BRITANNIA STREET CARPARK
LONDON BOROUGH OF CAMDEN

INTERNAL DAYLIGHT & SUNLIGHT ASSESSMENT

DIRECTOR: LIAM DUNFORD
CLIENT: CURLEW
DATE: JANUARY 2025
VERSION: RELEASE 12 FINAL 02
PROJECT: P3376

Contents

Appendices

1 Introduction

1.1 This report considers the daylight (CBDM) & sunlight amenity of the proposed redevelopment of Britannia Street Carpark – scheme received 02 January 2025. Through the planning process the local authority will wish to be reassured that the construction of the new scheme will benefit from acceptable levels of internal daylight amenity within BRE and British Standard Guidance.

1.2 The Local Authority will be informed in this by the BRE document entitled Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2022 (the BRE guidelines). This document is the principal guidance in this area and sets out the methodology for measuring light.

1.3 The BRE guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located, and the internal daylight amenity will be one of several planning considerations which the local authority will weigh.

2 Sources of Information

2.1 In compiling this report, we have used the following information:

Point 2 Surveyors

Site Photos

Plowman Craven

Survey Info (received 14/09/23)

F48542-001-PCL-RM-ZZ-M3-Y-00001-S3-P01.dwg

Sheppard Robson

Proposed Info (received 02/01/25)

6910-SRA-ZZ-ZZ-M3-A-00001.rvt

6910-SRA-ZZ-ZZ-M3-A-00002.rvt

6910-SRA-ZZ-ZZ-M3-A-00003.rvt

Historic Existing info (received 05/09/24)

Britain from Above - Britannia Street 1951.png

Britain from Above - Britannia Street 1951 - 2.png

Consented Scheme info (planning application approved 21/03/07)

Drawing (1).PDF

3 Methodology

Daylight within Proposed Developments

3.1 The 2022 revision of the BRE guidelines provides that Climate Based Daylight Modelling ("CBDM") can be used to assess internal daylight and sunlight. The new methodology is more complex versus the previous ADF assessment and has targets that are generally more difficult to achieve in an urban context.

Climate Based Daylight Modelling (CBDM)

3.2 The new CBDM methodology is based on the British Standard 'Daylight in Buildings' (BS EN17037). This contains advice and guidance on interior daylighting for all buildings across Europe but also has a UK National Annex which provides suggested targets for dwellings in the UK.

3.3 BS EN17037 supersedes BS 8206 Part 2 which was based on Average Daylight Factor ("ADF") and is no longer recommended.

3.4 The CBDM methodology is based on target illuminances from daylight. This is the Daylight Illuminance (DI) to be achieved over half the area of the room (measured on a reference plane at tabletop level) for at least half of the daylight hours in a typical year. The calculations are based on weather data files which cover different regions of the UK. The calculations are done for each hour of the day for every day of the year. There are 8760 hours in the year, of which 4380 are daylight hours, and therefore the targets should be achieved for 2190 hours in the year. The methodology uses a more accurate sky model which simulates the movement of the sun throughout the day and accounts for the weather conditions at the time. As a result, CBDM accounts for the presence of sunlight and therefore the orientation of the rooms/windows is accounted for. A south facing room is likely to have access to higher levels of natural light than a north facing room and as a result, a north facing room would typically need larger windows to comply.

3.5 The UK National Annex provides illuminance recommendations of:

- 100 Lux in bedrooms;
- 150 Lux in living rooms; and
- 200 Lux in kitchens.

3.6 These are median illuminances to be achieved over 50% of the assessment grid for at least half of the daylight hours.

3.7 Where a room has a shared use, the highest target should apply. However, it also says that Local Authorities could use discretion here and that a living room target of 150 Lux could be used for combined living/kitchen/dining rooms if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in the design.

3.8 There is a further simplistic methodology based on daylight factors (not the same as the old ADF methodology), which does not use climate-based data but uses a simple fixed sky model. However, since this alternative simplistic methodology does not account for the effect of sunlight, or the orientation of the room, it has not been used in our assessment.

