

105-111 WINCHESTER ROAD

INTERNAL DAYLIGHT AND SUNLIGHT REPORT

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DATE: 04 OCTOBER 2024
VERSION: V1
PROJECT: 3842

Contents

1	Executive Summary.....	3
2	Sources of Information	4
3	Planning Policy	5
4	Assessment Methodology.....	6
5	Alternative Target Values and Applying a Flexible Approach.....	8
6	Assumptions used in the analysis	9
7	Internal Daylight and Sunlight Analysis	10
8	Conclusions	11

APPENDICES

Appendix 1: Internal Daylight and Sunlight Results

1 Executive Summary

- 1.1 Heathwell Ltd have instructed Point 2 to assess the daylight and sunlight internally to the proposed rear second floor scheme at 105-111 Winchester Road (the “Proposed Development”).
- 1.2 The analysis has been based on the scheme drawings by Oaten Architects and a 3D context model of the site and surrounding buildings.
- 1.3 The analysis has been carried out in accordance with the methodologies contained in the Building Research Establishment’s *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice* (2022) (known as the “BRE Guidelines”), which is used by the local authority to determine the acceptability of a proposal in terms of its daylight and sunlight provision.
- 1.4 All rooms will meet their target value for daylight and, as such, the scheme complies with Schedule 2, Part 3 of The Town and Country Planning (General Permitted Development) (England) Order 2015 in terms of providing adequate natural light to all dwellings.



2 Sources of Information

2.1 In the process of compiling this report, the following sources of information have been used:

Oaten Architects

- Proposed Scheme Information (received 25.09.24)

Point 2

- 3D Context Model

3 Planning Policy

- 3.1 Below we have set out relevant sections from the planning policies and guidance documents as they are, in our opinion, the most pertinent in relation to daylight and sunlight internally to proposed developments.

Permitted Development Legislation

- 3.2 Schedule 2, Part 3 of The Town and Country Planning (General Permitted Development) (England) Order 2015 (the “GPDO”) states that, where the application relates to prior approval as to adequate natural light, the local planning authority must refuse prior approval if adequate natural light is not provided in all the habitable rooms of the dwellinghouses. However, no definition as to what ‘adequate natural light’ constitutes is provided in the legislation.

NATIONAL PLANNING POLICY

National Planning Policy Framework (NPPF) 2023

- 3.3 Paragraph 129 of the NPPF states:

“Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities and ensure that developments make optimal use of the potential of each site. In these circumstances: ...

(c) 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).”

LOCAL PLANNING POLICY

Eastleigh Borough Local Plan (2016-2036)

- 3.4 Policy DM1 of the local plan states:

“All new development should (as relevant):

a. not have an unacceptable impact on, and where possible should enhance:

i. residential amenities of both new and existing residents;”

4 Assessment Methodology

THE BRE GUIDELINES

- 4.1 The main reference used to determine the acceptability of proposals in terms of their internal daylight and sunlight is the BRE Guidelines, used in conjunction with British Standard Daylight in Buildings, BS EN 17037.
- 4.2 The BRE Guidelines is a document that is applied across the country. Due to its national application, the framework is a 'one size fits all' approach to the assessment of daylight and sunlight. Theoretically, the methodology and subsequent technical specification offered by the BRE Guidelines is applicable to all manner of built environments, ranging from villages to dense city centres, to areas where significant regeneration is taking place. Notwithstanding the stark disparity between these environments, the suggested target daylight and sunlight values remain consistent despite a suburban setting having very little in common with inner urban locations.

