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PROPERTY

P J Livesey Holdings Ltd
Chorlton Precinct Redevelopment

Daylight, Sunlight and Overshadowing Assessment

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EXECUTIVE SUMMARY

This Daylight, Sunlight, and Overshadowing Assessment has been produced to inform a full planning application for a residential-led mixed-use redevelopment (the 'Proposed Development') of the Chorlton Precinct site in Manchester (the 'Site'). The existing buildings on site are currently vacant and hoarded off.

The assessment follows the guidance outlined in the Building Research Establishment's (BRE) "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (the BRE Guide, 2022). The assessment also aligns with the guidance provided in Manchester's Statutory Development Plans, Saved Policies of Unitary Development Plan (1995), Manchester City Council's Core Strategy (2012), the Places for Everyone Joint Development Plan (2024), the Guide to Development in Manchester SPD (2007), and the Manchester Residential Quality Guide (2017), adhering specifically to policies DM1 and JP-P1.

This report describes the 'existing' and 'proposed' impact of the Proposed Development on the daylight and sunlight levels of the surrounding neighbouring residential and applicable non-residential (general practitioner surgery) properties in accordance with the BRE Guide. The neighbouring residential and applicable non-residential building (sensitive receptors) includes Nicolas Road houses (to the north), Selbourne/Keppel/Warwick Road houses (to the north-east/east), Wilbraham Road houses (to the south) and Oswald/Manchester Road houses (to the north west/west), and Chorlton Family Practice (to the north).

The amenity spaces which include the gardens/playground of Nicolas Road houses, Selbourne/Keppel/Warwick Road houses, Wilbraham/Oswald/Manchester Road houses, Oswald Road Primary School playground, & The Lloyds Pub Garden were also considered.

Daylight / Sunlight Assessment Summary

In terms of daylight quantity (VSC), the impact of the Proposed Development on all assessed neighbouring properties is considered acceptable. Consequently, with majority (98%) of the assessed windows adhering to the BRE guideline, with some windows only just transgressing the guidelines by a marginal amount of between 1% to 10%, overall, the effect of the Proposed Development on neighbouring properties is therefore considered negligible in accordance with paragraph H5 of the BRE Guide.

In terms of sunlight, the impact of the Proposed Development on all assessed neighbouring properties (within 90 degrees due south) is considered negligible in accordance with paragraph H5 of the BRE Guide 2022. Consequently, with majority (92%) of the assessed windows within 90° of due south adhering to the BRE guideline, overall, it is expected that the lighting conditions following the completion of the Proposed Development will present no significant effect to the neighbourhood residential properties as they will all continue to receive adequate sunlight as defined by the BRE guidance.

Some ground-floor windows at 22 Oswald Road fall short of sunlight criteria but the impact is considered minimal as they already receive limited sunlight due to existing structures and vegetation, making the reduction marginal. Results also shows that the 10 windows situated on the south-east windows of Chorlton Family Practice does not pass the BRE guidelines. However, following visit to the Practice, the offices all use electric lighting with blinds fully utilised majority of the day and do not necessarily rely on sunlight to light up the rooms.

Overshadowing Assessment Summary

In terms of overshadowing, the impact of the Proposed Development on the majority of assessed surrounding amenity spaces (gardens) will be unnoticeable. The overshadowing assessment shows that 97% of the amenity spaces will continue to receive good levels of sunlight following the completion of the Proposed Development without any changes to the current situation. All assessed gardens (except No 20, Oswald Road house garden) fully adhere to the BRE guidelines and will continue to receive adequate sunlight on the 21st of March.

The garden at 20 Oswald Road is already subject to overshadowing due to its pre-existing conditions, such as surrounding structures, and urban density. While the Proposed Development may increase overshadowing levels, the additional impact is minor and occurs in the context of a garden that already experiences limited sunlight. Therefore, when viewed in the broader context of the site's baseline conditions and the inherent limitations of the suburban environment, the impact of the Proposed Development on the sunlight levels of all surrounding amenity spaces are considered negligible.

Following the BRE overshadowing criteria mentioned in *paragraph 6.5*, it should be noted that the garden at 20 Oswald Road does not meet the criteria for an adequately sunlit amenity space. According to these guidelines, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. When assessing the impact of both the Existing and Proposed Development on 20 Oswald Road's garden, both fail to meet this criterion. Therefore, the overall impact could be considered negligible.

Internal Daylight and Sunlight Assessment Summary

In terms of internal daylight, the habitable rooms (living/kitchen/dining and bedroom) on the first floor of each block of the Proposed Development have been assessed for daylight quantity using the target illuminance metric (E_T) to determine typical results. This assessment represents the worst-case scenario, as the ground floor is expected to perform at an equivalent level and upper-level flats are expected to receive improved daylight compared to lower levels.

In a suburban location, with the majority (97%) of habitable rooms achieving or exceeding the recommended minimum target illuminance, the Proposed Development is considered to offer an acceptable level of daylight for the enjoyment of future occupants.

To ascertain whether the Proposed Development will provide acceptable sunlight levels for the enjoyment of future occupiers, at least one habitable room, preferably the main living room, should receive a minimum of 1.5 hours of direct sunlight on 21 March (equinox). Consequently, all living/kitchen/dining spaces on the first floor were also assessed to determine typical results for the proposed building.

The results show that 84% of the apartments' living/kitchen/dining spaces on the first floor achieved the recommended minimum of 1.5 hours of direct sunlight on 21 March (equinox) in accordance with the BRE Guide 2022 and BS EN 17037. Where lower levels of daylight/sunlight are experienced, this is mainly due to one or more of the following factors:

- The room's window being located where daylight/sunlight availability is typically limited, such as north-east and north-west; and
- The generous size of the room, which means light will be concentrated at the front of the space, with the rear relying more on supplementary artificial lighting.

Where lower levels of internal daylight/sunlight are experienced, the design has sought to strike a balance between achieving a good level of internal daylight/sunlight and ensuring appropriate measures are considered to help mitigate the risk of overheating.

Concluding Summary

Daylight, sunlight, and overshadowing are key considerations in Manchester's Statutory Development Plans, including the Core Strategy and Supplementary Planning Documents (SPDs) such as the Manchester Residential Quality Guidance and Guide to Development Manchester (SPD). These policies, supported by national standards like the BRE Guidance, aim to ensure developments provide high-quality living environments, protect neighbouring properties, and enhance public spaces.

The Proposed Development aligns with the applicable Core Strategy policy DM1 (Development Management) by safeguarding residential amenity and demonstrating high standards of design that mitigate overshadowing impacts while ensuring sufficient access to daylight and sunlight.

The Places for Everyone Joint Development Plan (2024) emphasises sustainable development, with Policy JP-P1 (Sustainable Places) focusing on optimising natural light and minimising environmental impacts. The Proposed Development adheres to these principles, contributing to a sustainable and liveable urban environment.

The Guide to Development in Manchester SPD (2007) stresses high-quality design that balances urban density with residential quality of life, which is reflected in the proposal's thoughtful approach to limiting overshadowing and maintaining adequate sunlight for public and private spaces. Additionally, the Manchester Residential Quality Guide (2017) promotes the creation of well-designed, functional, and liveable spaces. The proposal fulfils these standards by ensuring that residential units and surrounding spaces benefit from sufficient natural light.

The numerical criteria suggested within the BRE guidelines (2022) has been applied to each of the assessments mentioned above. The Guidelines recognise that they should not form a mandatory set of criteria to which a development must adhere, as that would be too restrictive for site development purposes. Rather, they provide guidance intended to help the designer and planning authority and should be viewed in the context of other site constraints. In essence, the BRE Guidelines must be interpreted flexibly.

In light of the above, the Proposed Development is considered acceptable in terms of daylight, sunlight, and overshadowing.

CONTENTS

EXECUTIVE SUMMARY iii
Daylight / Sunlight Assessment Summary iii
Overshadowing Assessment Summary iv
Internal Daylight and Sunlight Assessment Summary iv
Concluding Summary v
1. INTRODUCTION 9
Instruction 9
Existing Site Description and Proposed Development 9
Purpose of the Document 9
2. POLICY BACKGROUND 10
Introduction 10
Background 10
National Planning Policy Framework 11
Planning Policy Guidance (The Guidance) 11
Other Relevant Policy, Standards and Guidance 11
Manchester City Council's Core Strategy (2012) 13
Places for Everyone Joint Development Plan (2024) 14
Guide to Development in Manchester SPD (2007) 16
Manchester Residential Quality Guide (2017) 17
3. BRE GUIDELINES 18
Introduction 18
BRE Guidelines (BRE BR209 2022) 18
4. BRE GUIDELINES (DAYLIGHT) 20
Vertical Sky Component (VSC) 20
No Sky Line (NSL) 20
Illuminance Method and Daylight Factor Method (BS EN 17037) 21
5. BRE GUIDELINES (SUNLIGHT) 22
6. BRE GUIDELINES (OVERSHADOWING) 23
Sun Hours on Ground and Transient Overshadowing 23
7. MODELLING METHODOLOGY 24
Dynamic Thermal Model 24
8. ASSESSMENT RESULTS (DAYLIGHT) 28
Daylight (VSC) Assessment Criteria 28
Daylight (VSC) Assessment Result – Nicolas Road 28
Daylight (VSC) Assessment Result – Oswald Road 28

Daylight (VSC) Assessment Result – Manchester Road 29
Daylight (VSC) Assessment Result – Wilbraham Road 29
Daylight (VSC) Assessment Result – Warwick Road 30
Daylight (VSC) Assessment Result – Keppel Road 30
Daylight (VSC) Assessment Result – Selbourne Road 30
Daylight (VSC) Assessment Result Summary 30
9. ASSESSMENT RESULTS (SUNLIGHT) 32
Sunlight (APSH and WPSH) Assessment Criteria 32
Sunlight (APSH and WPSH) Assessment Result – Oswald Road 32
Sunlight (APSH and WPSH) Assessment Result – Manchester Road 32
Sunlight (APSH and WPSH) Assessment Result – Selbourne Road 33
Sunlight (APSH and WPSH) Assessment Result – Keppel Road 33
Sunlight (APSH and WPSH) Assessment Result – Warwick Road 33
Sunlight (APSH and WPSH) Assessment Result – Nicolas Road 33
10. ASSESSMENT RESULTS (OVERSHADOWING) 34
Overshadowing (SHOG) Assessment Criteria 34
Overshadowing (SHOG) Assessment Result – Amenity Spaces 34
11. INTERNAL DAYLIGHT (E_T) RESULTS 35
British Standard BS EN 17037 and Target Illuminance Criteria 35
Simulation Input Values and Assumptions 35
SAMPLE DWELLINGS 36
INTERNAL DAYLIGHT (E_T) RESULTS 37
12. INTERNAL SUNLIGHT (Min, Med, Max) RESULTS 38
Internal Sunlight Criteria 38
Internal Sunlight Results 38
13. CONCLUSION 39
Daylight 39
Sunlight 39
Overshadowing 40
Internal Daylight and Sunlight 40
Concluding Summary 41

FIGURES

Figure 1.1: Proposed Development Site Thermal Model
Figure 7.1: 'Existing' Development Site Modelled in IES VE Software
Figure 7.2: 'Proposed' Development Site Modelled in IES VE Software
Figure 7.3: 'Existing' Surrounding Development Groupings
Figure 8.1: Dwellings above commercial; 480-490, 495-525 and 609-615 Wilbraham Road
Figure 8.2: Chorlton Family Practice Development with Blinds in Use
Figure 10.1: Proposed Development with 20 Oswald Road highlighted
Figure 11.1: Internal Daylight IES model

TABLES

Table 4.1: Target Illuminances for Side Lit Rooms
Table 4.2: Daylight Factor Targets for side lit rooms in London for example
Table 8.1: Summary Table of Daylight Results (Residential)
Table 8.2: Summary Table of Daylight Results (Non-Residential)
Table 11.1: Minimum Target Illuminance (T_M) Values
Table 11.2: Surface Reflectance/Transmittance/Maintenance Values
Table 11.3: Summary Table of Internal Daylight Assessment Result
Table 12.1: Summary Table of Internal Sunlight Assessment Results

APPENDICES

APPENDIX 1: Daylight Assessment Result
APPENDIX 2: Sunlight Assessment Result
APPENDIX 3: Overshadowing Assessment Result
APPENDIX 4: Internal Daylight Assessment Result
APPENDIX 5: Internal Sunlight Assessment Result

1. INTRODUCTION

Instruction

1.1 BWB Consulting (BWB) was instructed by P J Livesey Holdings Ltd (the Client) to carry out a Daylight, Sunlight and Overshadowing Assessment to residential-led mixed-use redevelopment (the 'Proposed Development') of the Chorlton Precinct site in Manchester (the 'Site'). The existing buildings on site are currently vacant and hoarded off.

1.2 A separate Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by Manchester City Council, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a Demolition Management Plan, prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise impacts on surrounding residential receptors. The approved demolition works (starting with internal soft-strip) are intended to commence in Q2 2025 for a period of circa 20 weeks.

Existing Site Description and Proposed Development

1.3 The existing site is located within Chorlton district centre with surrounding uses including, retail, commercial, and residential area. The Site borders Nicolas Road to the north, where there are library and commercial buildings, and Barlow Moor Road to the east, with additional commercial use. To the south, it adjoins Wilbraham Road, which has retail and commercial units, while the western boundary includes Chorlton Family Practice and nearby residential properties on Oswald Road.

1.4 It is proposed the existing Chorlton Shopping centre is to be demolished and replaced with a mixed-use building (**Figure 1.1**) providing 262 new homes, ground floor commercial floorspace with associated hard/soft landscaping and access.

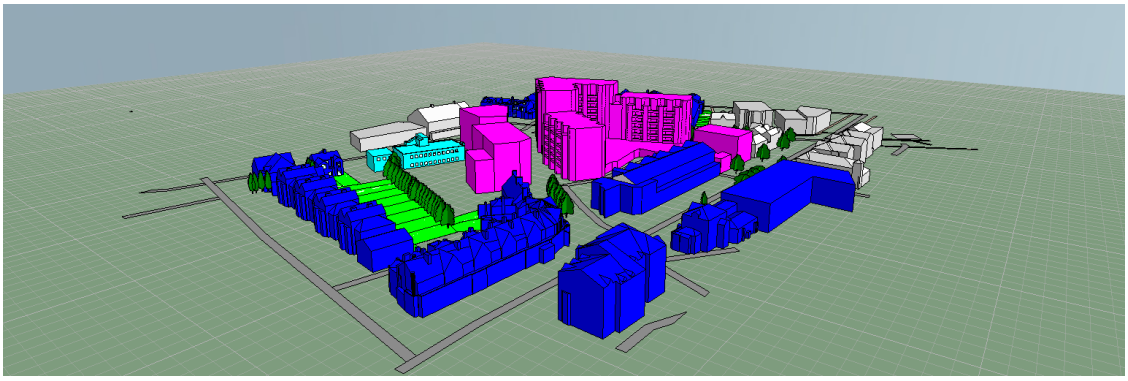


Figure 1.1: Proposed Development Site Thermal Model

Purpose of the Document

1.5 A Daylight, Sunlight and Overshadowing Assessment is required whereby a proposed building could potentially have an adverse impact upon the current levels of daylight/sunlight enjoyed by adjoining properties. This element of work is to carry out a

performance check set against the criteria outlined in the BRE Guide, 2022. This document will describe the policy context/guide to which this Daylight, Sunlight and Overshadowing Assessment responds to, before presenting and assessing the impact of the Proposed Development on the daylight and sunlight levels received by the neighbouring buildings, including amenity spaces in accordance with the BRE Guide.

1.6 A detailed model using IES Virtual Environment (IES VE) software (Version 2023) has been used to model the geometry of the 'existing', and 'proposed' development building design, including neighbouring existing buildings in order to provide an accurate 'before' and 'after' representation of the daylight and sunlight performance.

2. POLICY BACKGROUND

Introduction

2.1 This section of the Daylight, Sunlight and Overshadowing Assessment reviews relevant background information, relevant policies at the national, regional, and local levels and then discusses key issues for the Assessment.

Background

2.2 The quality of amenity and open spaces is often stipulated within planning policy for protection or enhancement and is often a concern for adjoining owners and other interested parties.

2.3 Historically the Department of Environment provided guidance on these issues, and, in this country, this role has now been taken on by the Building Research Establishment (BRE), the British Standards Institution (BSI) and the Chartered Institute of Building Services Engineers (CIBSE). Fortunately, they have collaborated in many areas to provide as much unified advice as possible in these areas.

2.4 It is also clear, particularly through either adopted or emerging local plan/policy that Local Authorities take this matter far more seriously than they previously did. There are many instances of planning applications being refused due to impact on daylight and sunlight to neighbouring properties and proportionately more of these refusals are appealed by applicants.

2.5 Where developers are seeking to maximise their development value, it is often in the area of daylight and sunlight issues that they may seek to 'push the boundaries'. Local Authorities vary in their attitude of how flexible they can be with worsening the impact on the amenity enjoyed by neighbouring owners. In city centres, where there is high density, it can be the subject of hot debate as to whether further loss of amenity is material or not. There are many factors that need to be taken into account and therefore each case is usually considered on its own merits. Clearly, though, there are governing principles which direct and inform on the approach that is taken.

2.6 These principles are effectively embodied within either adopted or emerging local plan/policy and the guidance they expressly rely upon. E.g., in central London, most Local Authorities expressly state they will not permit or encourage developments which create a material impact to neighbouring buildings or amenity areas.

2.7 Often the basis on what is constituted as 'material' will be derived specifically from the BRE Guidelines. The BRE Guidelines was initially produced in 1991, as a direct commission from the Department of the Environment and entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'.

2.8 The new edition (2022) replacing the old 2011 edition of this highly regarded BRE guide has been fully revised and updated. Guidance is given on site layout for good sun lighting and daylighting; safeguarding of daylight and sunlight within existing buildings nearby; and the protection of daylighting of adjoining land for future development.

National Planning Policy Framework

2.9 The updated National Planning Policy Framework (NPPF) updated in 2024 sets out the Government's planning policies for England and how these should be applied. Paragraph 130, Part C of the NPPF states that:

> '*[…] local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards). [...]*'.

Planning Policy Guidance (The Guidance)

2.10 The updated National Planning Practice Guidance (NPPG) published 2024 provides further advice on various planning issues associated with development, including daylight and sunlight and underpins the policies within the NPPF. The Guidance states that the distribution and design of new development are particularly important considerations, and that good design is an integral part of sustainable development to deliver a wide range of planning objectives. Paragraph 006 states that:

> '[…] *Where a planning application is submitted, local planning authorities will need to consider whether the proposed development would have an unreasonable impact on the daylight and sunlight levels enjoyed by neighbouring occupiers, as well as assessing whether daylight and sunlight within the development itself will provide satisfactory living conditions for future occupants.* [...]'.