Sunlight within Proposed Developments

3.9 For new buildings, the BRE guidelines refer to BS EN 17037 which says that a space should receive a minimum of 1.5 hours of sunlight on a selected date between 1st February and 21st March with cloudless conditions. The BRE guidelines suggests 21st March be used. For dwellings, at least one habitable room, preferably a main living room, should achieve at least this minimum criterion and that at least one main window faces within 90° of south. Whilst BS EN 17037 applies to all orientations, the BRE guidelines say that if the room faces significantly north of due east or west, the criterion is unlikely to be met.

4 Parameters and Assumptions

4.1 In order to calculate the various measures of daylight and sunlight it is necessary to construct a 3D computer model. The model is then analysed using proprietary software to calculate the various measures of daylight and sunlight.

4.2 The 3D model was created to reproduce the massing of the buildings both on and surrounding the site at a level of detail appropriate to the calculations performed.

4.3 In relation to the CBDM assessment of the daylight and sunlight within the proposed scheme, the following assumptions and parameters have been used.

- Light pastel internal painted walls with a reflectance of 0.7;
- Light wood veneer floors/ cream carpets with a reflectance of 0.4;
- White ceilings with a reflectance of 0.8; and
- All external reflectance levels have been assumed as 0.2 (equivalent to red brick) as per the guidelines.
- A transmittance factor of 0.68 for standard double glazing;
- A maintenance factor of 8% has been allowed to account for the effect of dirt on the glass in an urban environment.

4.4 Double glazing has been assumed as standard. If any units will benefit from triple glazing, coatings and treatments, these will need to be reflected in the analysis and could impact on results as this will decrease the transmittance factor accordingly.

4.5 The room assessment grid area excludes a 300mm band around the perimeter of the room, as per the paragraph C28 of the BRE guidelines.

5 Internal Daylight & Sunlight Assessment

5.1 Full and detailed analysis annotated upon floor layout plans are provided within the Appendix (see drawing reference P3376/CBDM/03-08). These show both the locations and configurations of the rooms which have been analysed, together with the distribution of daylight illuminance (Lux levels) that are achieved for 50% of daylight hours and the median daylight illuminance figure for each room.

5.2 One hundred and twenty-one purpose build student accommodation (PBSA) bedrooms and four studies have been assessed across the first to the sixth floors, this represents all floors within the block which contain bedrooms.

Internal Daylight Amenity

5.3 One hundred and four of the one hundred and twenty-one bedrooms (86%) and all four of the studies within the proposal meet or surpass the desired lux target value appropriate for the rooms' usages, this provides a total compliance of 86.4%.

5.4 The seventeen bedroom derogations are rooms predominantly located on the first floor (twelve rooms), with four on the second floor and one on the third floor. Despite the derogations, interrogation of the plots (P3376/CBDM/03-05) where the derogations are present indicates that all rooms will enjoy light levels of 200 lux or greater at the front of the rooms where the main living area is located. We consider that despite these derogations, all rooms will enjoy good daylight.