Internal Daylight and Sunlight Criteria for New Builds

- 4.3 The BRE Guidelines set out their interior daylight recommendations in Appendix C of their document. They refer to the British Standard Daylight in Buildings BS EN17037 and its UK National Annex which sets out two criteria for assessing interior daylight. Daylight provision in new rooms may be checked using either of the methods in BS EN 17037. One is based on target illuminances from daylight to be achieved over specified fractions of the reference plane (a plane at table top height covering the room) for at least half of the daylight hours in a typical year. The other, alternative, method is based on calculating the daylight factors achieved over specified fractions of the reference plane. We have undertaken the assessment based on the illuminance method.
- 4.4 This 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.
- 4.5 The UK National Annex gives illuminance recommendations of:
- 100 lux in bedrooms
 - 150 lux in living rooms
 - 200 lux in kitchens.
- 4.6 These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK.
- 4.7 The BRE Guidelines state in paragraph C17 that:

"Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if

students would often spend time in their rooms during the day. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design."

4.8 For internal sunlight, the BRE Guidelines state in paragraph 3.1.15:

"In general a dwelling, or non-domestic building that has a particular requirement for sunlight, will appear reasonably sunlit provided:

- at least one main window wall faces within 90° of due south and*
- a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted."*

5 Alternative Target Values and Applying a Flexible Approach

- 5.1 The BRE Guidelines specify that the daylight and sunlight results be considered flexibly and in the context of the site. Clearly, there would be a higher expectation for daylight and sunlight in a rural or suburban environment than in a dense city centre location. The important factor in all cases is that the levels of daylight and sunlight are appropriate, taking into account all the planning policy requirements of the site. The BRE Guidelines acknowledge this in the introduction where they state in paragraph 1.6:

“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 as natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values.”

- 5.2 The numerical figures set out in the BRE Guidelines should therefore not be rigidly applied, but instead used as part of the overall evaluation of the daylight and sunlight in context of the site and the need for regeneration and local planning policy guidance for the site.

- 5.3 Applying flexibility when considering the BRE Guidelines in planning terms is also supported by the National Planning Policy Framework (NPPF) (December 2023) which states in paragraph 129:

“Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances:

...

(c) 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).”

6 Assumptions used in the analysis

6.1 The following reflectance, transmittance, maintenance and framing values have been used in the internal daylight calculations:

- Transmittance (T): 0.68
- Internal Surface Reflectance Values: 0.4 for floors, 0.8 for ceilings, and 0.7 for walls
- External Surface Reflectance Values: 0.2 for exterior ground, 0.2 for exterior walls and obstructions
- Maintenance Factor: 0.92 (urban)
- Framing Factor: 0.8

6.2 BS EN 17037 section B.3.1 states that, *“the recommended values of reflectance for the major interior surfaces would be in the following ranges: ceiling 0.7 to 0.9; interior walls 0.5 to 0.8; floor 0.2 to 0.4.”* Paragraph C24 of the BRE Guidelines meanwhile states, *“Where surface finishes have been specified or measured on site, they can be used in the calculations with appropriate factors for maintenance and furniture. To allow for these factors, maximum reflectances for white painted surfaces in the calculations should not exceed 0.8 indoors, and 0.6 outdoors. Maximum reflectances for light pastel walls should not exceed 0.7 in the calculations, and maximum reflectances for light wood floors should not exceed 0.4.”*

7 Internal Daylight and Sunlight Analysis

- 7.1 The results of the internal daylight and sunlight analysis are included in Appendix 1. The methodologies and target values are detailed above in Section 4.