Other Relevant Policy, Standards and Guidance

2.11 Historic England Guidance on Tall Buildings – Historic England Advice Note 4 (2022). Paragraph 4.10 of the Historic England Advice Note 4 provides a checklist summarising the main considerations for tall building policies:

> '*[…] 1. Development plans should include:*
>
> *i. A specific tall buildings policy accompanied by site-specific policies to support areas / sites identified as appropriate for tall buildings; or, where tall buildings proposals are the exception*

ii. A more general place-shaping policy, which includes building height, density and local context.

3. The tall building policy should:

a. Be underpinned by proportionate evidence to direct tall buildings to suitable locations where they make a positive contribution to the urban or rural landscape and ensure potential harm to the significance of heritage assets is avoided or minimised (see Appendix 1).

b. *Be informed by a heritage impact assessment, views analysis, and existing conservation area appraisals.*

c. Identify the potential impact of a tall building's height, mass and location through assessment of local context, historic character, the significance of heritage assets, and protected views which contribute to setting.

d. Ensure the protection of heritage assets, and conservation of the overall historic character that makes a place distinctive and special, avoiding or minimising harm to their significance

e. Form part of the development plan's positive strategy for the:

- *Conservation and enjoyment of the historic environment (NPPF, paragraph 190);*
- *Areas prevailing character and setting (NPPF, paragraph 124); and*
- *Contribution to views and skyline (NDG, paragraph 70).*

f. Form part of a coherent plan-led place-shaping strategy, contributing towards well-designed places sympathetic to local character and history, including the surrounding built environment and landscape setting (NPPF, paragraph 130).

g. Be informed by early and ongoing engagement with stakeholders and communities.

h. Specify tall building height parameters.

i. Make it clear that the existence of a tall building coming to the end of its lifespan does not automatically justify it being replaced by another tall building

j. *Address the following:*

i. Location and siting;

ii. Relationship to context;

iii. Impact on local character, views and sight lines;

iv. Composition – how tall buildings meet the ground and sky;

v. Environmental impacts, such as sunlight, daylight, overshadowing and wind; and

vi. The appropriateness, or otherwise, of clustering tall buildings and how design quality and pressure for expansion in these areas are dealt with.

3. In relation to proposed tall buildings affecting a listed building or conservation area, the LPA needs to comply with Section 66 (1) and Section 72 (1) of the Planning (Listed Buildings and Conservation Areas) Act 1990. [...]'.

2.12 The new European standard (BS EN 17037) supersedes the British Standard BS 8206-2:2008 "Lighting for buildings. Code of practice for daylighting. BS EN 17037 gives information on how to use daylighting to provide lighting within interiors, and how to limit glare. The standard details a lot of new material including: (a) the use of median daylight illuminance; (b) a new metric for daylight glare; (c) a new assessment method for sunlight in buildings; and (d) new ways of assessing view. Other relevant standards and guidance includes the Building Research Establishment's (BRE) Site Layout Planning for Daylight and Sunlight: A guide to good practice BR 209 2022. It is intended to be used in conjunction with the interior daylight recommendations for new buildings in the British Standard Daylight in buildings, BS EN 17037.

Manchester City Council's Core Strategy (2012)

2.13 Adopted in July 2012, Manchester's Core Strategy 2012 is the principal planning document for Manchester City, providing a framework for development and growth in the city from 2012 until 2027. The strategy guides decisions on various aspects of urban planning, such as housing, employment, transport, and environmental sustainability.

2.14 With regards to DSO the main applicable policy is 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: -*

i. Appropriate siting, layout, scale, form, massing, materials and detail.

ii. Impact on the surrounding areas in terms of the design, scale and appearance of the

iii. proposed development. Development should have regard to the character of the surrounding area.

iv. 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.

v. Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes.

vi. Community safety and crime prevention.

vii. Design for health.

viii. Adequacy of internal accommodation and external amenity space.

ix. Refuse storage and collection

x. Vehicular access and car parking.

xi. Effects relating to biodiversity, landscape, archaeological or built heritage.

xii. Green Infrastructure including open space, both public and private.

xiii. The use of alternatives to peat-based products in landscaping/gardens within development schemes.

xiv. Flood risk and drainage.

xv. Existing or proposed hazardous installations.

xvi. *Subject to scheme viability, developers will be required to demonstrate that new development incorporates sustainable construction techniques as follows (In terms of energy targets this policy should be read alongside policy EN6 and the higher target energy targets this policy should be read alongside policy EN6 and the higher target will apply):-*

xvii. *For new residential development meet as a minimum the following Code for Sustainable Homes standards. This will apply until a higher national standard is required:*

- *Year 2010 – Code Level 3;*
- *Year 2013 - Code Level 4;*
- *Year 2016 - Code Level 6; and*

xviii. *For new commercial developments to demonstrate best practice which will include the application of the BREEAM (Building Research Establishment Environmental Assessment Method) standards. By 2019 provisions similar to the Code for Sustainable Homes will also apply to all new non-domestic buildings. […]".*

Places for Everyone Joint Development Plan (2024)

2.15 Adopted in March 2024, The Places for Everyone Joint Development Plan Document (PfE) is a strategic planning framework developed collaboratively by nine Greater Manchester local authorities.

2.16 It sets out policies and proposals for development across these areas until 2037, aiming to ensure sustainable growth, address housing needs, and support economic prosperity.

2.17 The plan is an evolution of the earlier Greater Manchester Spatial Framework (GMSF), which initially included all ten Greater Manchester councils. After Stockport withdrew from the GMSF in 2020, the remaining nine councils formed the PfE plan.

2.18 Relevant policies regarding DSO, the main policies are JP-P1 (Sustainable Places)

2.19 Policy JP-P1 states: "*[…]*

i. *"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: 1. 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*

ii. *Visually stimulating, creating interesting and imaginative environments which raise the human spirit through the use of green space, public art and quality design*

iii. *Socially inclusive:*
    - *Responding to the needs of all parts of society;*
    - *Enabling everyone to participate equally and independently;*
    - *Providing opportunities for social contact and support; and*
    - *Promoting a sense of community*

iv. *Resilient, capable of dealing with major environmental events*

v. *Adaptable, able to respond easily to varied and changing needs and technologies*

vi. *Durable, being built to last and using robust materials that reflect local character, weather well and are easily maintained*

vii. *Resource-efficient with:*
    - *A low carbon footprint;*
    - *Efficient use of land;*
    - *Minimised use of new materials;*
    - *High levels of recycling*

viii. *Safe, including by designing out crime and terrorism, reducing opportunities for anti-social behaviour and by ensuring that developments make appropriate provision for response and evacuation in the case of an emergency or disaster.*

ix. *Supported by critical infrastructure, such as energy, water and drainage and green spaces*

x. *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*

xi. *Incorporating inclusive design within all spaces with support for tackling inequality and poverty to form part of creating sustainable places*

xii. *Legible, being easy to understand and navigate, with the protection and enhancement of key views and new development well-integrated into the place*

xiii. *Easy to move around for those of all mobility levels, particularly by walking and cycling, with enjoyable routes free from obstacles and disorienting stimuli, and with places to rest*

xiv. *Well-connected to other places, particularly by public transport and digital infrastructure enabling everyone to take advantage of the employment, cultural and leisure opportunities across Greater Manchester and beyond*

xv. *Comfortable and inviting, with indoor and outdoor environments:*
    - *Offering a high level of amenity that minimises exposure to pollution; and*
    - *Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter*

xvi. *Incorporating high quality and well managed green infrastructure and quality public realm, with:*

- *Opportunities for recreation and outdoor play for children, and interaction between the generations;*
- *Public and private spaces clearly distinguished;*
- *Development clearly defining, and promoting activity within, public spaces;*
- *High quality landscaping with schemes*

xvii. *Well-served by local shops, services and amenities, including education and health facilities" […]"*

Guide to Development in Manchester SPD (2007)

2.20 Adopted in April 2007, The Guide to Development in Manchester: Supplementary Planning Document and Planning Guidance (SPD), serves as a key planning framework for guiding development within Manchester.

2.21 It addresses daylight and sunlight as part of its focus on creating high-quality urban environments. The document emphasises the importance of designing developments that ensure good levels of natural light for both new and existing buildings. Regarding DSO, this SPD mentions the following:

i. Protection of Amenity: The guidance prioritises the protection of daylight and sunlight to maintain the amenity of surrounding buildings and spaces. New developments should avoid overshadowing existing properties or open spaces to an extent that would significantly reduce natural light.

ii. Design for Natural Light: Buildings should be designed to maximise daylight within their interiors, improving energy efficiency by reducing the need for artificial lighting. Particular attention should be given to the orientation of buildings and the placement of windows to optimise natural light.

iii. Impacts on Public Spaces: The document encourages designing public spaces that benefit from adequate daylight to ensure they are attractive and usable throughout the year.

iv. Balancing Density with Daylight: While the guide promotes high-density developments in appropriate locations, it emphasises that this must not come at the expense of natural light. Careful consideration of building heights and spacing is required to avoid creating overly dark or shaded environments.

v. Daylight and Sunlight Assessments: For larger developments or those with potential impacts on surrounding properties, the guide suggests the use of daylight and sunlight assessments. These studies evaluate how the proposed development might affect light levels for neighbouring buildings and public areas.

Manchester Residential Quality Guide (2017)

2.22 Adopted March 2017, the Manchester Residential Quality Guidance is a planning document designed to ensure high standards of design and living quality in residential developments across Manchester.

2.23 It supports the delivery of sustainable, attractive, and well-functioning housing that meets the needs of Manchester's growing population. It also provides principles and standards to guide developers, architects, and planners in delivering well-designed, sustainable, and liveable homes.

2.24 The document is used by Manchester City Council to assess planning applications for new residential schemes. Compliance with the guidance improves the likelihood of planning approval and ensures developments align with the city's strategic vision.

2.25 The Manchester Residential Quality Guidance explicitly considers daylight, sunlight, and overshadowing as part of its focus on residential amenity and environmental performance. This includes:

i. Daylight and Sunlight Access: Developments should provide adequate levels of natural light to internal living spaces to enhance residents' comfort and reduce reliance on artificial lighting. The orientation of buildings and layout of rooms should be designed to optimise daylight access.

ii. Impact on Neighbours: The guidance advises that new developments must carefully consider their impact on the daylight and sunlight levels of neighbouring properties. Developers are encouraged to minimise overshadowing and avoid designs that result in significant light loss for adjacent buildings.

iii. Public and Private Outdoor Spaces: Public open spaces and private amenity areas (like gardens or balconies) should receive sufficient sunlight to ensure they are functional and pleasant for users.

iv. Compliance with BRE Guidelines: The guidance aligns with the Building Research Establishment (BRE) Guidance for Daylight and Sunlight, which provides detailed technical standards for assessing daylight, sunlight, and overshadowing impacts. Developers may be required to conduct BRE assessments, particularly for large or high-density developments, to demonstrate compliance.

3. BRE GUIDELINES

Introduction

3.1 The Building Research Establishment (BRE) have set out in their handbook 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (2022)' (BRE BR209 2022), guidelines and methodology for the measurement and assessment of daylight and sunlight both within buildings and in the open spaces between them.

BRE Guidelines (BRE BR209 2022)

3.2 The BRE Guidelines provide advice on site layout planning to determine the quality of daylight and sunlight within open spaces between buildings.

3.3 The BRE Guidelines note that the document is intended to be used in conjunction with the interior daylight recommendations for new buildings in the British Standard Daylight in buildings, BS EN 17037. The appendices contain methods to quantify access to sunlight and daylight within a layout.

3.4 The BRE Guidelines are typically referred to for daylight and sunlight amenity spaces issues, however, they were not intended to be used as an instrument of planning policy, nor were the figures intended to be fixedly applied to all locations. In the introduction of 'Site Layout Planning for Daylight and Sunlight (2022)', section 1.6 (page 7) states that:

'[…] The guide is intended for building designers and their clients, consultants, and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design (see Section 5).

In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. [...]'.

3.5 Paragraph 2.2.3 (page 14) of the document states that '*[…] Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints. [...]'.*

3.6 The numerical criteria suggested by the BRE are therefore designed to provide industry advice / guidance to plan / design with daylight in mind. Alternative values may be appropriate in certain circumstances such as highly dense urban areas around Manchester. The BRE approach to creating alternative criteria is detailed within Appendix F 'Setting alternative target values for skylight and sunlight access' of the document.

3.7 The BRE Guidelines also states in Paragraph 2.2.2 (page 14) that they are: '*[…] intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens, and bedrooms. Windows to bathrooms, toilets, storerooms, circulation area and garages need not be analysed. [...]*'.

3.8 They are therefore primarily designed to be used for residential properties, though, the BRE Guidelines continue to state that they may be applied to any existing non-residential buildings where there may be a reasonable expectation of daylight including schools, hospitals, hotels, hostels, small workshop, and some offices.

3.9 However, non-domestic buildings (excluding educational institutions - schools) are usually not assessed for daylight and sunlight as these are generally not considered 'sensitive receptors' as defined by the BRE Guide. This is because they are designed to rely on electric lighting to provide sufficient light by which to work, rather than natural daylight. In addition, they are generally not considered town planning issues.

3.10 Many Local Planning Authorities consider daylight and sunlight an important factor for determining planning applications. Policies refer to both the protection of daylight and sunlight amenity within existing properties as well as the creation of proposed dwellings with high levels of daylight and sunlight amenity.

3.11 In terms of considering what is a numerical deterioration in light, Local Authorities typically refer to the BRE Guide. Although Local Authorities will look to the BRE Guide to understand impacts, it is their Planning Policies that will determine whether the changes in light should be a reason for refusal at planning.

3.12 It is an inevitable consequence of the built-up urban environment that Daylight and Sunlight will be more limited in dense urban areas. It is well acknowledged that in such situations there may be many other conflicting and potentially more important planning and urban design matters to consider other than just the provision of ideal levels of Daylight and Sunlight.

3.13 In May 2019 the British Standard BS8206-2:2008 was superseded by the new European Standard on daylight "*BS EN 17037:2018 Daylight in buildings*" as detailed above. The Standard adopts a new methodology for testing daylight and sunlight in proposed developments based on climatic data as opposed the 'Standard CIE overcast sky' adopted in BS8206-2:2008 and includes views out and glare.

3.14 The BRE Guide is therefore intended to be used in conjunction with the interior daylight recommendations for new buildings in the British Standard Daylight in buildings, BS EN 17037. It contains guidance on site layout to provide good natural lighting within a new development; safeguarding of daylight and sunlight within existing buildings nearby; and the protection of daylighting of adjoining land for future development. A special section deals with loss of solar radiation for solar panels and for passive solar buildings that use the sun as a source of heating energy. Guidance is also given on the sunlighting of gardens and amenity areas. Issues like privacy, enclosure, microclimate, road layout, and security are briefly reviewed. The appendices contain methods to quantify access to sunlight and daylight within a layout.

3.15 This report is a comprehensive revision of the 2011 edition of Site layout planning for daylight and sunlight: a guide to good practice. It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location. Appendix F explains how this can be done in a logical way, while retaining consistency with the British Standard recommendations on interior daylighting. The following sections extract relevant sections from the BRE Guidelines (BR209 2022).

4. BRE GUIDELINES (DAYLIGHT)

4.1 The BRE Guidelines set out various methods for assessing daylight in buildings. The Guidelines provide three methodologies for daylight assessment, namely:

- The Vertical Sky Component (VSC);
- The No Sky Line (NSL); and
- Illuminance Method and Daylight Factor Method (BS EN 17037).

Vertical Sky Component (VSC)

4.2 The Vertical Sky Component (VSC) method is described in the BRE Guidelines as the: '*[…] Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plan due to an unobstructed hemisphere of this sky. Usually the 'given vertical place' is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings [...]*'.

4.3 Put simply, the VSC provides an assessment of the amount of skylight falling on a vertical plane (generally a window) directly from the sky, in the circumstance of an overcast sky (CIE standard).

4.4 The national numerical value target 'ideal' for VSC is 27%. The BRE Guidelines advise that upon implementation of a development, a window should retain a VSC value of 27% or at least 0.80 of its former value (i.e., no more than a 20% change).

4.5 This form of assessment does not take account of window size, room use, room size, window number or dual aspect rooms. The assessment also assumed that all obstructions to the sky are 100% non-reflective. The VSC calculation has been undertaken in both the 'existing' and 'proposed' scenarios to make a comparison.

No Sky Line (NSL)

4.6 The BRE recommends the No Sky Line (NSL) method where internal layouts are known. The No Sky Line (NSL) method is described as '*[…] the outline on the working plane of the area from which no sky can be seen [...]*'.

4.7 In summary, the NSL calculation assesses where the sky can and cannot be seen from inside a room at the working place, '*[…] in houses the working plane is assumed to be horizontal and 0.85m high [...]*'.

4.8 The change in position of the NSL between the 'existing' and 'proposed' scenario is then calculated. The BRE Guidelines state at paragraph 2.2.11 [page 16] that '*[…] If, following construction of a new development, the no sky line moves so that the area of the existing room, which does receive direct skylight, is reduced to less than 0.80 times its former value this will be noticeable to the occupants, and more of the room will appear poorly lit. This is also true if the no sky line encroaches on key areas like kitchen sinks and workshops [...]*'.

4.9 If the NSL experiences more than a 20% change from the existing situation then, in accordance with the strict application of the national numerical values, the change in daylight would be noticeable to the occupants.

4.10 This assessment takes the number and size of windows serving a room into account, however, there is no qualitative assessment of the light in the room, only where sky can or cannot be seen. This assessment is only undertaken where floor plans and elevations of adjacent buildings are available.

Illuminance Method and Daylight Factor Method (BS EN 17037)

4.11 BS EN 17037 (Interior daylighting recommendations) supersedes BS 8206 Part 2 "Code of practice for daylighting", which contained a method of assessment based on Average Daylight Factor, which is now no longer recommended. For daylight provision in buildings, BS EN 17037 provides two methodologies. One is based on target illuminances from daylight to be achieved over specified fractions of the reference plane for at least half of the daylight hours in a typical year. The other method is based on calculating the daylight factors achieved over specified fractions of the reference plane.

