	One Lord Street - $kgCO_2e/m^2$
Upfront	<600 (Residential Major Developments Targets)	593.69
Whole life	n/a	699

Table 10.3– Top Three Materials with Highest Embodied Carbon

Minimise embodied carbon	Upfront embodied carbon ($kgCO_2e/m^2GIA$)	≤500-600
	Material 1: Ready-mix concrete, normal-strength, generic, C40/50	143.96kg CO_2e/m^2
	Material 2: Precast hollow core concrete flooring	81.89kg CO_2e/m^2
	Material 3: Aluminium metal ceiling system	44.81kg CO_2e/m^2

Table 10.3 shows the top three materials with the highest upfront embodied carbon emissions ($kgCO_2e/m^2GIA$) being: Ready-mix concrete, normal-strength, generic, C40/50, Precast hollow core concrete flooring, and Aluminium metal ceiling system which together contribute to around 54.5% of the cradle to gate (A1-A3) CO_2e.

When compared to the targets stipulated within Places for Everyone Design Guidance for Net Zero (March 2025), it is evident that **the One Lord Street scheme improves upon the Places for Everyone Residential Major Development: Flats target for upfront embodied carbon**.

10.2 Efforts Made to Minimise Embodied Carbon

The proposals will contribute towards making more efficient use of non-renewable materials resources, and to reducing the lifecycle impact of materials used in construction. This is demonstrated by:

- A key consideration in materials selection will their environmental performance, alongside commercials and aesthetics. Indirect carbon emissions will therefore be taken into account, including those involved in the extraction/cultivation, manufacture and handling processes; and subsequent, in-life emissions resulting from the use of those materials in development;

- Materials with a low environmental impact throughout their life cycle will be prioritised within the new buildings. Plus, materials with associated Environmental Performance Declarations (EPD's) will be favoured;

- Responsibly sourced materials from suppliers operating an Environmental Management System and procuring timber verified by either the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification standard (PEFC) will be prioritised;

- Material selection will be carefully considered to avoid the use of toxic materials, such as Volatile Organic Compounds (VOCs) and contribute towards creating a healthy indoor environment; and,

- Local sourcing of construction materials where feasible and viable will minimise the impact of carbon dioxide emissions associated with the transportation of materials.

Linear Living undertake to ensure the following measures are implemented at this site:

- Recycle materials on site from demolition removal of hardstandings;

- Use crushed recycled materials as standard for areas such as bases for hardstandings, beneath roads etc.;

- All labour is sourced from within the northwest, therefore reducing journeys;

- Wherever feasible all materials are sourced locally;

- Materials and plant / fixtures and fittings are selected for longevity; and,

- Site Waste is segregated at source to facilitate recycling.

DRAFT