RESULTS

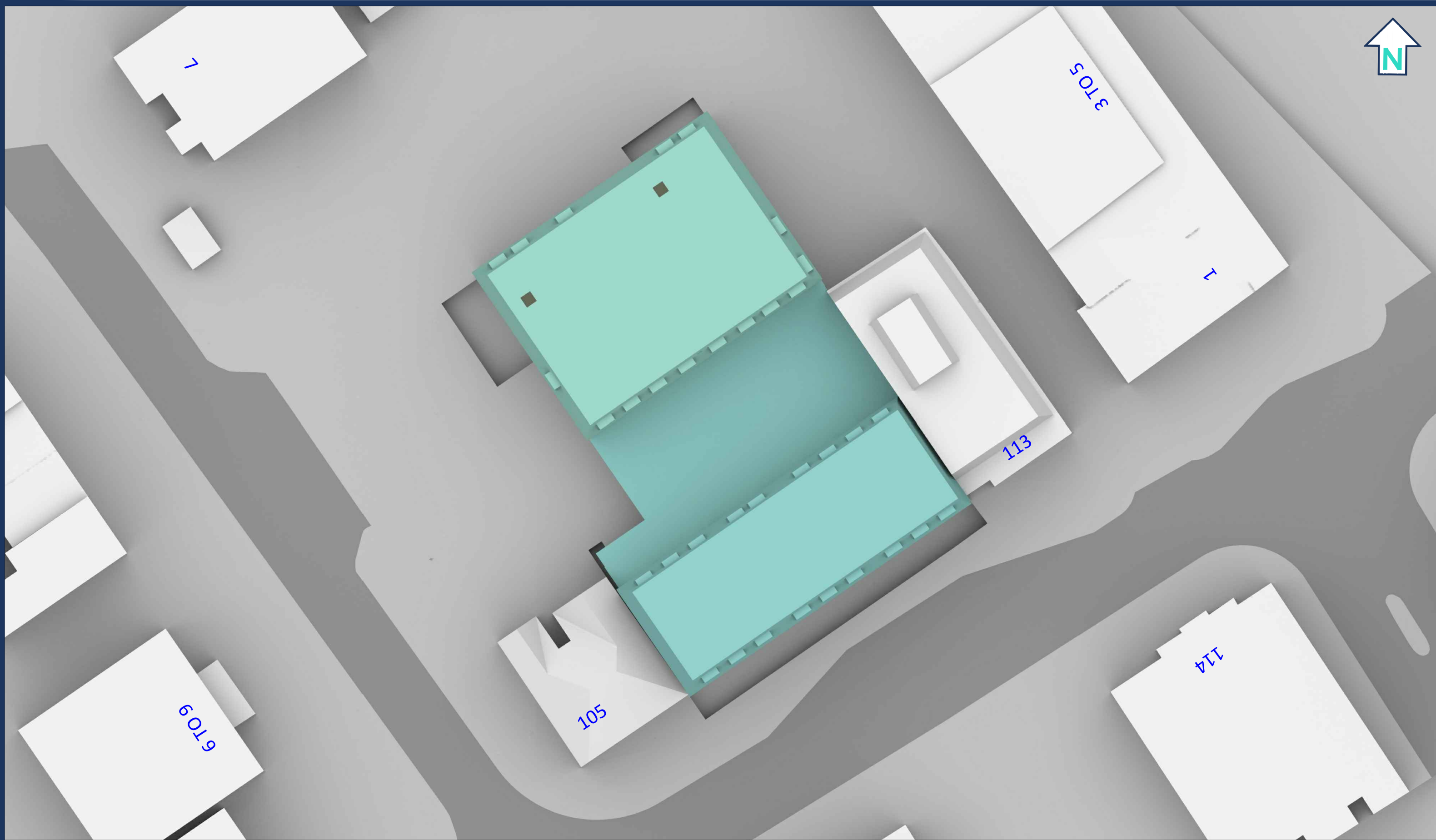
- 7.2 In daylight terms, all rooms meet their target illuminance.
- 7.3 In sunlight terms, all units meet for sunlight exposure.

8 Conclusions

- 8.1 Heathwell Ltd have instructed Point 2 to assess the daylight and sunlight within the Proposed Development.
- 8.2 The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines, which is used by the local authority to determine the acceptability of a proposal in terms of its daylight and sunlight amenity.
- 8.3 All rooms will meet their target value for daylight and, as such, the scheme complies with Schedule 2, Part 3 of The Town and Country Planning (General Permitted Development) (England) Order 2015 in terms of providing adequate natural light to all dwellings.