4.12 The illuminance method '*[…] involves using climatic data for the location of the site (via the use of an appropriate, typical, or average year, weather file within the software) to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year […]*'. **Table 4.1** gives the minimum target illuminances for side lit rooms:

Table 4.1: Target Illuminances for Side Lit Rooms

Target Illuminances from Daylight Over At Least Half of The Daylight Hours		
Room	Target Minimum illuminance E_T (lx) for half of assessment grid	Duration (At Least Half of the Daylight Hours)
Bedrooms	100	2190 hours (Average of 6 hours)
Living Rooms	150	2190 hours (Average of 6 hours)
Kitchens	200	2190 hours (Average of 6 hours)

4.13 The Daylight factor method '*[…] involves the computation of the daylight factor at each calculation point on an assessment grid. The daylight factor is the illuminance at a point on the reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is usually expressed as a percentage […]*'. **Table 4.2** gives the daylight factor targets for side lit rooms in London for example:

Table 4.2: Daylight Factor Targets for side lit rooms in London for example

Target Daylight Factors (D) for London		
Level of recommendations	Target daylight factor D for half of assessment grid	Target daylight factor D for 95% of assessment grid
Minimum	2.1%	0.7%
Medium	3.5%	2.1%
High	5.3%	3.5%

5. BRE GUIDELINES (SUNLIGHT)

5.1 The BRE Guidance suggests that to understand sunlight impacts to a property an assessment of Annual Probable Sunlight Hours (APSH) is undertaken.

5.2 The APSH is defined as: '*[…] the long-term average of the total number of hours during a year in which direct sunlight reaches the unobstructed ground (when clouds are taken into account) [...]*'.

5.3 In interpreting the results, the BRE Guidance states that the Sunlight to a window may be adversely affected if a point at the centre of a 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;
- Receives less than 0.8 times its former sunlight houses during either period; and
- Has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

5.4 To understand the potential sunlight impacts therefore, all windows facing within 90 degrees of due south and overlooking the development have been assessed for APSH – for both the 'existing' and 'proposed' scenarios to make a comparison.

5.5 The BRE Guidelines note that: '*[…] all main living rooms of dwellings… should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun: and if the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be checked [...]*'.

5.6 The BRE Guidelines set out the overall methodology and criteria for the assessment of Sunlight in Chapter 3. The BRE Guidelines state:

'*[…] To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun.*

A point at the centre of the window on the outside face of the window wall may be taken. If this window reference point can receive more than one quarter of Annual Probable Sunlight House [25%], including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight.

Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount above and less than 0.8 times their former value, either over the whole year or just during the winter months (21 September – 21 March), then the occupants of the existing building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH, the room may appear colder and less cheerful and pleasant [...]'.

6. BRE GUIDELINES (OVERSHADOWING)

6.1 The BRE Guidance in respect of overshadowing of amenity spaces is set out in section 3. Of the handbook. The document states:

'[…] Sunlight in the spaces between buildings has an important on the overall appearance and ambiance of a development. It is valuable for a number of reasons [...]':

- To provide attractive sunlight views (all year);
- To make outdoor activities, like sitting out and children's play more pleasant (mainly during the warmer months);
- To encourage plant growth (mainly in spring and summer);
- To dry out the ground, reducing moss and slime (mainly during the colder months); and
- To melt frost, ice, and snow (in winter); and to dry clothes (all year).

6.2 It must be acknowledged that in urban areas the availability of sunlight on the ground is a factor which is significantly controlled by the existing urban fabric around the site in question and so may have very little to do with the form of the development itself.

6.3 Likewise, there may be many other urban design planning and site constraints which determine and run contrary to the best form, sitting and location of a proposed development in terms of availability of sun on the ground.

Sun Hours on Ground and Transient Overshadowing

6.4 The Sun Hours on Ground (SHOG) method of overshadowing assessment uses a simulation software to determine the areas which receive direct Sunlight and those which do not.

6.5 The BRE Guidelines suggest that the Spring Equinox (21 March) is a suitable date for the assessment as this is the midpoint of the sun's position throughout the year. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not. *'[…] It is recommended that for it [an amenity space] to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable [...]*'.

6.6 To understand the potential sunlight impacts therefore, all existing garden overlooking the development have been assessed for SHOG – for both the 'existing' and 'proposed' scenarios to make a comparison.

6.7 The Transient Overshadowing study is recommended where large buildings are proposed which may affect a number of gardens or open spaces. The BRE guidelines do not provide any criteria for Transient Overshadowing.

7. MODELLING METHODOLOGY

7.1 The purpose of this report is to provide an objective empirical assessment of the impact on daylight and sunlight in accordance with the standards contained in the Building Research Establishment (BRE) Guidelines "Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice" 2022. These are the standards and controls that the Council will apply in terms of protecting the existing amenity of neighbouring dwellings.

Dynamic Thermal Model

7.2 To determine the daylight and sunlight impact of the Proposed Development on neighbouring residential properties, a three-dimensional detailed thermal model using IES Virtual Environment (IES VE) software (Version 2023) have been used to model and calculate the changes in levels of daylight and sunlight as a consequence of the proposal.

7.3 The three-dimensional representation of the Proposed Development has been modelled using the latest scheme drawings provided in correspondence with FCB Studios. This has been placed in the context of its surrounding buildings which have been modelled from a desktop survey (using Google Earth, the Planning Portal & site visit).

7.4 The IES VE 2023 software has been accredited by CIBSE and acknowledged by the BRE as a suitable software tool for undertaking daylight and sunlight assessments in accordance with the Building Research Establishment (BRE) Guide, "Site layout planning for daylight and sunlight" Third Edition 2022 by PJ Littlefair et al.

7.5 Three separate modules of the IES VE have been utilised for this assessment, all of which incorporates the sun position for the site in Manchester, Greater Manchester (Latitude 53.35° N; longitude 2.28° W):

- ModelIT: This module enables the creation of three dimensional "Virtual Environment" models without CAD data, or alternatively allows you to create a 3D model from 2D CAD data. ModelIT interfaces with Revit and Google SketchUp, allowing the import of models created within this package;
- Radiance IES: This module is a detailed 3D simulation tool designed to predict daylight levels, and the appearance of a space prior to construction. Vertical Sky Components can be calculated for the 'existing' and the 'proposed' development using RadianceIES; and
- SunCast: This module is a 3D simulation tool used to calculate solar shading and sunlight availability. SunCast can be used to calculate the Annual Probable Sunlight Hours (APSH) and Winter Probable Sunlight Hours (WPSH) including Sun Hours on Ground (SHOG) for both the 'existing' and 'proposed' development.

7.6 In determining the impact of the Proposed Development on the levels of sunlight/daylight enjoyed by adjoining properties, including associated gardens, all the applicable neighbouring residential buildings have been assessed for daylight and sunlight by means of Vertical Sky Component (VSC) metric, and APSH/WPSH metric. **Figures 7.1** - **7.2** shows the 3D model of the 'existing', and 'proposed' development modelled in IES VE software (Version 2023) for analysis while **Figure 7.3** shows the 3D model of the 'existing' surrounding development groupings.

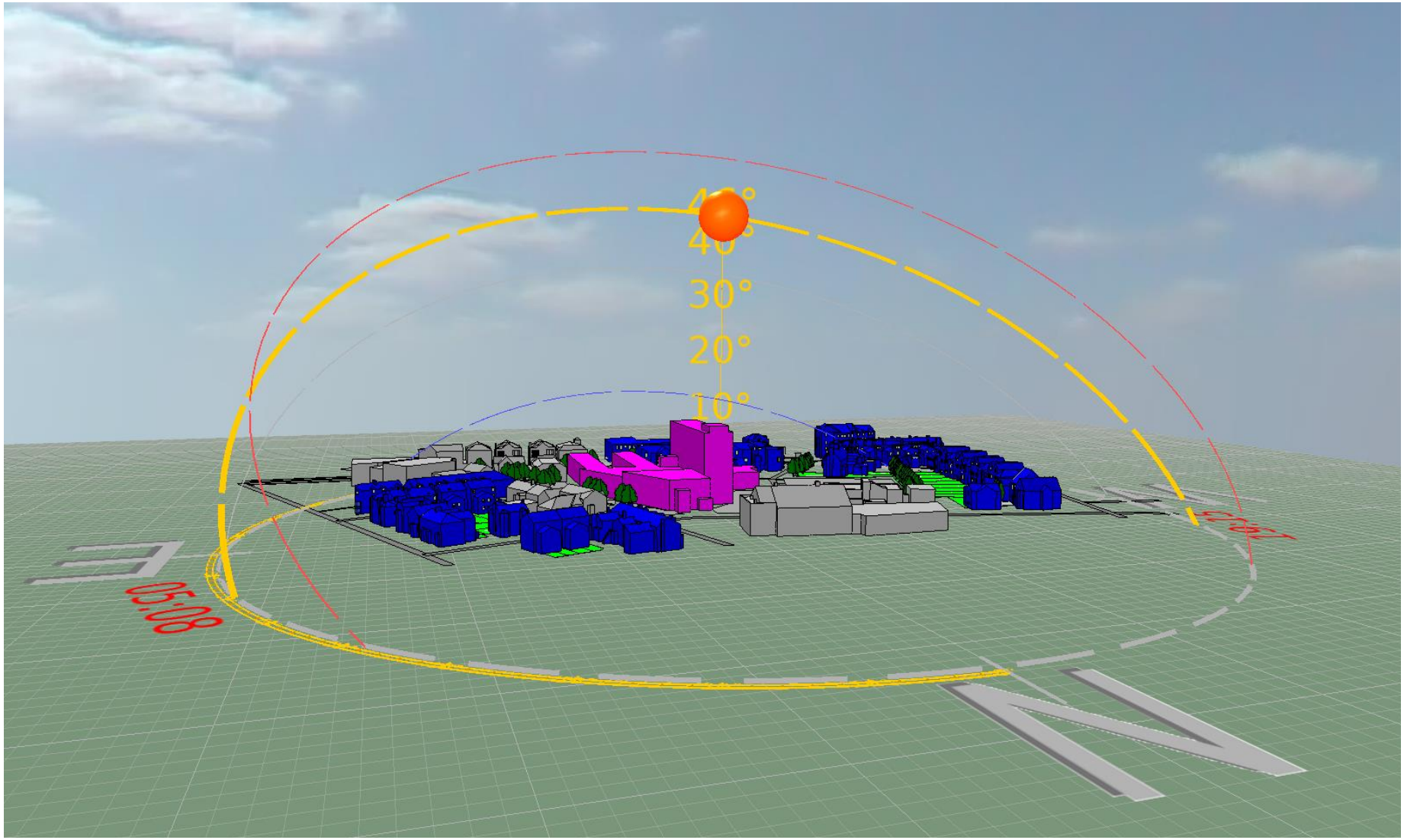


Figure 7.1: 'Existing' Development Site Modelled in IES VE Software

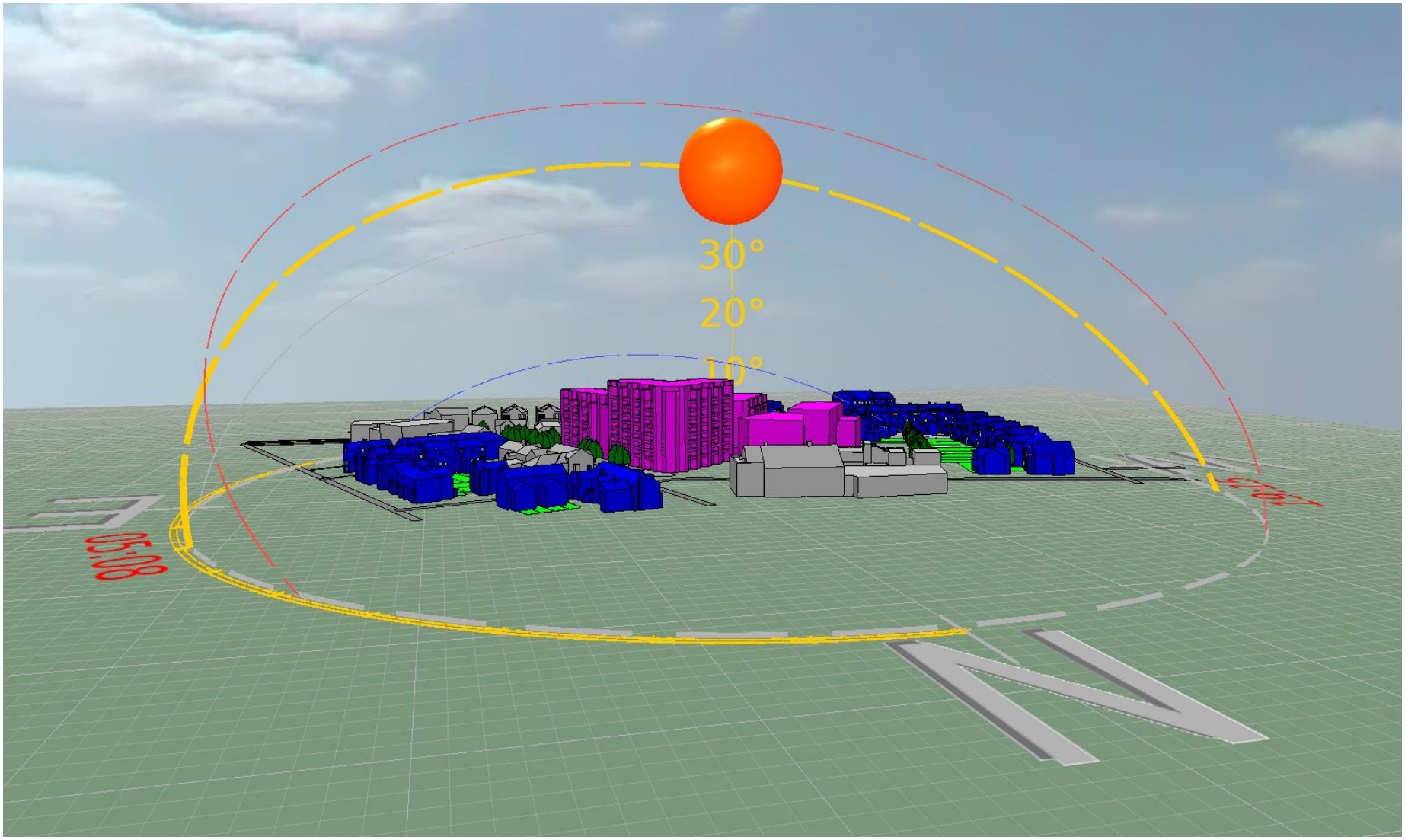


Figure 7.2: 'Proposed' Development Site Modelled in IES VE Software

Figure 7.3: 'Existing' Surrounding Development Groupings

8. ASSESSMENT RESULTS (DAYLIGHT)

Daylight (VSC) Assessment Criteria

8.1 During the construction of the Proposed Development, the effects in relation to the daylight will vary and will almost certainly be less than that of the completed Proposed Development, given that the extent of building will increase throughout construction, until the building is complete. It is, therefore, considered that the completed Proposed Development represents the worst-case assessment in terms of likely daylight effects. As such, the daylight assessment focuses on the Proposed Development when completed and operational.

8.2 The national numerical value target 'ideal' for Vertical Sky Component VSC is 27%. The BRE Guidelines advise that upon implementation of the Proposed Development, neighbouring buildings windows should retain a VSC value of 27% or at least 0.80 of its former value (i.e., no more than a 20% change). Vertical Sky Component (VSC) analysis of all applicable neighbouring residential properties windows was carried out. The results are summarised in **Appendix 1**. If the VSC at the centre of the window is more than 27% (or if not, then it is more than 80% of its former value), then the diffuse daylighting of the existing building will not be adversely affected.

Daylight (VSC) Assessment Result – Nicolas Road

8.3 Highlighted in orange (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Nicolas Road will result in 100% of windows passing the BRE guidelines. That is, out of the total number of 8 windows that could potentially be affected 8 (100%) pass the BRE guidelines. The results are detailed in **Appendix 1** showing as the magnitude of change from as very low (negligible).

8.4 The windows on the neighbouring Chorlton Family Practice were also assessed the impact of the Proposed Development will result in 57% of windows passing the BRE guidelines. That is, out of the total number of 35 windows that could potentially be affected 20 (57%) pass the BRE guidelines. The results are detailed in **Appendix 1** showing as the magnitude of change from as very low(negligible) to high.

8.5 It should be noted that the neighbouring Chorlton Family Practice is considered as a non-residential receptor for the purposes of the BRE assessment meaning the Chorlton Family Practice is subject to less stringent daylight and sunlight criteria, reflecting its use as a clinic rather than a residential dwelling.

Daylight (VSC) Assessment Result – Oswald Road

8.6 The assessed dwellings (1-24 Oswald Road) highlighted in blue (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Oswald Road will result in 100% of windows passing the BRE guidelines. That is, out of the total number of 66 windows that could potentially be affected 66 (100%) pass the BRE guidelines The results are detailed in **Appendix 1** showing the magnitude of change as very low (negligible).

Daylight (VSC) Assessment Result – Manchester Road

8.7 The assessed dwellings (13-15 Manchester Road) highlighted in pink (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Manchester Road will result in 100**%** of windows passing the BRE guidelines. That is, out of the total number of 16 windows that could potentially be affected 16 (100%) pass the BRE guidelines The results are detailed in **Appendix 1** showing the magnitude of change as very low (negligible).

Daylight (VSC) Assessment Result – Wilbraham Road

8.8 The assessed dwellings (480-615 Wilbraham Road which include dwellings above commercial) highlighted in red (**Figure 7.3**) and (**Figure 8.1**) showing the assumed dwellings above commercial. The impact of the Proposed Development on the neighbouring residential property on Wilbraham Road will result in 95% of windows passing the BRE guidelines. That is, out of the total number of 190 windows that could potentially be affected 181 (95%) pass the BRE guidelines. Whilst there are impacts on these remaining 9 windows (480-490 Wilbraham Road), these are only just transgressing the guidelines by a marginal amount of between 1% to 10% (**Appendix 1**).

Figure 8.1: Dwellings above commercial; 480-490, 495-525 and 609-615 Wilbraham Road

Daylight (VSC) Assessment Result – Warwick Road

8.9 The assessed dwellings (2-20 Warwick Road) highlighted in green (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Warwick Road will result in 100**%** of windows passing the BRE guidelines. That is, out of the total number of 130 windows that could potentially be affected 130 (100%) pass the BRE guidelines The results are detailed in **Appendix 1** showing the magnitude of change from low to very low (negligible).

Daylight (VSC) Assessment Result – Keppel Road

8.10 The assessed dwellings (21-31 Keppel Road) highlighted in yellow (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Keppel Road will result in 100% of windows passing the BRE guidelines. That is, out of the total number of 17 windows that could potentially be affected 17 (100%) pass the BRE guidelines The results are detailed in **Appendix 1** showing the magnitude of change as very low (negligible).

Daylight (VSC) Assessment Result – Selbourne Road

8.11 The assessed dwellings (1-7 Selbourne Road) highlighted in cyan (**Figure 7.3**), the impact of the Proposed Development on the neighbouring residential property on Selbourne Road will result in 100% of windows passing the BRE guidelines. That is, out of the total number of 27 windows that could potentially be affected 27 (100%) pass the BRE guidelines The results are detailed in **Appendix 1** showing the magnitude of change as very low (negligible).

Daylight (VSC) Assessment Result Summary

8.12 In terms of daylight quantity (VSC), the impact of the Proposed Development on all assessed neighbouring residential properties should be considered acceptable in a suburban environment. Consequently, with **98%** of the assessed residential windows adhering to the BRE guideline, the effect of the proposed development on neighbouring properties is therefore considered low/very low (negligible) in accordance with paragraph H5 of the BRE Guide. This is further detailed in **Appendix 1**, **Table 8.1** and **Table 8.2**.

Table 8.1: Summary Table of Daylight Results (Residential)

Properties	Total no. of windows tested	Windows Satisfying BRE Criteria	
		Number Of Windows	% Compliance
Nicolas Road	8	8	100%
Oswald Road	66	66	100%
Manchester Road	16	16	100%
Wilbraham Road	190	181	95%
Warwick Road	130	130	100%
Keppel Road	17	17	100%
Selbourne Road	27	27	100%
Total	**454**	**445**	**98%**

Table 8.2: Summary Table of Daylight Results (Non-Residential)

Properties	Total no. of windows tested	Windows Satisfying BRE Criteria	
		Number Of Windows	% Compliance
Chorlton Family Practice	35	20	57.00%
Total	**35**	**20**	**57.00%**

8.13 Whilst there are impacts on these remaining 15 windows as noted above, 3 of these are only just transgressing the guidelines by a marginal amount of between 1% to 10% (**Appendix 1**), which is considered acceptable for considering the scale of the Proposed Development.

8.14 Furthermore, following visit to the Practice, the internal offices all use electric lighting with blinds fully utilised majority of the daylight hours (**Figure 8.2**) and do not necessarily rely on daylight to light up the rooms.

Figure 8.2: Chorlton Family Practice Development with Blinds in Use

8.15 Moreover, it should be noted that the BRE Guidelines takes the form of guidance and recommendations. Therefore, they should not form a mandatory set of criteria to which a development must adhere as that would be too restrictive for site development purposes; rather they provide guidance intended to help the designer and planning authority and should be viewed in the context of other site constraints.

8.16 With majority (98%) of all the windows meeting BRE standards in relation to daylight as detailed in the report, overall, the effect of the Proposed Development on neighbouring properties is therefore considered negligible in accordance with paragraph H5 of the BRE Guide.

9. ASSESSMENT RESULTS (SUNLIGHT)

Sunlight (APSH and WPSH) Assessment Criteria

9.1 BRE Guidance uses the Annual Probable Sunlight Hours (APSH) and Winter Probable Sunlight Hours (WPSH) method to assess the existing development as it currently stands to determine the 'existing' and then with the 'proposed' development in place to identify the magnitude of impact.

9.2 If the window reference point can receive more than 25% of APSH, including at least 5% of APSH during winter months between 21 Sep & 21 March, then the room should still receive enough sunlight, and the impact will therefore be negligible. However, if the available sunlight hours are both less than the 25% level & less than 0.8 times their former value, either over the whole year or during the winter months, then the occupants of the neighbouring properties will notice the loss of sunlight.

9.3 In terms of sunlight, the BRE criteria only applies to windows facing within 90 degrees due south of the Proposed Development. As the applicable houses on Wilbraham Road (including Dwellings above Commercial; 609-615; 480-490 and 495-525 Wilbraham Road) have north facing windows or windows that are not facing the Proposed Development within 90 degrees due south, the sunlight assessment is therefore not applicable and has not been investigated further.

9.4 Furthermore, any north-facing windows on neighbouring properties along Nicolas Road, Oswald Road, Manchester Road, Selbourne Road, Keppel Road, and Warwick Road do not fall within the scope of the BRE sunlight assessment criteria and have not been analysed further. This approach aligns with the BRE's "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice," which suggests that only windows oriented within 90 degrees of due south warrant a detailed sunlight assessment.

Sunlight (APSH and WPSH) Assessment Result – Oswald Road

9.5 In terms of sunlight, the impact of the Proposed Development on the neighbouring properties at Oswald Road – highlighted blue in **Figure 7.3** will generally be negligible. That is, 97% of Oswald Road residential windows facing within 90 degrees of due south will overall continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

9.6 Some ground-floor windows (residual 3%) at 22 Oswald Road fall short of sunlight criteria, but the impact is generally considered minimal as they already receive limited sunlight due to existing structures and vegetation, making the reduction marginal.

Sunlight (APSH and WPSH) Assessment Result – Manchester Road

9.7 In terms of sunlight, the impact of the Proposed Development on the neighbouring properties (Manchester Road) – highlighted pink in **Figure 7.3** will be negligible. That is, 100% Manchester Road residential windows facing within 90 degrees of due south will continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

Sunlight (APSH and WPSH) Assessment Result – Selbourne Road

9.8 In terms of sunlight, the impact of the Proposed Development on the neighbouring property (Selbourne Road) – highlighted cyan in **Figure 7.3** will be negligible. That is, 100**%** of Selbourne Road residential windows facing within 90 degrees of due south will continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

Sunlight (APSH and WPSH) Assessment Result – Keppel Road

9.9 In terms of sunlight, the impact of the Proposed Development on the neighbouring properties (Keppel Road) – highlighted yellow in **Figure 7.3** will be negligible. That is, 100**%** of Keppel Road residential windows facing within 90 degrees of due south will continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

Sunlight (APSH and WPSH) Assessment Result – Warwick Road

9.10 In terms of sunlight, the impact of the Proposed Development on the neighbouring properties (Warwick Road) – highlighted green in **Figure 7.3** will be negligible. That is, 100**%** of Warwick Road residential windows facing within 90 degrees of due south will continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

Sunlight (APSH and WPSH) Assessment Result – Nicolas Road

9.11 In terms of sunlight, the impact of the Proposed Development on the neighbouring properties (Nicolas Road) – highlighted orange in **Figure 7.3** will be negligible. That is, 100**%** of Nicolas Road residential windows facing within 90 degrees of due south will continue to receive adequate sunlight level as defined by the BRE guidance. The results are detailed in **Appendix 2.**

9.12 In terms of sunlight, the impact of the Proposed Development on the neighbouring Chorlton Family Practice was also assessed. The result shows that 71% of windows pass the BRE guidelines. That is, out of the total number of 35 windows facing within 90 degrees of due south that could potentially be affected 25 (71%) pass the BRE guidelines.

9.13 The 10 windows not passing the BRE guidelines are the ground, and first floor windows situated on the south-east elevation of the Practice. Furthermore, following visit to the Practice, the internal offices all use electric lighting with blinds fully utilised majority of the daylight hours (**Figure 8.2**) and do not necessarily rely on sunlight to light up the rooms.

9.14 Moreover, it should be noted that the BRE Guidelines takes the form of guidance and recommendations and should be viewed in the context of other site constraints. Therefore, with majority (92%) of all the windows meeting BRE standards in relation to sunlight as detailed in the report, overall, the effect of the Proposed Development on neighbouring properties is therefore considered negligible in accordance with paragraph H5 of the BRE Guide.

10. ASSESSMENT RESULTS (OVERSHADOWING)

Overshadowing (SHOG) Assessment Criteria

10.1 BRE's the Sun Hours on Ground (SHOG) method of overshadowing assessment uses a simulation software to determine the areas which receive direct Sunlight and those which do not. The BRE Guidelines suggest that the Spring Equinox (21 March) is a suitable date for the assessment as this is the midpoint of the sun's position throughout the year. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

10.2 It is recommended that for an amenity space to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

Overshadowing (SHOG) Assessment Result – Amenity Spaces

10.3 In terms of overshadowing, the assessment shows that out of the 44 amenity spaces (gardens) (**Figure 10.1**) of Selbourne Road, Oswald Road, Warwick Road, Manchester Road and Nicolas Road houses, Oswald Road Primary School playground, and The Lloyds Pub Garden, 43 of 44 gardens will continue to receive the same level of sunlight on the 21st of March following the completion of the Proposed Development.

10.4 The garden of 20 Oswald Road is the only amenity space that does not adhere with the BRE Guidelines (**Figure 10.1**). The result is further detailed in **Appendix 3** showing the shadow plan calculated at 08:00, 12:00 and 15:00 and 17:00 intervals throughout the day on the 21st of March.

Figure 10.1: Proposed Development with 20 Oswald Road highlighted

10.5 That the BRE Guidelines takes the form of guidance and recommendations. Therefore, they should **not form a mandatory set of criteria** to which a development must adhere as that would be too restrictive for site development purposes.

11. INTERNAL DAYLIGHT (E_T) RESULTS

11.1 The provision of daylight is as important as ensuring low levels of noise, or low levels of odour, in maintaining the enjoyment of one's property. Adequate levels of daylight are important not only to light and heat the home, but also for an occupant's emotional well-being.

11.2 Daylight is widely accepted to have a positive psychological effect on human beings and there is a great deal of evidence to suggest that people who are deprived of daylight are more susceptible to depression and mood swings.

British Standard BS EN 17037 and Target Illuminance Criteria

11.3 Target illuminance method adopts climatic data for the location of the site to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year.

11.4 This method of assessment takes into account the total glazed area to the room, the transmittance quality of the glazing proposed, the total area of the room surfaces including ceilings and floors, and the internal average reflectance for the room being assessed.

11.5 The British Standard BS EN 17037 states the minimum target illuminance (T_M) values in dwellings. This is detailed in **Table 11.1** below:

Table 11.1: Minimum Target Illuminance (T_M) Values

Room Type	Minimum Target Illuminance
Bedroom	100 lux
Living Area	150 lux
Kitchen	200 lux

11.6 Where a room has a shared use, the highest target should apply. However, the target for a living room could be used for a combined living/dining/kitchen (LDK) area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design.

Simulation Input Values and Assumptions

11.7 A detailed thermal model has been created using the approved software IES VE 2023 Radiance IES. The model represents the location and building geometry to simulate how the space will perform under design conditions and to be in line with the British Standard BS EN 17037 daylight criteria. Consequently, a number of assumptions have been made during the modelling and these are summarised below.

11.8 The following reflectance, transmittance, and maintenance values (**Table 11.2**) as shown in Table C4 – C6 have been used assumed in accordance with BRE Guide 2022 and BS EN 17037 in the absence of specified value by the designer.

Table 11.2: Surface Reflectance/Transmittance/Maintenance Values

Surface/Settings	Reflectance / Transmittance / Inputs
Interior Walls	0.81 – BS 4800 Plasterboard [Pale Cream 10C31])
Ceiling	0.81 – BS 4800 Plasterboard [Pale Cream 10C31])
Floors	0.45 – BS 4800 Floor Carpet [Mid-grey 00A05]
Exterior Walls and obstructions	0.20 – BRE Default Value
Exterior Ground	0.20 – BRE Default Value
Glazing	0.68 – BRE Default Value
Maintenance Factor	0.92 – BRE Default Value
Assessment Grid	0.30 – BRE Default Value
Working Plane	0.85 – BRE Default Value
Area of Interest (AOI)	0.30 – BRE Default Value

SAMPLE DWELLINGS

11.9 To ascertain whether the Proposed Development will provide acceptable daylight amenity for the enjoyment of future occupiers, the habitable rooms (kitchen, living areas and bedroom) of the first floor of flats, shown in cyan in **Figure 11.1**, were assessed to determine the typical results of the Proposed Development. The upper-level floors will receive equal are greater daylight levels than the lower-level floors.

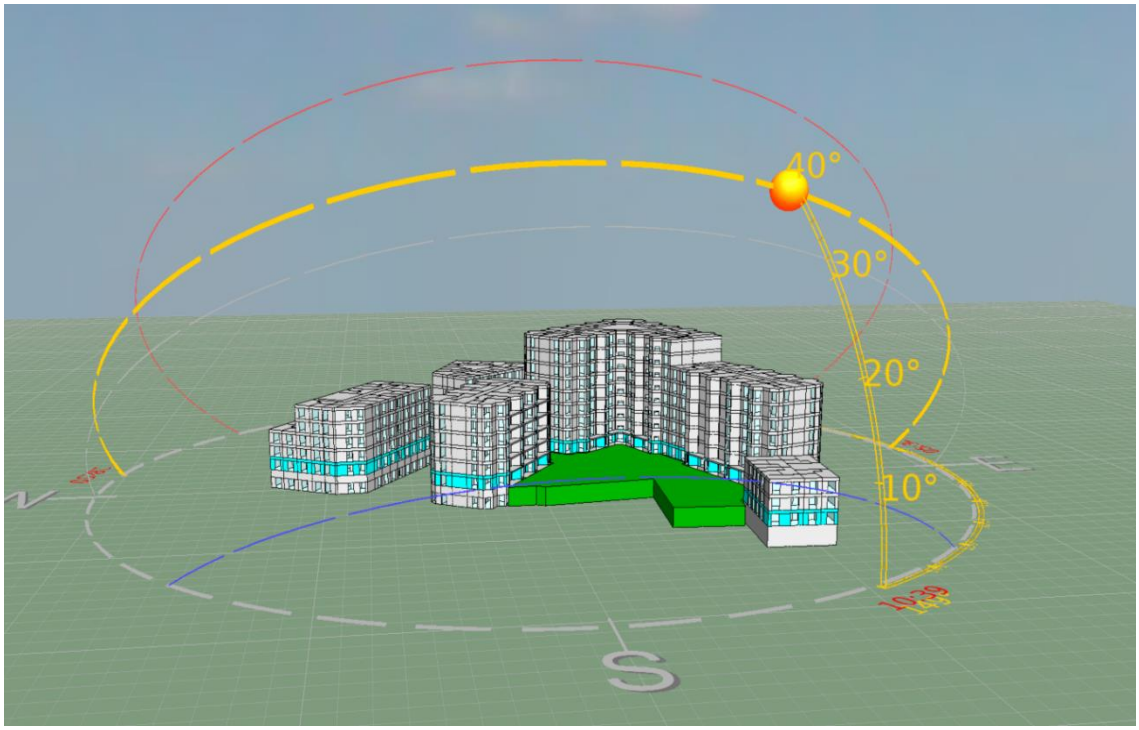


Figure 11.1: Internal Daylight IES model

INTERNAL DAYLIGHT (E_T) RESULTS

11.10 As shown in **Table 11.3**, in an inner-city urban location where the majority (97%) of habitable rooms meet or exceed the minimum target illuminance of daylight, the Proposed Development is considered to offer acceptable daylight for the enjoyment of future occupants in light of the building form and close proximity to surrounding buildings. The results summary is detailed in **Appendix 4**.

11.11 Where lower levels of daylight are experienced, this is mainly due to the following factor:

- The generous size of the room, which means light will be concentrated at the front of the space, with the rear relying more on supplementary artificial lighting.

Table 11.3: Summary Table of Internal Daylight Assessment Result

Habitable Room	Rooms Tested	No. of Habitable Rooms Achieving BRE's Recommendations		% Compliance
Block A				
LKD	10	9	LKDs achieving ≥ 200 lux	90.00%
Bedrooms	20	20	Bedrooms achieving ≥ 100 lux	100.00%
Block B				
LKD	8	8	LKDs achieving ≥ 200 lux	100.00%
Bedrooms	12	12	Bedrooms achieving ≥ 100 lux	100.00%
Block C				
LKD	6	5	LKDs achieving ≥ 200 lux	83.33%
Bedrooms	10	10	Bedrooms achieving ≥ 100 lux	100.00%
Block D				
LKD	9	8	LKDs achieving ≥ 200 lux	88.89%
Bedrooms	14	14	Bedrooms achieving ≥ 100 lux	100.00%
Block E				
LKD	7	7	LKDs achieving ≥ 200 lux	100.00%
Bedrooms	12	12	Bedrooms achieving ≥ 100 lux	100.00%
Block F				
LKD	4	4	LKDs achieving ≥ 200 lux	100.00%
Bedrooms	6	6	Bedrooms achieving ≥ 100 lux	100.00%
Total	**118**	**15**	**Total Compliance**	**97%**

12. INTERNAL SUNLIGHT (Min, Med, Max) RESULTS

Internal Sunlight Criteria

12.1 To ascertain whether the Proposed Development will provide acceptable sunlight amenity for the enjoyment of future occupiers, at least one habitable room, preferably the main living room should receive a minimum of 1.5 hours of direct sunlight on 21 March (equinox).

12.2 The BS EN 17037 criteria are intended to apply to minimum, medium, and high levels of sunlight in a range of situations. However, in special circumstances the designer or planning authority may wish to choose a different target value for hours of sunlight.

Internal Sunlight Results

12.3 The Living/Kitchen/Dining space of each flat on the first floor of the Proposed Development was assessed to determine the typical sunlight results of the Proposed Development. This is a representative of the worst-case scenario as the upper-level flats are expected to receive improved sunlight compared to the lower levels.

12.4 **Table 12.1** shows 84% of the apartments meet or exceed the minimum number of exposure hours to appear reasonably sunlit, receiving greater than 1.5 hour of sunlight exposure in the living room. Furthermore 73% of apartments have medium sunlight exposure receiving at least 3 hours of sunlight in the living space and 55% have high sunlight exposure receiving at least 4 hours of sunlight in the living space. This is further detailed in **Appendix 5**.

Table 12.1: Summary Table of Internal Sunlight Assessment Results

Habitable Rooms	No. of Rooms Test	Sunlight Compliance with BRE Criteria			
		No. of Rooms Minimum 1.5 hours	No. of Rooms Medium 3.0 hours	No. of Rooms High 4.0 hours	Overall Compliance (%)
Block A LKDs	10	8	6	5	95.00%
Block B LKDs	8	8	8	6	100.00%
Block C LKDs	6	6	5	4	100.00%
Block D LKDs	9	8	6	4	88.89%
Block E LKDs	7	5	5	3	71.43%
Block F LKDs	4	2	2	2	50.00%
Total	**44**	**37**	**32**	**24**	**84%**

12.5 Where lower levels of sunlight are experienced, this is mainly due to the following factor:

- Rooms facing the north / north-east/ north-west where minimal sunlight is received due to the orientation of the building.

13. CONCLUSION

13.1 This Daylight, Sunlight, and Overshadowing Assessment has been produced to inform a full planning application for a residential-led mixed-use redevelopment of the Chorlton Precinct site in Manchester. The existing buildings on site are currently vacant and hoarded off.