Appendix 1:

Internal Daylight and Sunlight
Results



Sources: ARCHITECT INFO
240925 CHANDLERS FORD 2F rear.dwg

Key:  Existing Buildings
 Proposed Scheme

Project: 105-111 Winchester Road
London

Title: PROPOSED VIEW

Scheme Confirmed:

-

Date:

-

Drawn By:

DF

Scale:

1:300@A3

Date:

OCT 24

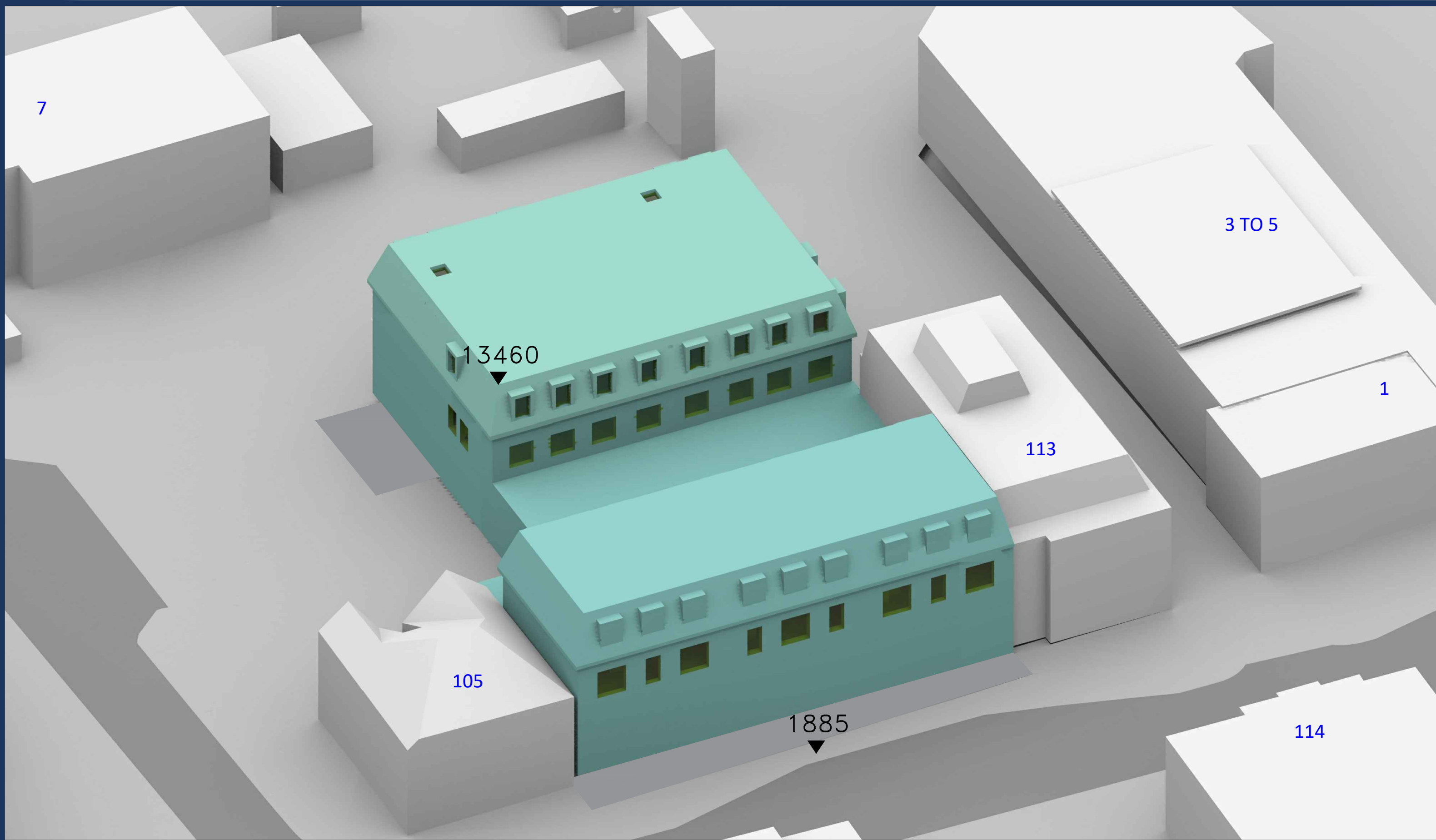
Dwg No:

P3842/01/

Rel:

01





Sources: ARCHITECT INFO
240925 CHANDLERS FORD 2F rear.dwg

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 105-111 Winchester Road
London

Title: PROPOSED 3D VIEW

Scheme Confirmed:

-

Date:

-

Drawn By:

DF

Scale:

@A3

Date:

OCT 24

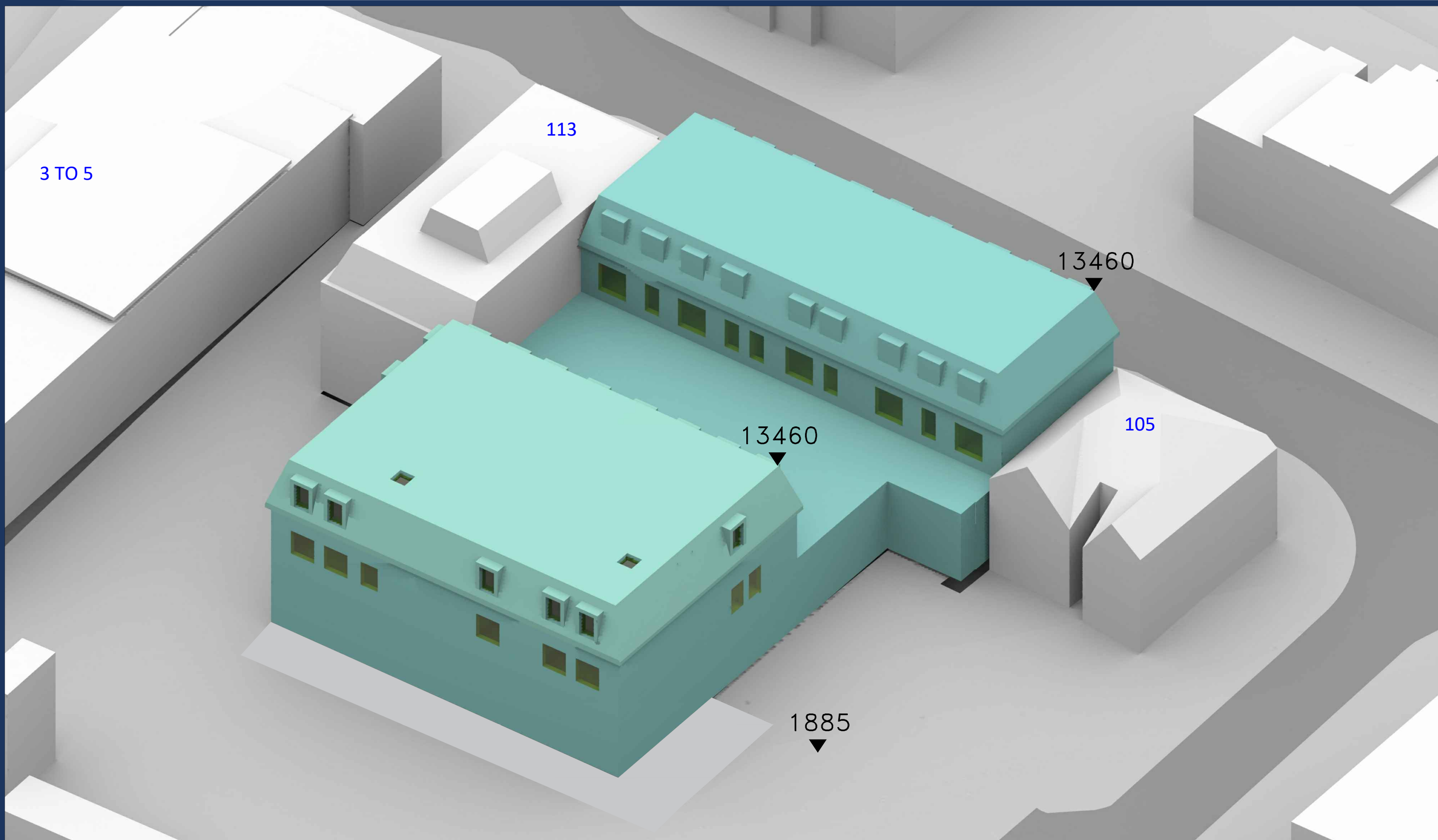
Dwg No:

P3842/02/

Rel:

01





Sources: ARCHITECT INFO
240925 CHANDLERS FORD 2F rear.dwg

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 105-111 Winchester Road
London

Title: PROPOSED 3D VIEW

Scheme Confirmed:

-

Date:

-

Drawn By:
DF

Scale:
@A3

Date:
OCT 24

Dwg No:
P3842/03/

Rel:
01





Second Floor

Sources: ARCHITECT INFO 240925 CHANDLERS FORD 2F rear.dwg	Key: Daylight Illuminance (achieved for 50% of daylight hours) <50 Lux >50 Lux >100 Lux >150 Lux >200 Lux Median Illuminance (Lux) Levels shown for each room. Recommended Targets: Bedroom 100 Lux Living Room 150 Lux Kitchen 200 Lux LKD 150 Lux		Project: 105-111 Winchester Road London		Title: Climate Based Daylight Modelling (CBDM) Assessment Median Daylight Illuminance	
	Scheme Confirmed: -	Date: -	Drawn By: DF	Scale: 1:120@A3	Date: OCT 24	Dwg No: P3842/CBDM/01





BRE CBDM ANALYSIS

PROJECT NAME, 105-111 Winchester Road, London
PROPOSED

BRE CBDM ANALYSIS

Room Label	Room Use	Room Use Target Illuminance Lux	Median Illuminance Lux	BRE Compliant
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Proposed

R1/112	LKD	150	403.9	✓
R2/112	BEDROOM	100	254.8	✓
R3/112	BEDROOM	100	250.8	✓
R4/112	LD	150	175	✓
R5/112	LD	150	172.3	✓
R6/112	BEDROOM	100	244.7	✓
R7/112	LKD	150	425	✓
R8/112	BEDROOM	100	237.9	✓
R9/112	STUDY	150	378.3	✓
R10/112	BEDROOM	100	213.5	✓
R11/112	LKD	150	455.3	✓
				100.0%

105-111 Winchester Road, LONDON
SCHEME 250924

SUNLIGHT EXPOSURE

Unit	Room	Room Use	Date	Sunlight Exposure (Hours)	Room Complies?	Unit Complies?
Proposed						
None	R1/112	LKD	21-Mar	11.5	✓	✓
	R2/112	BEDROOM	21-Mar	6.8	✓	
	R3/112	BEDROOM	21-Mar	7.1	✓	✓
	R4/112	LD	17-Mar	7.0	✓	
	R5/112	LD	10-Mar	6.7	✓	✓
	R6/112	BEDROOM	22-Feb	6.3	✓	
	R7/112	LKD	21-Mar	6.8	✓	✓
	R8/112	BEDROOM	21-Mar	2.2	✓	
	R9/112	STUDY	21-Mar	6.3	✓	✓
	R10/112	BEDROOM	21-Mar	0.3	✗	✓
	R11/112	LKD	21-Mar	6.3	✓	
					90.9%	100.0%
					90.9%	100.0%