13.2 The assessment follows the guidance outlined in the Building Research Establishment's (BRE) "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (the BRE Guide, 2022). The assessment also aligns with the guidance provided in Manchester's Statutory Development Plans, Manchester City Council's Core Strategy (2012), the Places for Everyone Joint Development Plan (2024), the Guide to Development in Manchester SPD (2007), and the Manchester Residential Quality Guide (2017), adhering specifically to policies DM1 and JP-P1.

13.3 This report describes the 'existing' and 'proposed' impact of the Proposed Development on the daylight and sunlight levels of the surrounding neighbouring residential and applicable non-residential (general practitioner surgery) properties in accordance with the BRE Guide.

13.4 The neighbouring residential and applicable non-residential building (sensitive receptors) includes Nicolas Road houses (to the north), Selbourne/Keppel/Warwick Road houses (to the north-east/east), Wilbraham Road houses (to the south) and Oswald/Manchester Road houses (to the north west/west), and Chorlton Family Practice (to the north). The amenity spaces which include the gardens/playground of Nicolas Road houses, Selbourne/Keppel/Warwick Road houses, Wilbraham Road houses, Oswald/Manchester Road houses, Oswald Road Primary School playground, and The Lloyds Pub Garden were also considered.

Daylight

13.5 In terms of daylight quantity (VSC), the impact of the Proposed Development on all assessed neighbouring properties is considered acceptable. Consequently, with majority (98%) of the assessed windows adhering to the BRE guideline, with some windows only just transgressing the guidelines by a marginal amount of between 1% to 10%, overall, the effect of the Proposed Development on neighbouring properties is therefore considered negligible in accordance with paragraph H5 of the BRE Guide.

Sunlight

13.6 In terms of sunlight, the impact of the Proposed Development on all assessed neighbouring properties (within 90 degrees due south) is considered negligible in accordance with paragraph H5 of the BRE Guide 2022. Consequently, with majority (92%) of the assessed windows within 90° of due south adhering to the BRE guideline, overall, it is expected that the lighting conditions following the completion of the Proposed Development will present no significant effect to the neighbourhood residential properties as they will all continue to receive adequate sunlight as defined by the BRE guidance.

13.7 Some ground-floor windows at 22 Oswald Road fall short of sunlight criteria but the impact is considered minimal as they already receive limited sunlight due to existing structures and vegetation, making the reduction marginal. Results also shows that the 10 windows situated on the south-east windows of Chorlton Family Practice does not pass the BRE guidelines. However, following visit to the Practice, the offices all use electric lighting with blinds fully utilised majority of the day and do not necessarily rely on sunlight to light up the rooms.

Overshadowing

13.8 In terms of overshadowing, the impact of the Proposed Development on the majority of assessed surrounding amenity spaces (gardens) will be unnoticeable. The overshadowing assessment shows that 97% of the amenity spaces will continue to receive good levels of sunlight following the completion of the Proposed Development without any changes to the current situation. All assessed gardens (except No 20, Oswald Road house garden) fully adhere to the BRE guidelines and will continue to receive adequate sunlight on the 21st of March.

13.9 The garden at 20 Oswald Road is already subject to overshadowing due to its pre-existing conditions, such as surrounding structures, and sub-urban density. While the Proposed Development may increase overshadowing levels, the additional impact is minor and occurs in the context of a garden that already experiences limited sunlight. Therefore, when viewed in the broader context of the site's baseline conditions and the inherent limitations of the suburban environment, the impact of the Proposed Development on the sunlight levels of all surrounding amenity spaces are considered negligible.

13.10 Following the BRE overshadowing criteria mentioned in paragraph 6.5, it should be noted that the garden at 20 Oswald Road does not meet the criteria for an adequately sunlit amenity space. According to these guidelines, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. When assessing the impact of both the Existing and Proposed Development on 20 Oswald Road's garden, both fail to meet this criterion. Therefore, the overall impact could be considered negligible.

Internal Daylight and Sunlight

13.11 In a suburban location, with the majority (97%) of habitable rooms achieving or exceeding the recommended minimum target illuminance, the Proposed Development is considered to offer an acceptable level of daylight for the enjoyment of future occupants.

13.12 The results show that 84% of the apartments' living/kitchen/dining spaces on the first floor achieved the recommended minimum of 1.5 hours of direct sunlight on 21 March (equinox) in accordance with the BRE Guide 2022 and BS EN 17037. Where lower levels of daylight/sunlight are experienced, this is mainly due to one of the following factors:

- The room's window being located where daylight/sunlight availability is typically limited, such as North-East and North-West; and

- The generous size of the room, which means light will be concentrated at the front of the space, with the rear relying more on supplementary artificial lighting.

13.13 Where lower levels of internal daylight/sunlight are experienced, the design has sought to strike a balance between achieving a good level of internal daylight/sunlight and ensuring appropriate measures are considered to help mitigate the risk of overheating.

Concluding Summary

13.14 Daylight, sunlight, and overshadowing are key considerations in Manchester's Statutory Development Plans, including the Core Strategy and Supplementary Planning Documents (SPDs) such as the Manchester Residential Quality Guidance and Guide to Development Manchester (SPD). These policies, supported by national standards like the BRE Guidance, aim to ensure developments provide high-quality living environments, protect neighbouring properties, and enhance public spaces.

13.15 The Proposed Development aligns with the applicable Core Strategy policy DM1 (Development Management) by safeguarding residential amenity and demonstrating high standards of design that mitigate overshadowing impacts while ensuring sufficient access to daylight and sunlight.

13.16 The Places for Everyone Joint Development Plan (2024) emphasises sustainable development, with Policy JP-P1 (Sustainable Places) focusing on optimising natural light and minimising environmental impacts. The Proposed Development adheres to these principles, contributing to a sustainable and liveable urban environment.

13.17 The Guide to Development in Manchester SPD (2007) stresses high-quality design that balances urban density with residential quality of life, which is reflected in the proposal's thoughtful approach to limiting overshadowing and maintaining adequate sunlight for public and private spaces. Additionally, the Manchester Residential Quality Guide (2017) promotes the creation of well-designed, functional, and liveable spaces. The proposal fulfils these standards by ensuring that residential units and surrounding spaces benefit from sufficient natural light.

13.18 The numerical criteria suggested within the BRE guidelines (2022) has been applied to each of the assessments mentioned above. The Guidelines recognise that they should not form a mandatory set of criteria to which a development must adhere, as that would be too restrictive for site development purposes. Rather, they provide guidance intended to help the designer and planning authority and should be viewed in the context of other site constraints.

13.19 In essence, the BRE Guidelines must be interpreted flexibly. In light of the above, the Proposed Development is considered acceptable in terms of daylight, sunlight, and overshadowing.

APPENDICES

APPENDIX 1: Daylight Assessment Result

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Warwick Road

			DAYLIGHT STUDY - RESULTS (WARWICK ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	**Existing Site**	**Proposed Site**			**Compliance with BRE Criteria Met?**			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
1-3 Warwick Road	Ground Floor	Left to Reft	28.25	25.98	Fail	92%	Fail	Pass	Pass	Very Low (Negligible)
Windows facing development			28.60	28.18	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			23.74	23.79	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			24.12	22.47	Fail	93%	Fail	Pass	Pass	Very Low (Negligible)
			28.81	28.44	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			24.49	24.60	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	33.83	31.26	Pass	92%	Pass	Pass	Pass	Very Low (Negligible)
			35.56	35.16	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			30.52	30.75	Pass	101%	Pass	Pass	Pass	Very Low (Negligible)
			33.31	32.83	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.95	33.08	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			31.31	30.41	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.64	35.28	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			31.95	32.10	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.34	34.93	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.13	34.45	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			31.63	31.09	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	37.61	37.02	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.39	36.61	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)

5-7 Warwick Road Windows facing development	Ground Floor	Left to Reft	23.62	22.60	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
			29.14	28.75	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			23.95	24.05	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			30.16	29.95	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.88	32.51	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			33.08	32.65	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	36.36	36.18	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.40	36.21	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.41	34.12	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			33.44	33.46	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.26	36.40	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.42	35.50	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.07	27.28	Pass	78%	Pass	Fail	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	38.80	38.58	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			38.82	38.81	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
9-11 Warwick Road Windows facing development	Ground Floor	Left to Reft	27.11	25.94	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
			30.34	30.40	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			25.72	25.75	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			22.05	21.18	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
			30.32	29.88	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			21.13	20.94	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			30.63	30.76	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			31.53	31.14	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	32.93	32.29	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.91	35.67	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			30.55	30.70	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			34.15	34.30	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.84	33.78	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			27.73	27.37	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.72	35.67	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			25.93	26.04	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			33.74	33.33	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.49	34.03	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	38.00	37.90	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.04	37.89	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.38	36.12	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.77	36.51	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

11A Warwick Road Windows facing development	Ground Floor	Left to Reft	25.58	25.42	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			31.28	31.29	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			26.92	26.79	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			24.31	24.22	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			33.45	33.39	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			34.42	34.30	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	33.79	33.48	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.03	36.15	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			31.20	31.35	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.42	36.12	Pass	102%	Pass	Pass	Pass	Very Low (Negligible)
			30.63	30.70	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.18	37.22	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.46	35.60	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			30.79	30.80	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			23.83	23.72	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			18.55	18.39	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			23.58	23.65	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	32.28	32.23	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
2-14 Warwick Road Windows facing development	Ground Floor	Left to Reft	26.62	22.27	Fail	84%	Fail	Pass	Pass	Very Low (Negligible)
			30.42	28.51	Pass	94%	Pass	Pass	Pass	Very Low (Negligible)
			27.67	27.50	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			30.03	28.89	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			29.35	28.24	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			28.38	27.54	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			27.73	26.97	Fail	97%	Fail	Pass	Pass	Very Low (Negligible)
			27.86	27.22	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	34.84	32.96	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			34.95	33.12	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			34.28	33.04	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.43	32.73	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			33.49	32.54	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.36	32.43	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.15	32.47	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			33.20	32.28	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.32	32.12	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			32.59	32.19	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.62	32.23	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.74	32.33	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	36.73	35.21	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			36.40	35.35	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.25	35.29	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.19	35.21	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.96	35.21	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.93	35.28	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.63	35.19	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

16-20 Warwick Road Windows facing development	Ground Floor	Left to Reft	9.51	9.33	Fail	98%	Fail	Pass	Pass	Very Low (Negligible)
			22.73	21.77	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
			27.90	27.92	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			25.42	25.50	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			23.14	22.89	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			29.79	29.78	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			24.69	25.01	Fail	101%	Fail	Pass	Pass	Very Low (Negligible)
			20.74	20.10	Fail	97%	Fail	Pass	Pass	Very Low (Negligible)
			30.56	30.48	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			28.32	28.39	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			25.56	25.36	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			32.66	32.80	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.78	37.72	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	25.78	25.22	Fail	98%	Fail	Pass	Pass	Very Low (Negligible)
			31.50	31.00	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.97	28.20	Pass	74%	Pass	Fail	Pass	Low
			25.84	25.17	Fail	97%	Fail	Pass	Pass	Very Low (Negligible)
			32.24	32.14	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			27.90	27.95	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			24.69	24.22	Fail	98%	Fail	Pass	Pass	Very Low (Negligible)
			33.19	32.54	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			30.37	30.31	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			28.66	28.29	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.69	34.57	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.25	38.32	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Reft	36.21	35.94	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.71	36.57	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.00	36.82	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.60	37.71	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Nicolas Road

			DAYLIGHT STUDY - RESULTS (NICOLAS ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	**Existing Site**	**Proposed Site**			**Compliance with BRE Criteria Met?**			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
Chorlton Family Practice	Ground Floor	Left to Reft	35.36	31.48	Pass	89%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development	Residential Floor		35.52	31.20	Pass	88%	Pass	Pass	Pass	Very Low (Negligible)
			35.67	30.48	Pass	85%	Pass	Pass	Pass	Very Low (Negligible)
			35.66	29.74	Pass	83%	Pass	Pass	Pass	Very Low (Negligible)
			35.61	29.14	Pass	82%	Pass	Pass	Pass	Very Low (Negligible)
			35.41	28.34	Pass	80%	Pass	Pass	Pass	Very Low (Negligible)
			35.81	27.34	Pass	76%	Pass	Fail	Pass	Low
			35.45	26.40	Fail	74%	Fail	Fail	Fail	Low
			35.43	25.60	Fail	72%	Fail	Fail	Fail	Low
			35.46	24.59	Fail	69%	Fail	Fail	Fail	Low
			35.30	22.91	Fail	65%	Fail	Fail	Fail	Low
			27.03	7.06	Fail	26%	Fail	Fail	Fail	High
			21.28	5.43	Fail	26%	Fail	Fail	Fail	High
			22.46	4.62	Fail	21%	Fail	Fail	Fail	High
			27.47	5.93	Fail	22%	Fail	Fail	Fail	High
			29.06	7.59	Fail	26%	Fail	Fail	Fail	High
	First Floor	Left to Reft	36.96	35.56	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
	Residential Floor		36.92	35.34	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			36.85	34.98	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			36.47	33.65	Pass	92%	Pass	Pass	Pass	Very Low (Negligible)
			36.71	33.27	Pass	91%	Pass	Pass	Pass	Very Low (Negligible)
			36.70	32.76	Pass	89%	Pass	Pass	Pass	Very Low (Negligible)
			36.79	32.17	Pass	87%	Pass	Pass	Pass	Very Low (Negligible)
			36.60	31.73	Pass	87%	Pass	Pass	Pass	Very Low (Negligible)
			36.78	31.07	Pass	84%	Pass	Pass	Pass	Very Low (Negligible)
			36.70	29.92	Pass	82%	Pass	Pass	Pass	Very Low (Negligible)
			36.67	29.09	Pass	79%	Pass	Fail	Pass	Low
			36.38	28.23	Pass	78%	Pass	Fail	Pass	Low
			36.51	27.16	Pass	74%	Pass	Fail	Pass	Low
			36.26	25.86	Fail	71%	Fail	Fail	Fail	Low

			29.70	10.71	Fail	36%	Fail	Fail	Fail	High
			24.72	9.76	Fail	39%	Fail	Fail	Fail	High
			26.10	8.03	Fail	31%	Fail	Fail	Fail	High
			30.84	9.17	Fail	30%	Fail	Fail	Fail	High
			31.60	10.07	Fail	32%	Fail	Fail	Fail	High
5-7 Nicolas Road	Ground Floor	Left to Reft	32.38	30.89	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development	Residential Floor		32.92	32.19	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			33.42	33.04	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			33.75	33.43	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	1st Floor	Left to Reft	34.82	34.13	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Residential Floor		23.39	23.50	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			35.04	34.05	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.73	35.72	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Oswald Road

			DAYLIGHT STUDY - RESULTS (OSWALD ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	**Existing Site**	**Proposed Site**			**Compliance with BRE Criteria Met?**			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
1 Oswald Road Windows facing development	Ground Floor	Left to Right	31.43	31.05	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.05	31.40	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			32.70	32.21	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	34.82	34.41	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.84	34.50	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.11	34.80	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.12	34.78	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
2-4 Oswald Road Windows facing development	Ground Floor	Left to Right	34.12	33.75	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			31.83	30.73	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.43	32.63	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.72	34.03	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor		36.35	36.03	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.79	34.14	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.65	35.33	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.99	35.15	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.54	33.87	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			36.74	36.16	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor		37.53	37.20	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.48	37.02	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

6-8 Oswald Road Windows facing development	Ground Floor	Right to Left	35.24	34.39	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			32.70	31.53	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.37	33.27	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.82	34.42	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
	1st Floor Residential Floor	Right to Left	36.97	36.03	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			34.80	34.38	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.97	35.73	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.37	35.60	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.93	33.78	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.95	36.26	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor		37.81	29.11	Pass	77%	Pass	Fail	Pass	Low
			37.69	31.94	Pass	85%	Pass	Pass	Pass	Very Low (Negligible)
10-12 Oswald Road Windows facing development	Ground Floor Residential Floor	Right to Left	31.31	29.91	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.68	32.94	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			35.29	34.30	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.28	34.24	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.91	32.18	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			33.84	32.25	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Right to Left	34.33	33.38	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.28	35.12	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.45	35.14	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.25	33.47	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Right to Left	37.90	37.23	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.91	37.21	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.79	37.08	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.80	37.07	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)

14-16 Oswald Road Windows facing development	Ground Floor Residential Floor	Right to Left	28.35	27.10	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			33.73	31.94	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			34.30	33.18	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.05	31.84	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
		Right to Left	32.15	30.71	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			26.50	25.36	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
			24.88	23.92	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
	First Floor	Right to Left	37.11	36.03	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			34.88	33.55	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			36.74	35.80	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.62	35.70	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.78	33.01	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.75	34.68	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Right to Left	37.91	37.30	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.99	37.22	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
22 Oswald Road Windows facing development	Ground Floor	Left to Right	26.39	26.17	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			22.17	21.63	Fail	98%	Fail	Pass	Pass	Very Low (Negligible)
	First Floor		34.77	34.49	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.32	31.83	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.47	35.17	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			29.51	29.28	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Manchester Road

			DAYLIGHT STUDY - RESULTS (MANCHESTER ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	**Existing Site**	**Proposed Site**			**Compliance with BRE Criteria Met?**			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
13 Manchester Road	Ground Floor	Left to Right	32.78	31.90	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development			31.69	30.01	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			32.81	31.14	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	35.84	35.20	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.78	34.56	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.29	34.06	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	37.45	36.99	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.34	36.93	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
15 Manchester Road	Ground Floor	Left to Right	30.99	30.94	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development			32.54	31.55	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.10	32.55	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	34.88	34.33	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.46	34.93	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.13	35.65	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	37.82	37.19	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			37.74	37.12	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Wilbraham Road

			DAYLIGHT STUDY - RESULTS (WILBRAHAM ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	Existing Site	Proposed Site			Compliance with BRE Criteria Met?			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
480-490 Wilbraham Road Flats (Rear) Windows facing development	Ground Fllor	Left to Right	26.03	19.44	Fail	75%	Fail	Fail	Fail	Low
			18.63	16.54	Fail	89%	Fail	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	26.47	26.10	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			17.05	13.97	Fail	82%	Fail	Pass	Pass	Very Low (Negligible)
			16.28	15.12	Fail	93%	Fail	Pass	Pass	Very Low (Negligible)
			32.85	26.03	Fail	79%	Fail	Fail	Fail	Very Low (Negligible)
			32.94	25.71	Fail	78%	Fail	Fail	Fail	Very Low (Negligible)
			17.05	13.72	Fail	80%	Fail	Pass	Pass	Very Low (Negligible)
			34.13	26.40	Fail	77%	Fail	Fail	Fail	Low
			34.37	26.42	Fail	77%	Fail	Fail	Fail	Low
			18.73	13.08	Fail	70%	Fail	Fail	Fail	Low
			33.60	26.07	Fail	78%	Fail	Fail	Fail	Low
			25.99	19.84	Fail	76%	Fail	Fail	Fail	Low
			20.02	16.42	Fail	82%	Fail	Pass	Pass	Very Low (Negligible)
			35.41	30.84	Pass	87%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	34.84	28.10	Pass	81%	Pass	Pass	Pass	Very Low (Negligible)
			34.50	28.62	Pass	83%	Pass	Pass	Pass	Very Low (Negligible)
			34.41	28.47	Pass	83%	Pass	Pass	Pass	Very Low (Negligible)
			22.82	20.08	Fail	88%	Fail	Pass	Pass	Very Low (Negligible)
			23.60	21.24	Fail	90%	Fail	Pass	Pass	Very Low (Negligible)
			35.00	28.86	Pass	82%	Pass	Pass	Pass	Very Low (Negligible)
			35.07	28.82	Pass	82%	Pass	Pass	Pass	Very Low (Negligible)
			27.71	22.64	Fail	82%	Fail	Pass	Pass	Very Low (Negligible)
			25.66	22.69	Fail	88%	Fail	Pass	Pass	Very Low (Negligible)
			35.28	28.68	Pass	81%	Pass	Pass	Pass	Very Low (Negligible)
			35.59	28.60	Pass	80%	Pass	Pass	Pass	Very Low (Negligible)
			29.57	23.49	Fail	79%	Fail	Fail	Fail	Low
			26.49	22.47	Fail	85%	Fail	Pass	Pass	Very Low (Negligible)
			36.04	29.93	Pass	83%	Pass	Pass	Pass	Very Low (Negligible)
			36.26	30.32	Pass	84%	Pass	Pass	Pass	Very Low (Negligible)
			37.25	33.49	Pass	90%	Pass	Pass	Pass	Very Low (Negligible)
			34.56	31.77	Pass	92%	Pass	Pass	Pass	Very Low (Negligible)

495-524 Wilbraham Road Windows facing development	First Floor	Left to Right	36.89	36.74	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.11	37.17	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.65	37.57	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.52	37.37	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.31	37.05	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.38	33.85	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.94	35.09	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.72	34.96	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			16.86	16.90	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			17.88	17.90	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			37.13	36.79	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.13	36.83	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			17.36	17.40	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			17.97	17.51	Fail	97%	Fail	Pass	Pass	Very Low (Negligible)
			36.67	36.52	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.72	36.58	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			14.50	14.55	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			7.45	7.46	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			37.15	37.01	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.10	37.04	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.41	36.13	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.42	37.37	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor		38.28	38.05	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			38.15	38.22	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.11	36.97	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.49	36.17	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.23	35.87	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.65	36.46	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.21	36.97	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.18	37.07	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.32	36.94	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.97	36.90	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.25	36.94	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.25	37.25	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.21	37.14	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.09	36.88	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.77	37.42	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.44	37.29	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.15	37.12	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.83	36.82	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			22.45	22.23	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)

601-611 Apartments Wilbraham Road Windows facing development	First Floor	Left to Right	35.61	33.44	Pass	94%	Pass	Pass	Pass	Very Low (Negligible)
			35.50	33.68	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			35.51	33.78	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			35.12	33.54	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			35.07	33.64	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			35.12	33.67	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.91	33.74	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.00	33.93	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			34.98	34.00	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			35.06	33.94	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			34.62	33.88	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.92	34.21	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.89	34.24	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.95	34.31	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.91	34.45	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.86	34.68	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	37.71	35.31	Pass	94%	Pass	Pass	Pass	Very Low (Negligible)
			37.60	35.00	Pass	93%	Pass	Pass	Pass	Very Low (Negligible)
			37.79	35.27	Pass	93%	Pass	Pass	Pass	Very Low (Negligible)
			37.43	35.27	Pass	94%	Pass	Pass	Pass	Very Low (Negligible)
			37.12	35.38	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.42	35.41	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.20	35.20	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.01	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			37.30	35.32	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			36.95	35.69	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.94	35.51	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			36.98	35.68	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			36.88	35.73	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.89	35.84	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			37.06	35.77	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			36.83	36.19	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)

			37.02	36.23	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
613 Apartments Wilbraham Road Windows facing development	First Floor	Left to Right	35.00	34.70	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.77	34.79	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.23	33.00	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.31	35.79	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.25	36.10	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.43	32.43	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			34.71	34.44	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			32.26	31.86	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.59	36.24	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.56	35.28	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	38.12	37.33	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			38.11	37.35	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
615 Apartments Wilbraham Road Windows facing development	Ground Floor	Left to Right	31.53	30.89	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			30.34	30.40	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			30.82	30.56	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			25.88	25.80	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			30.10	30.02	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			29.83	29.90	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			30.20	30.09	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			30.33	30.45	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			25.16	25.11	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			22.09	22.20	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			25.00	24.81	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			16.34	16.40	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			29.54	29.41	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			30.66	30.70	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	33.76	33.69	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.28	32.24	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			33.28	33.24	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.28	33.24	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.26	32.30	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.83	32.92	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.52	33.19	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			33.24	33.40	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			24.21	24.30	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			27.18	27.30	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			19.71	19.56	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			34.00	33.91	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.52	33.52	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			31.12	31.20	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.69	33.80	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Right to Left	36.34	36.47	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.67	32.14	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			35.60	35.40	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			29.25	29.35	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.65	36.73	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.36	35.19	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.34	36.50	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			36.69	36.59	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)

			27.58	27.52	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.06	32.20	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			34.48	34.42	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.58	35.70	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			33.12	32.79	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			35.99	36.15	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
	Third Floor	Right to Left	38.98	38.70	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			38.38	38.25	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.63	38.44	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.61	38.43	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.43	38.48	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.45	38.28	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			32.44	32.60	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.88	37.97	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.06	37.10	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			38.58	38.29	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Keppel Road

			DAYLIGHT STUDY - RESULTS (KEPPEL ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	Existing Site	Proposed Site			Compliance with BRE Criteria Met?			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
21 Keppel Road	Ground Floor	Left to Right	19.15	18.18	Fail	95%	Fail	Pass	Pass	Very Low (Negligible)
Windows facing development	First Floor	Left to Right	33.93	32.14	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
			28.82	27.42	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	36.41	35.02	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
23 Keppel Road	Ground Floor	Left to Right	30.77	29.20	Pass	95%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development	First Floor		34.22	32.75	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
			34.59	32.67	Pass	94%	Pass	Pass	Pass	Very Low (Negligible)
27 Keppel Road	Ground Floor	Left to Right	9.02	9.33	Fail	103%	Fail	Pass	Pass	Very Low (Negligible)
Windows facing development			26.80	25.52	Fail	95%	Fail	Pass	Pass	Very Low (Negligible)
	1st Floor	Left to Right	31.65	30.27	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor		16.97	16.98	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			34.70	33.22	Pass	96%	Pass	Pass	Pass	Very Low (Negligible)
29 Keppel Road	First Floor	Left to Right	29.54	29.33	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development	Second Floor	Left to Right	34.14	33.00	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			18.84	18.08	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
31 Keppel Road	First Floor	Left to Right	30.35	30.19	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
Windows facing development	Residential Floor		34.44	34.03	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2022): Daylight Study

Project Name	Chorlton Precinct
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	18/10/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 1 - Daylight (VSC) Assessment Result - Selborne Road

			DAYLIGHT STUDY - RESULTS (SELBORNE ROAD)							
Building Reference	Floor	Window R = Right hand L = Left hand C = Centre	**Existing Site**	**Proposed Site**			**Compliance with BRE Criteria Met?**			Magnitude of Change VL = Very Low (=/> 80%) L = Low (60-79%) M = Medium (41-59%) H = High (<40%)
			Vertical Sky Component (%)	Vertical Sky Component (%)	Greater than 27%	Percentage of Existing	Greater than 27%	80% of Existing	Overall Compliance	
1-3 Selborne Road	Ground Floor	Left to Reft	25.63	24.34	Fail	95%	Fail	Pass	Pass	Very Low (Negligible)
Windows facing development			31.17	30.80	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			25.86	25.74	Fail	100%	Fail	Pass	Pass	Very Low (Negligible)
			31.80	31.29	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Reft	36.66	35.87	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			36.72	35.94	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			36.78	36.00	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			34.87	34.58	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			34.04	33.20	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			36.89	36.24	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			36.92	36.29	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	36.13	34.92	Pass	97%	Pass	Pass	Pass	Very Low (Negligible)
			38.14	37.49	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			38.36	37.64	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
5-7 Selborne Road	Ground Floor	Left to Right	23.60	22.64	Fail	96%	Fail	Pass	Pass	Very Low (Negligible)
Windows facing development			31.56	31.34	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			26.00	25.81	Fail	99%	Fail	Pass	Pass	Very Low (Negligible)
			32.41	31.96	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	First Floor	Left to Right	36.87	36.64	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.87	36.67	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			36.87	36.69	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			35.29	34.51	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			33.99	33.85	Pass	100%	Pass	Pass	Pass	Very Low (Negligible)
			37.31	37.03	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
			37.35	37.04	Pass	99%	Pass	Pass	Pass	Very Low (Negligible)
	Second Floor	Left to Right	38.76	37.89	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)
			38.84	38.09	Pass	98%	Pass	Pass	Pass	Very Low (Negligible)

APPENDIX 2: Sunlight Assessment Result

BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2021): Sunlight (APSH & WPSH) Assessment

Project Name	Chorlton, Precinct Redevelopment
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P02
Date	19/02/2025
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 2 - Sunlight (APSH & WPSH) Assessment Result

	SUNLIGHT STUDY - RESULTS (OSWALD RD/ MANCHESTER RD /NICOLAS RD)							
Building and Window Reference	Existing Annual/Winter Probable Sunlight Hours (APSH)		Proposed Annual/Winter Probable Sunlight Hours (APSH)		Compliance with BRE Criteria Met?			
	Annual Year (main windows within 90° of due south)	Winter Months (main windows within 90° of due south)	Annual Year (main windows within 90° of due south)	Winter Months (main windows within 90° of due south)	Compliance with BRE Criteria (Annual - APSH) **>25 %**	Compliance with BRE Criteria (Winter - WPSH) **>5 %**	Compliance with BRE Criteria (> 0.8 times it former sunlight hours)	Overall Compliance with BRE Criteria?
1 Oswald Road - South Windows (GF)	34%	25%	31%	18%	Pass	Pass	Fail	Pass
1 Oswald Road - South Windows (1F)	40%	32%	38%	32%	Pass	Pass	Pass	Pass
2 Oswald Road - South Windows (GF)	34%	26%	33%	26%	Pass	Pass	Pass	Pass
2 Oswald Road - South Windows (1F)	42%	37%	39%	32%	Pass	Pass	Pass	Pass
2 Oswald Road - South Windows (2F)	50%	53%	47%	47%	Pass	Pass	Pass	Pass
4 Oswald Road - South Windows (GF)	38%	32%	38%	32%	Pass	Pass	Pass	Pass
4 Oswald Road - South Windows (1F)	49%	50%	43%	41%	Pass	Pass	Pass	Pass
4 Oswald Road - South Windows (2F)	50%	53%	46%	45%	Pass	Pass	Pass	Pass
6 Oswald Road - South Windows (GF)	36%	29%	36%	29%	Pass	Pass	Pass	Pass
6 Oswald Road - South Windows (1F)	42%	35%	39%	32%	Pass	Pass	Pass	Pass
6 Oswald Road - South Windows (2F)	49%	51%	46%	44%	Pass	Pass	Pass	Pass
8 Oswald Road - South Windows (GF)	41%	38%	40%	35%	Pass	Pass	Pass	Pass
8 Oswald Road - South Windows (1F)	46%	45%	45%	42%	Pass	Pass	Pass	Pass
8 Oswald Road - South Windows (2F)	49%	51%	46%	44%	Pass	Pass	Pass	Pass
10 Oswald Road - South Windows (GF)	31%	19%	29%	16%	Pass	Pass	Pass	Pass
10 Oswald Road - South Windows (1F)	42%	35%	39%	31%	Pass	Pass	Pass	Pass
10 Oswald Road - South Windows (2F)	51%	50%	48%	44%	Pass	Pass	Pass	Pass
12 Oswald Road - South Windows (GF)	41%	35%	38%	31%	Pass	Pass	Pass	Pass
12 Oswald Road - South Windows (1F)	49%	47%	44%	40%	Pass	Pass	Pass	Pass
12 Oswald Road - South Windows (2F)	51%	50%	48%	44%	Pass	Pass	Pass	Pass
14 Oswald Road - South Windows (GF)	30%	21%	26%	15%	Pass	Pass	Fail	Pass
14 Oswald Road - South Windows (1F)	44%	38%	41%	29%	Pass	Pass	Fail	Pass
14 Oswald Road - South Windows (2F)	51%	50%	46%	41%	Pass	Pass	Pass	Pass
16 Oswald Road - South Windows (GF)	44%	43%	40%	34%	Pass	Pass	Fail	Pass
16 Oswald Road - South Windows (1F)	49%	47%	45%	40%	Pass	Pass	Pass	Pass
16 Oswald Road - South Windows (2F)	51%	50%	46%	41%	Pass	Pass	Pass	Pass
22 Oswald Road - South Windows (GF)	24%	21%	22%	18%	Fail	Pass	Pass	Pass
22 Oswald Road - South Windows (GF)	24%	25%	22%	19%	Fail	Pass	Fail	Fail
22 Oswald Road - South Windows (1F)	49%	49%	44%	40%	Pass	Pass	Pass	Pass
22 Oswald Road - South Windows (1F)	56%	56%	51%	46%	Pass	Pass	Pass	Pass
22 Oswald Road - South Windows (1F)	48%	47%	48%	47%	Pass	Pass	Pass	Pass
5 Nicolas Road - South Windows (GF)	59%	60%	54%	50%	Pass	Pass	Pass	Pass
5 Nicolas Road - South Windows (1F)	69%	77%	63%	65%	Pass	Pass	Pass	Pass
5 Nicolas Road - South Windows (1F)	51%	47%	51%	47%	Pass	Pass	Pass	Pass
7 Nicolas Road - South Windows (GF)	44%	38%	42%	34%	Pass	Pass	Pass	Pass
7 Nicolas Road - South Windows (1F)	66%	73%	61%	63%	Pass	Pass	Pass	Pass
7 Nicolas Road - South Windows (1F)	51%	52%	46%	41%	Pass	Pass	Fail	Pass

13 Manchester Road - South Windows (GF)	45%	43%	42%	41%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (GF)	41%	37%	40%	34%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (GF)	46%	43%	45%	41%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (1F)	55%	63%	50%	56%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (1F)	55%	62%	51%	54%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (1F)	54%	60%	51%	54%	Pass	Pass	Pass	Pass
13 Manchester Road - South Windows (2F)	62%	72%	58%	63%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (GF)	42%	35%	38%	32%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (GF)	42%	37%	40%	34%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (GF)	45%	44%	42%	38%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (1F)	48%	44%	45%	43%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (1F)	50%	49%	45%	43%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (1F)	53%	59%	53%	59%	Pass	Pass	Pass	Pass
15 Manchester Road - South Windows (2F)	62%	72%	58%	63%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (GF)	55%	57%	48%	41%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	55%	59%	47%	41%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	56%	56%	48%	40%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	59%	60%	49%	39%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	58%	59%	47%	34%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	58%	59%	48%	37%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	60%	59%	48%	34%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	60%	59%	47%	29%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	60%	57%	47%	31%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	60%	56%	42%	26%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	61%	57%	42%	26%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (GF)	42%	34%	10%	2%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (GF)	40%	32%	10%	0%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (GF)	22%	4%	0%	0%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (GF)	33%	15%	5%	1%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (GF)	38%	22%	7%	3%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (1F)	62%	59%	57%	54%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	63%	63%	59%	56%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	60%	56%	54%	45%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	62%	62%	57%	51%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	60%	56%	54%	45%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	62%	62%	57%	51%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	62%	63%	57%	51%	Pass	Pass	Pass	Pass
Chorlton Health Centre - South Windows (1F)	63%	65%	57%	51%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	64%	65%	57%	51%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	65%	65%	58%	50%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	65%	65%	55%	44%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	64%	63%	52%	38%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	65%	65%	52%	38%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	65%	65%	51%	35%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	65%	65%	50%	34%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	63%	62%	49%	32%	Pass	Pass	Fail	Pass
Chorlton Health Centre - South Windows (1F)	42%	32%	15%	4%	Fail	Fail	Fail	Fail
Chorlton Health Centre - South Windows (1F)	40%	32%	15%	6%	Fail	Pass	Fail	Fail
Chorlton Health Centre - South Windows (1F)	38%	19%	13%	7%	Fail	Pass	Fail	Fail
Chorlton Health Centre - South Windows (1F)	44%	32%	13%	10%	Fail	Pass	Fail	Fail
Chorlton Health Centre - South Windows (1F)	45%	35%	12%	9%	Fail	Pass	Fail	Fail

1 Selborne Road - South Windows (GF)	58%	48%	56%	45%	Pass	Pass	Pass	Pass
1 Selborne Road - South Windows (1F)	68%	70%	66%	66%	Pass	Pass	Pass	Pass
1 Selborne Road - South Windows (2F)	70%	75%	67%	69%	Pass	Pass	Pass	Pass
3 Selborne Road - South Windows (GF)	59%	51%	57%	47%	Pass	Pass	Pass	Pass
3 Selborne Road - South Windows (1F)	69%	73%	67%	69%	Pass	Pass	Pass	Pass
3 Selborne Road - South Windows (2F)	71%	76%	69%	72%	Pass	Pass	Pass	Pass
4 Selborne Road - South Windows (GF)	58%	56%	55%	51%	Pass	Pass	Pass	Pass
4 Selborne Road - South Windows (1F)	68%	67%	64%	60%	Pass	Pass	Pass	Pass
4 Selborne Road - South Windows (2F)	71%	73%	67%	66%	Pass	Pass	Pass	Pass
5 Selborne Road - South Windows (GF)	60%	54%	59%	51%	Pass	Pass	Pass	Pass
5 Selborne Road - South Windows (1F)	69%	73%	67%	69%	Pass	Pass	Pass	Pass
5 Selborne Road - South Windows (2F)	71%	78%	69%	73%	Pass	Pass	Pass	Pass
6 Selborne Road - South Windows (GF)	33%	28%	33%	28%	Pass	Pass	Pass	Pass
6 Selborne Road - South Windows (1F)	67%	66%	62%	57%	Pass	Pass	Pass	Pass
6 Selborne Road - South Windows (2F)	69%	70%	66%	64%	Pass	Pass	Pass	Pass
7 Selborne Road - South Windows (GF)	60%	53%	58%	50%	Pass	Pass	Pass	Pass
7 Selborne Road - South Windows (1F)	70%	75%	67%	69%	Pass	Pass	Pass	Pass
7 Selborne Road - South Windows (2F)	71%	78%	69%	72%	Pass	Pass	Pass	Pass
21 Keppel Road- South Windows (GF)	33%	31%	67%	66%	Pass	Pass	Pass	Pass
21 Keppel Road- South Windows (1F)	44%	43%	44%	41%	Pass	Pass	Pass	Pass
21 Keppel Road- South Windows (2F)	51%	48%	49%	44%	Pass	Pass	Pass	Pass
23 Keppel Road- South Windows (GF)	37%	31%	69%	73%	Pass	Pass	Pass	Pass
23 Keppel Road- South Windows (1F)	44%	43%	34%	23%	Pass	Pass	Fail	Pass
27 Keppel Road - South Windows (GF)	40%	43%	37%	38%	Pass	Pass	Pass	Pass
27 Keppel Road - South Windows (1F)	44%	44%	42%	40%	Pass	Pass	Pass	Pass
27 Keppel Road - South Windows (2F)	46%	45%	44%	41%	Pass	Pass	Pass	Pass
29 Keppel Road - South Windows (1F)	42%	38%	42%	38%	Pass	Pass	Pass	Pass
29 Keppel Road - South Windows (2F)	49%	46%	46%	41%	Pass	Pass	Pass	Pass
31 Keppel Road - South Windows (1F)	44%	38%	44%	38%	Pass	Pass	Pass	Pass
31 Keppel Road - South Windows (2F)	49%	48%	47%	44%	Pass	Pass	Pass	Pass
1 Warwick Road - South Windows (GF)	55%	42%	52%	37%	Pass	Pass	Pass	Pass
1 Warwick Road - South Windows (1F)	69%	72%	68%	71%	Pass	Pass	Pass	Pass
1 Warwick Road - South Windows (2F)	62%	67%	65%	72%	Pass	Pass	Pass	Pass
3 Warwick Road - South Windows (GF)	54%	41%	51%	35%	Pass	Pass	Pass	Pass
3 Warwick Road - South Windows (1F)	69%	73%	71%	77%	Pass	Pass	Pass	Pass
3 Warwick Road - South Windows (2F)	64%	70%	66%	74%	Pass	Pass	Pass	Pass
5 Warwick Road - South Windows (GF)	54%	41%	51%	35%	Pass	Pass	Pass	Pass
5 Warwick Road - South Windows (1F)	70%	75%	73%	81%	Pass	Pass	Pass	Pass
5 Warwick Road - South Windows (2F)	72%	79%	74%	84%	Pass	Pass	Pass	Pass
7 Warwick Road - South Windows (GF)	57%	50%	56%	47%	Pass	Pass	Pass	Pass
7 Warwick Road - South Windows (1F)	71%	76%	72%	80%	Pass	Pass	Pass	Pass
7 Warwick Road - South Windows (2F)	73%	81%	75%	85%	Pass	Pass	Pass	Pass
9 Warwick Road - South Windows (GF)	60%	53%	59%	52%	Pass	Pass	Pass	Pass
9 Warwick Road - South Windows (1F)	71%	76%	72%	78%	Pass	Pass	Pass	Pass
9 Warwick Road - South Windows (2F)	73%	81%	74%	84%	Pass	Pass	Pass	Pass
11 Warwick Road - South Windows (GF)	59%	51%	58%	50%	Pass	Pass	Pass	Pass
11 Warwick Road - South Windows (1F)	71%	78%	72%	79%	Pass	Pass	Pass	Pass
11 Warwick Road - South Windows (2F)	73%	81%	74%	84%	Pass	Pass	Pass	Pass
11A Warwick Road - South Windows (GF)	62%	57%	60%	54%	Pass	Pass	Pass	Pass
11A Warwick Road - South Windows (1F)	73%	81%	73%	81%	Pass	Pass	Pass	Pass
11A Warwick Road - South Windows (2F)	73%	81%	76%	88%	Pass	Pass	Pass	Pass

APPENDIX 3: Overshadowing Assessment Result

BWB Consulting

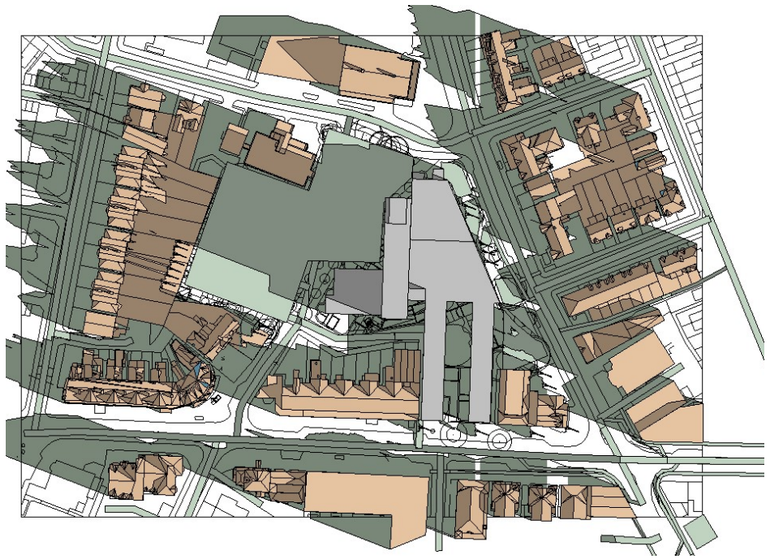
BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2021): Overshadowing Assessment

Project Name	Chorlton Precinct, Manchester
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P01
Date	01/11/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 2 - Transient Overshadowing Assessment Result

21st March - Existing

08:00



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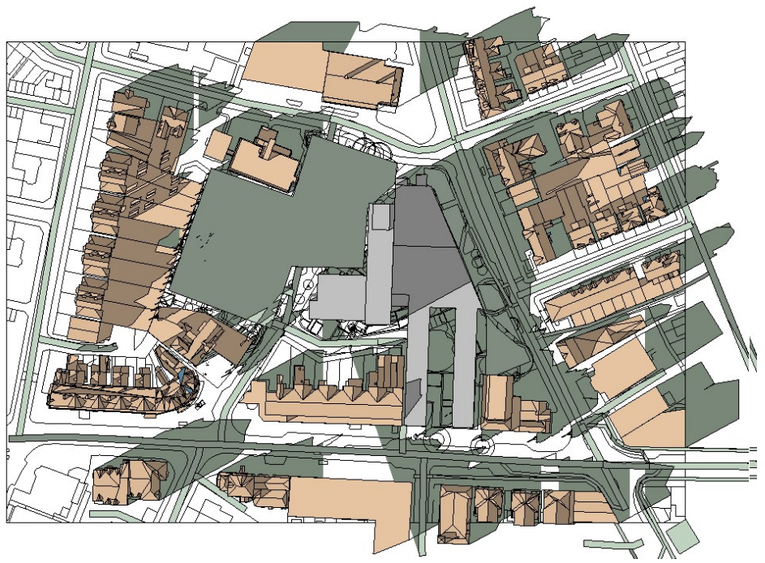
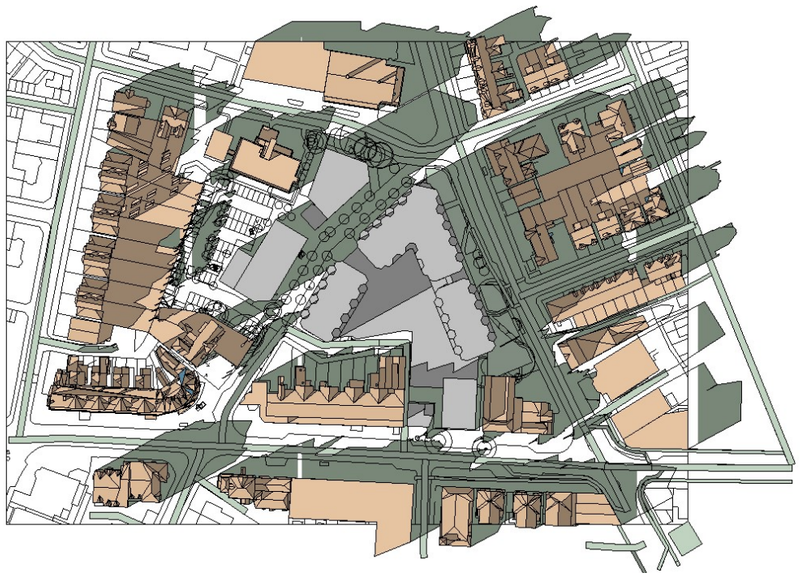


21st March - Proposed

08:00

12:00

16:00



BWB Consulting

BRE Site Layout Planning for Daylight and Sunlight (BRE Guide, 2021): Overshadowing Assessment

Project Name	Chorlton Precinct, Manchester
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P01
Date	01/11/2024
Consultant / Author	Marcus Thompson BSc(Hons) MSc

Appendix 3 - Overshadowing Assessment Result - Surrounding Amenity Spaces

OVERSHADOWING STUDY - RESULTS (GARDENS)

Area Reference	Existing Site			Proposed Site			Reduction in Comparison with Existing (Target is 80% of Existing)		Overall Compliance with BRE Criteria?
	Maximum Area of Sunlight (%)	Hours of Sunlight When More than 50% of Area is Exposed to Sunlight	BRE Criteria for 2 Hours of Sunlight Met?	Maximum Area of Sunlight (%)	Hours of Sunlight When More than **50%** of Area is Exposed to Sunlight	BRE Criteria for **2 Hours** of Sunlight Met?	Maximum Area of Sunlight (%)	Hours of Sunlight When More than 50% of Area is Exposed to Sunlight	
1 Selborne Road Garden	43	0	NO	43	0	NO	100%	#DIV/0!	PASS
3 Selborne Road Garden	39	0	NO	39	0	NO	100%	#DIV/0!	PASS
4 Selborne Road Garden	96	8	YES	96	7	YES	100%	88%	PASS
5 Selborne Road Garden	27	0	NO	27	0	NO	100%	#DIV/0!	PASS
6 Selborne Road Garden	100	7	YES	100	6	YES	100%	86%	PASS
7 Selborne Road Garden	48	0	NO	48	0	NO	100%	#DIV/0!	PASS
1 Oswald Road Garden	100	6	YES	100	6	YES	100%	100%	PASS
2 Oswald Road Garden	99	4	YES	91	7	YES	93%	175%	PASS
4 Oswald Road Garden	75	7	YES	75	6	YES	100%	86%	PASS
6 Oswald Road Garden	76	5	YES	80	5	YES	106%	100%	PASS
8 Oswald Road Garden	91	6	YES	80	6	YES	88%	100%	PASS
10 Oswald Road Garden	98	7	YES	80	6	YES	82%	86%	PASS
12 Oswald Road Garden	100	8	YES	82	6	YES	82%	75%	PASS
14 Oswald Road Garden	100	9	YES	84	7	YES	84%	78%	PASS
16 Oswald Road Garden	84	9	YES	82	7	YES	97%	78%	PASS
20 Oswald Road Garden	70	1	NO	21	0	NO	30%	0%	FAIL
22 Oswald Road Garden	51	1	NO	44	0	NO	85%	0%	PASS
1 Warwick Road Garden	47	0	NO	47	0	NO	100%	#DIV/0!	PASS
2 Warwick Road Garden	99	4	YES	99	4	YES	100%	100%	PASS
3 Warwick Road_Garden	48	0	NO	48	0	NO	100%	#DIV/0!	PASS
4 Warwick Road Garden	100	4	YES	100	4	YES	100%	100%	PASS
5 Warwick Road_Garden	68	2	YES	68	2	YES	100%	100%	PASS
6 Warwick Road_Garden	100	5	YES	100	5	YES	100%	100%	PASS
7 Warwick Road_Garden	81	3	YES	67	2	YES	82%	67%	PASS
8 Warwick Road_Garden	100	9	YES	100	8	YES	100%	89%	PASS
9 Warwick Road_Garden	59	1	NO	59	1	NO	100%	100%	PASS
10 Warwick Road_Garden	100	10	YES	100	9	YES	100%	90%	PASS
11 Warwick Road_Garden	62	1	NO	62	1	NO	100%	100%	PASS
11A Warwick Road_Garden	59	1	NO	59	1	NO	100%	100%	PASS
12 Warwick Road_Garden	98	10	YES	98	10	YES	100%	100%	PASS
14 Warwick Road_Garden	99	10	YES	99	10	YES	100%	100%	PASS
16 Warwick Road_Garden	100	10	YES	100	10	YES	100%	100%	PASS
18 Warwick Road_Garden	97	10	YES	97	10	YES	100%	100%	PASS
20 Warwick Road_Garden	100	11	YES	100	10	YES	100%	91%	PASS
21 Keppel Road Garden	100	6	YES	100	5	YES	100%	83%	PASS
23 Keppel Road Garden	86	7	YES	86	7	YES	100%	100%	PASS
27 Keppel Road Garden	97	6	YES	86	5	YES	88%	83%	PASS
29 Kepple Road Garden	88	4	YES	73	3	YES	84%	75%	PASS
5 Nicolas Road Garden	96	8	YES	96	6	YES	100%	75%	PASS
7 Nicolas Road Garden	87	7	YES	87	6	YES	100%	86%	PASS
13 Manchester Road Garden	38	0	NO	38	0	NO	100%	#DIV/0!	PASS
15 Manchester Road Garden	76	4	YES	76	4	YES	100%	100%	PASS

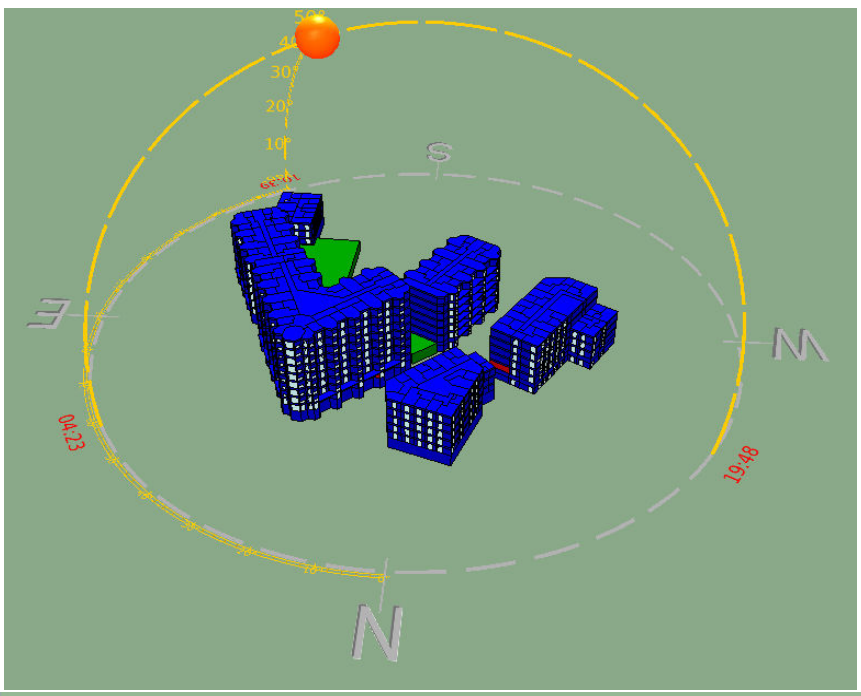
APPENDIX 4: Internal Daylight Assessment Result

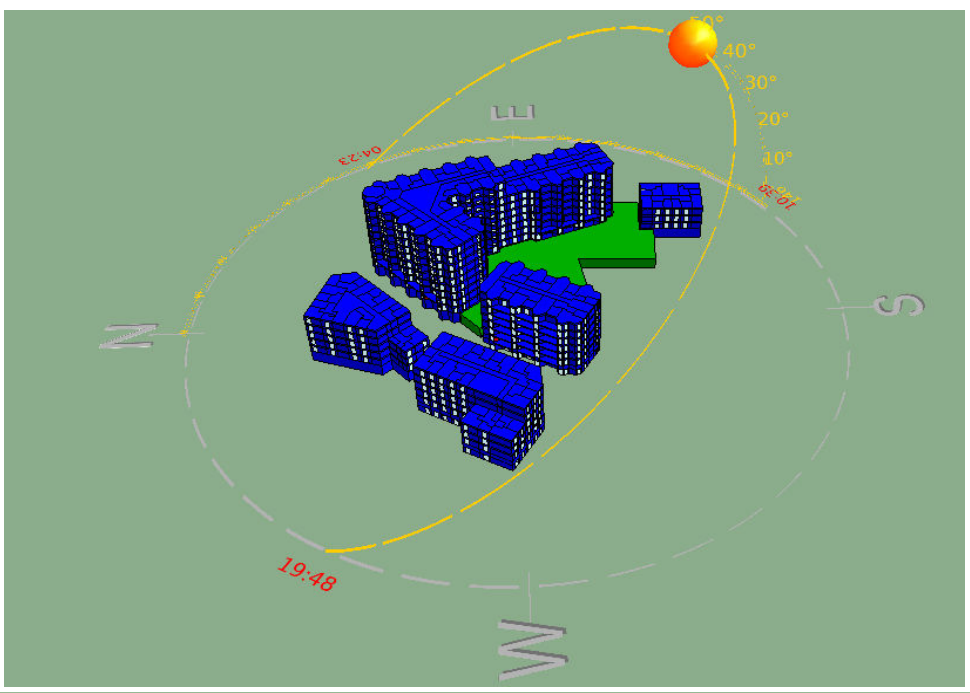
Project Name	Chorlton Precinct Redevelopment
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P01
Date	28/10/2024
IES VE Modeller / Consultant	Ariana Beepath MSc BASc
Checked / Approved	Mohammed Fatade BSc(Hons) MSc

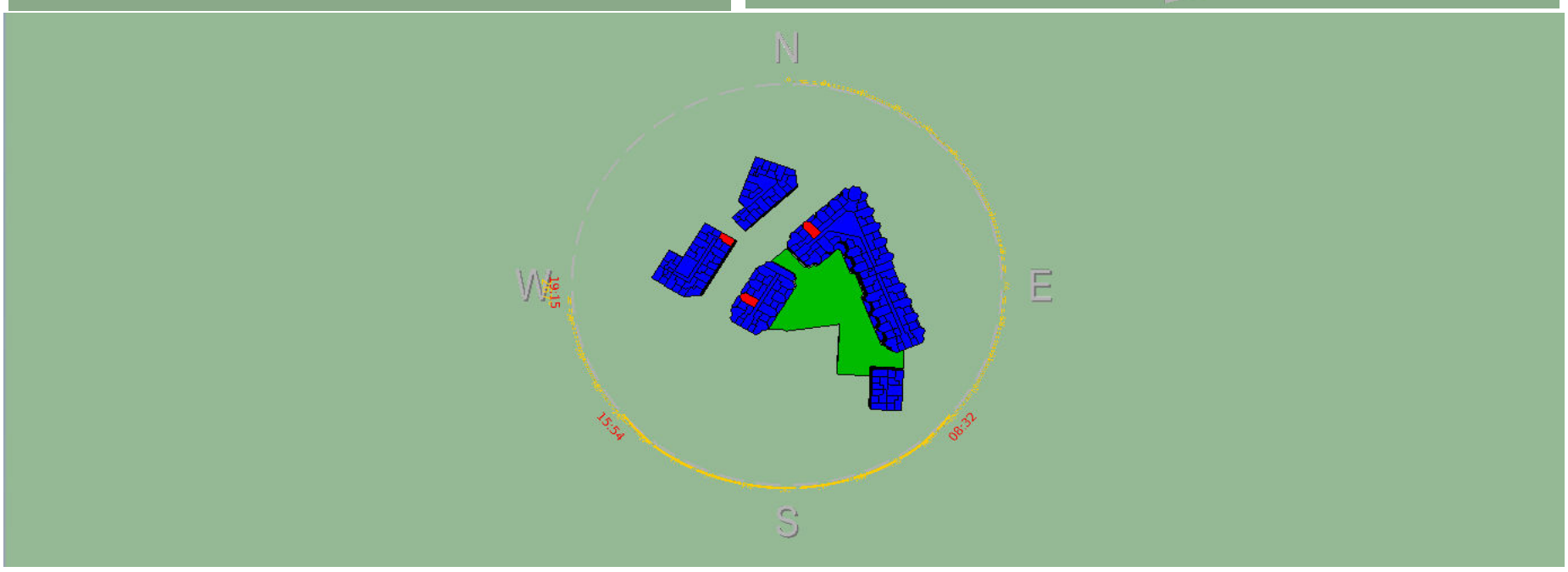
Internal Daylight (Target Illuminance) Assessment Result - BRE Default Reflectance Value

DAYLIGHT STUDY - RESULTS (PROPOSED DEVELOPMENT)						
Building Reference	Room assessed	Window Orientation	BRE Target		Compliance with BRE Criteria Met?	
			Lux	Assessment (Grid) Points in the Room	Result (% =/> 50%)	Overall Compliance
BLOCK A -First Floor						
01_A1	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW&SE	200.00	50.00%	100%	Pass
01_A2	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	64%	Pass
01_A3	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A4	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	98%	Pass
01_A5	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	58%	Pass
01_A6	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	95%	Pass
01_A7	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE&NW	200.00	50.00%	100%	Pass
01_A8	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	100%	Pass
01_A9	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	40%	Fail
01_A10	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	100%	Pass
BLOCK B -First Floor						
01_A1	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A2	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A3	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A4	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A5	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
01_A6	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	71%	Pass
01_A7	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
01_A8	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
BLOCK C -First Floor						
01_A1	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	100%	Pass
01_A2	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	30%	Fail
01_A3	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	68%	Pass
01_A4	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
01_A5	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
01_A6	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
BLOCK D -First Floor						
01_A1	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A2	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SW	200.00	50.00%	100%	Pass
01_A3	Bedroom	SW	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass

	Living/Kitchen/Dining	SE	200.00	50.00%	100%	Pass
01_A4	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	82%	Pass
01_A5	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	62%	Pass
01_A6	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	48%	Fail
01_A7	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE&NW	200.00	50.00%	100%	Pass
01_A8	Bedroom	NW	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	100%	Pass
01_A9	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE&NE	200.00	50.00%	100%	Pass
BLOCK E- First Floor						
01_A1	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE&SE	200.00	50.00%	100%	Pass
01_A2	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	75%	Pass
01_A3	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	SE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	SE	200.00	50.00%	58%	Pass
01_A4	Bedroom	SE	100.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	100%	Pass
	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	100%	Pass
01_A5	Bedroom	NE	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE	200.00	50.00%	84%	Pass
01_A6	Bedroom	NE	100.00	50.00%	100%	Pass
	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NE&NW	200.00	50.00%	100%	Pass
01_A7	Bedroom	NW	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	NW	200.00	50.00%	100%	Pass
BLOCK F- First Floor						
01_A1	Bedroom	W	100.00	50.00%	100%	Pass
	Bedroom	W	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	S&W	200.00	50.00%	100%	Pass
01_A2	Bedroom	W	100.00	50.00%	100%	Pass
	Bedroom	W	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	N&W	200.00	50.00%	100%	Pass
01_A3	Bedroom	N	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	N&E	200.00	50.00%	100%	Pass
01_A4	Bedroom	S	100.00	50.00%	100%	Pass
	Living/Kitchen/Dining	S&E	200.00	50.00%	100%	Pass
ROOMS FAILING SHOWN IN RED						







APPENDIX 5: Internal Sunlight Assessment Result

BWB Consulting

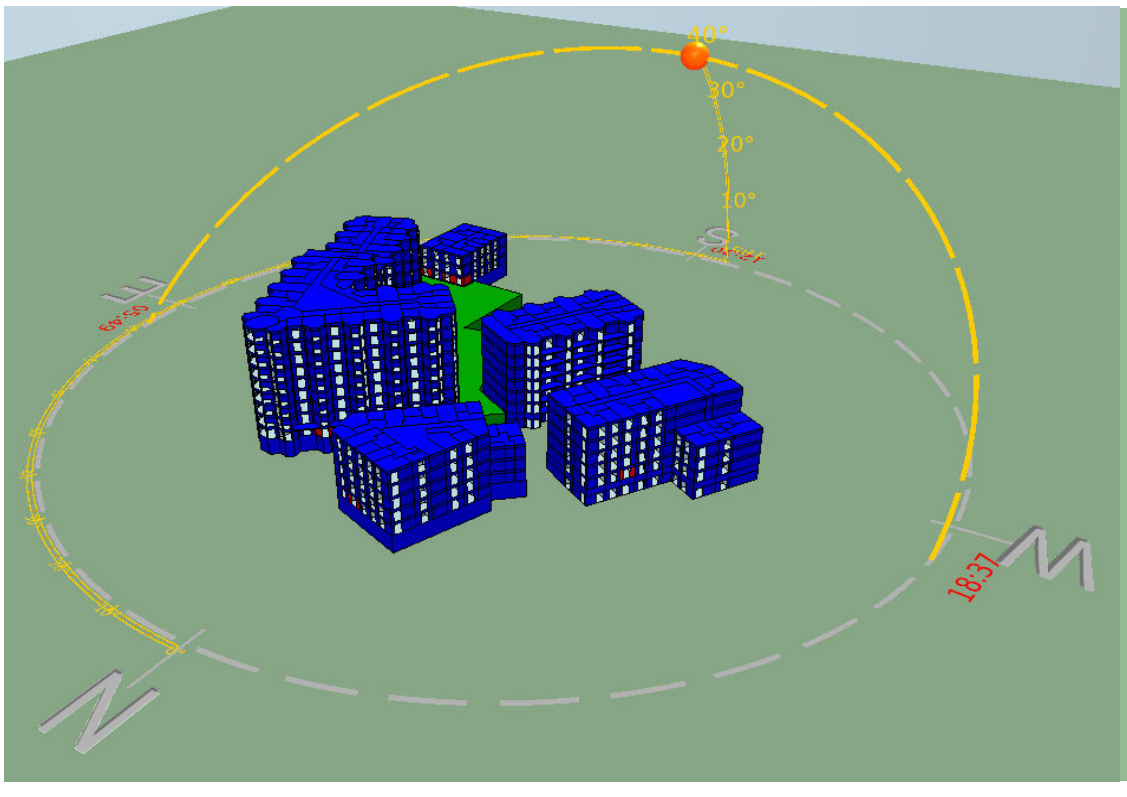
Building Research Establishment's (BRE) Guide 2022 / British Standard BS EN 17037 - Internal Sunlight Assessment

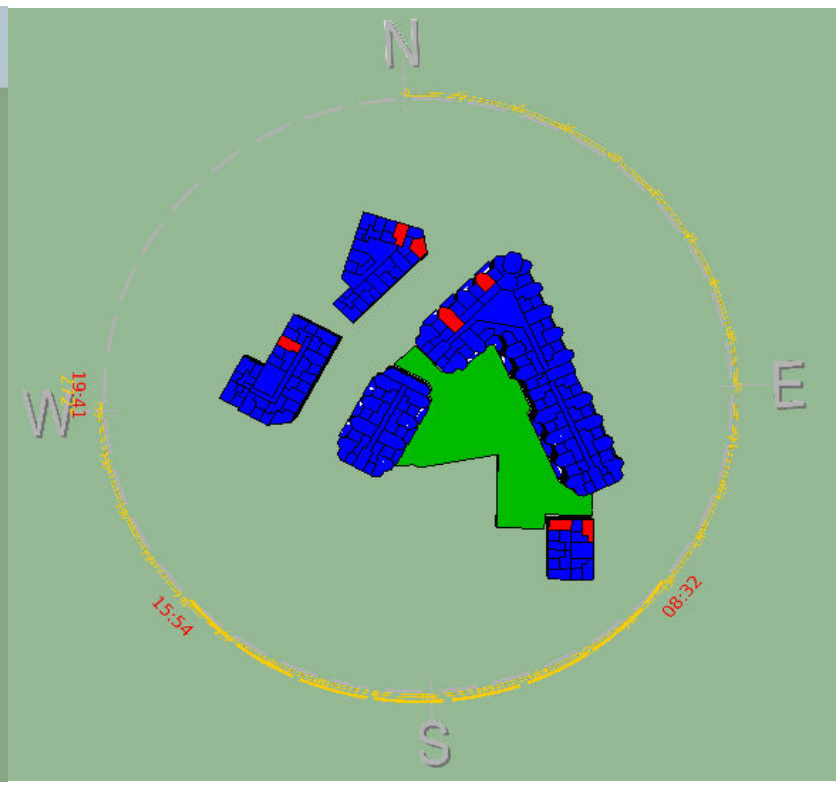
Project Name	Chorlton Precinct Redevelopment
Project Number	233048
Weather Location	Manchester
Status	S2
Revision	P01
Date	28/10/2024
IES VE Modeller / Consultant	Ariana Beepath MSc BASc
Checked / Approved	Mohammed Fatade BSc(Hons) MSc

Internal Sunlight Assessment (Minimum, Medium, and High Levels of Sunlight Hours Metric)

SUNLIGHT STUDY RESULT					
Room Reference	**Lightwel Apartments**	**Compliance with BRE Criteria Met?**			
	Hours of Sunlight	Minimum 1.5 Hours	Medium 3.0 Hours	Maximum 4.0 Hours	**Overall Compliance**
BLOCK A					
00_BLOCK A_1F_A1	5.00	Pass	Pass	Pass	Pass
00_BLOCK A_1F_A2	4.00	Pass	Pass	Pass	Pass
00_BLOCK A_1F_A3	4.00	Pass	Pass	Pass	Pass
00_BLOCK A_1F_A4	4.00	Pass	Pass	Pass	Pass
00_BLOCK A_1F_A5	4.00	Pass	Pass	Pass	Pass
00_BLOCK A_1F_A6	3.00	Pass	Pass	Fail	Pass
00_BLOCK A_1F_A7	2.00	Pass	Fail	Fail	Pass
00_BLOCK A_1F_A8	1.00	Fail	Fail	Fail	Fail
00_BLOCK A_1F_A9	1.00	Fail	Fail	Fail	Fail
00_BLOCK A_1F_A10	2.00	Pass	Fail	Fail	Pass
BLOCK B					
00_BLOCK B_1F_A1	5.00	Pass	Pass	Pass	Pass
00_BLOCK B_1F_A2	5.00	Pass	Pass	Pass	Pass
00_BLOCK B_1F_A3	5.00	Pass	Pass	Pass	Pass
00_BLOCK B_1F_A4	8.00	Pass	Pass	Pass	Pass
00_BLOCK B_1F_A5	6.00	Pass	Pass	Pass	Pass
00_BLOCK B_1F_A6	3.00	Pass	Pass	Fail	Pass
00_BLOCK B_1F_A7	3.00	Pass	Pass	Fail	Pass
00_BLOCK B_1F_A8	4.00	Pass	Pass	Pass	Pass
BLOCK C					
00_BLOCK C_1F_A1	5.00	Pass	Pass	Pass	Pass
00_BLOCK C_1F_A2	3.00	Pass	Pass	Fail	Pass
00_BLOCK C_1F_A3	2.00	Pass	Fail	Fail	Pass
00_BLOCK C_1F_A4	8.00	Pass	Pass	Pass	Pass
00_BLOCK C_1F_A5	6.00	Pass	Pass	Pass	Pass
00_BLOCK C_1F_A6	5.00	Pass	Pass	Pass	Pass
BLOCK D					
00_BLOCK D_1F_A1	9.00	Pass	Pass	Pass	Pass
00_BLOCK D_1F_A2	9.00	Pass	Pass	Pass	Pass
00_BLOCK D_1F_A3	9.00	Pass	Pass	Pass	Pass
00_BLOCK D_1F_A4	3.00	Pass	Pass	Fail	Pass
00_BLOCK D_1F_A5	2.00	Pass	Fail	Fail	Pass
00_BLOCK D_1F_A6	2.00	Pass	Fail	Fail	Pass
00_BLOCK D_1F_A7	4.00	Pass	Pass	Pass	Pass
00_BLOCK D_1F_A8	1.00	Fail	Fail	Fail	Fail
00_BLOCK D_1F_A9	3.00	Pass	Pass	Fail	Pass
BLOCK E					
00_BLOCK E_1F_A1	4.00	Pass	Pass	Pass	Pass
00_BLOCK E_1F_A2	4.00	Pass	Pass	Pass	Pass
00_BLOCK E_1F_A3	3.00	Pass	Pass	Fail	Pass
00_BLOCK E_1F_A4	1.00	Fail	Fail	Fail	Fail
00_BLOCK E_1F_A5	1.00	Fail	Fail	Fail	Fail
00_BLOCK E_1F_A6	4.00	Pass	Pass	Pass	Pass
00_BLOCK E_1F_A7	3.00	Pass	Pass	Fail	Pass
BLOCK F					
00_BLOCK F_1F_A1	10.00	Pass	Pass	Pass	Pass
00_BLOCK F_1F_A2	0.00	Fail	Fail	Fail	Fail
00_BLOCK F_1F_A3	0.00	Fail	Fail	Fail	Fail
00_BLOCK F_1F_A4	9.00	Pass	Pass	Pass	Pass

ROOMS FAILING SHOWN IN RED





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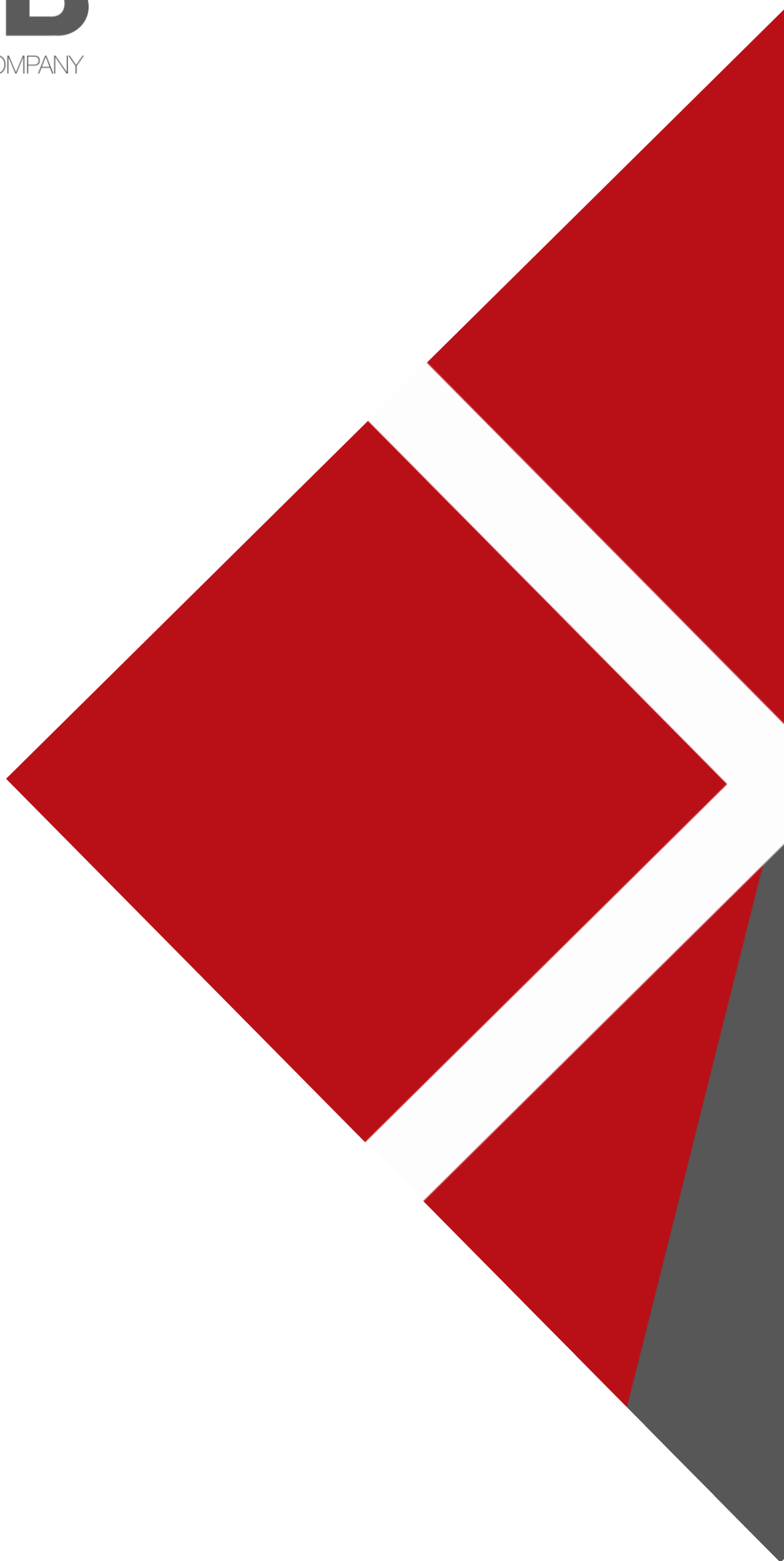

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