Internal Sunlight Amenity

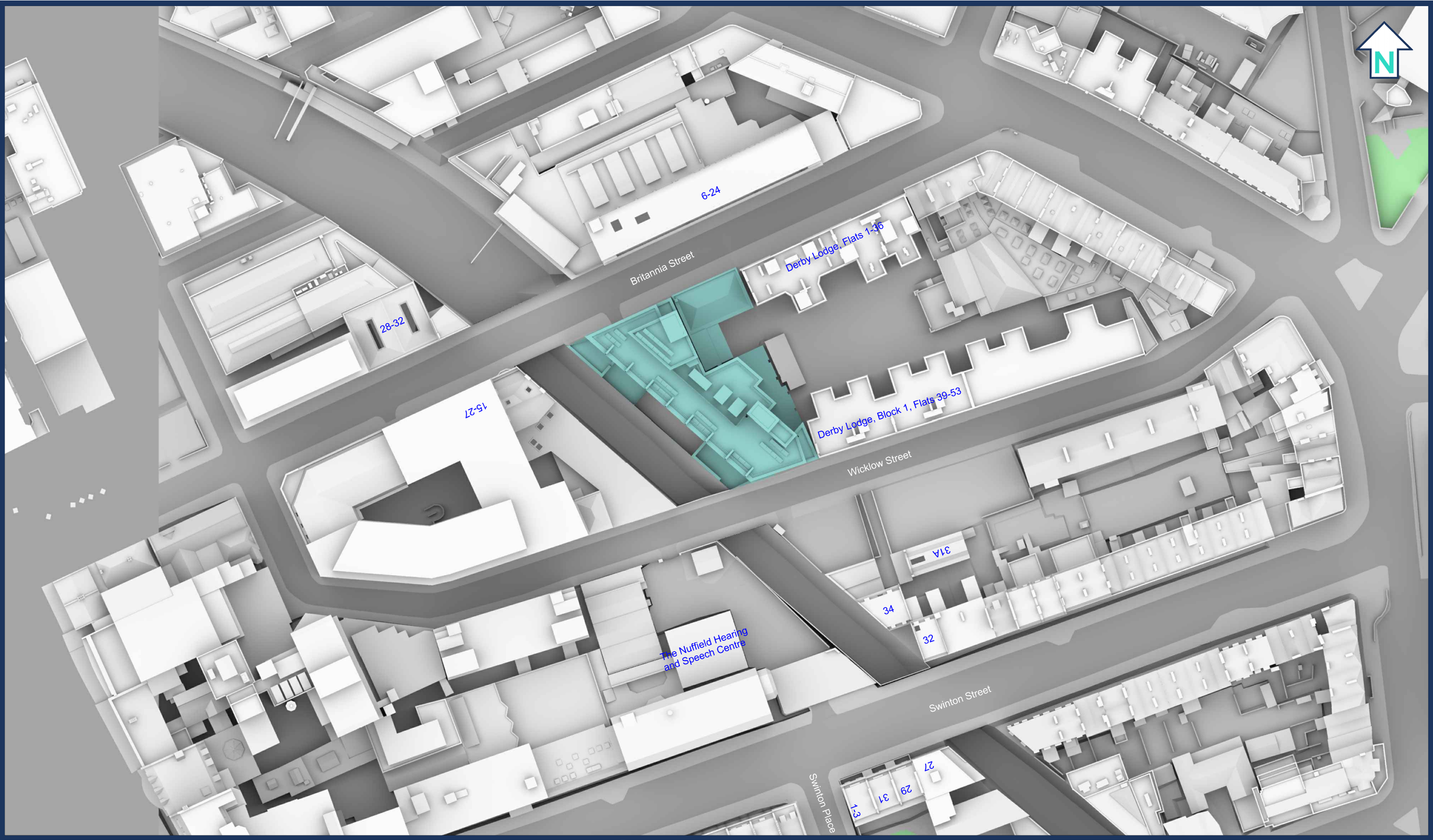
5.5 With reference to the potential for the habitable rooms within the Proposed Development to receive good levels of direct sunlight amenity, we have assessed all one hundred and twenty five bedrooms and studies. Of these, 99 (79%) meet the recommendations. These rooms are northerly facing and when developing an accommodation block inevitably some north facing rooms will derogate from the guidelines, regardless the overall sunlight levels are considered commensurate.

6 Conclusion

6.1 The appended results show that the Proposed Development demonstrates a very high level of compliance with BRE Guidance in terms of internal daylight amenity with 86.4% of rooms meeting the recommendations for daylight amenity. It is noted that derogations are restricted to the lower floors, however many of the derogations are small with all rooms enjoying 200 lux or greater at the front of the room where the main living space is located. With regards sunlight, 79% of rooms will meet the sunlight amenity, this is a good compliance rate considering the surrounding urban context.

6.2 Due to the high performance rate of the scheme, we fully support this planning application for internal daylight and sunlight amenity assessment.

Appendix 1: Drawings



Sources: Plowman Craven
Survey Info (received 14/09/23)
F48542-001-PCL-RM-ZZ-M3-Y-00001-S3-P01.dwg

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6910-SRA-ZZ-ZZ-M3-A-00003.rvt

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Britain from Above - Britannia Street 1951.png
Britain from Above - Britannia Street 1951 - 2.png

Consented Scheme info (planning application approved 21/03/07)
Drawing (1).PDF

Key: Existing Buildings
Proposed Scheme

Project: Britannia Street Car Park
Kings Cross
London

Title: Site Plan
Proposed Scheme 02/01/25

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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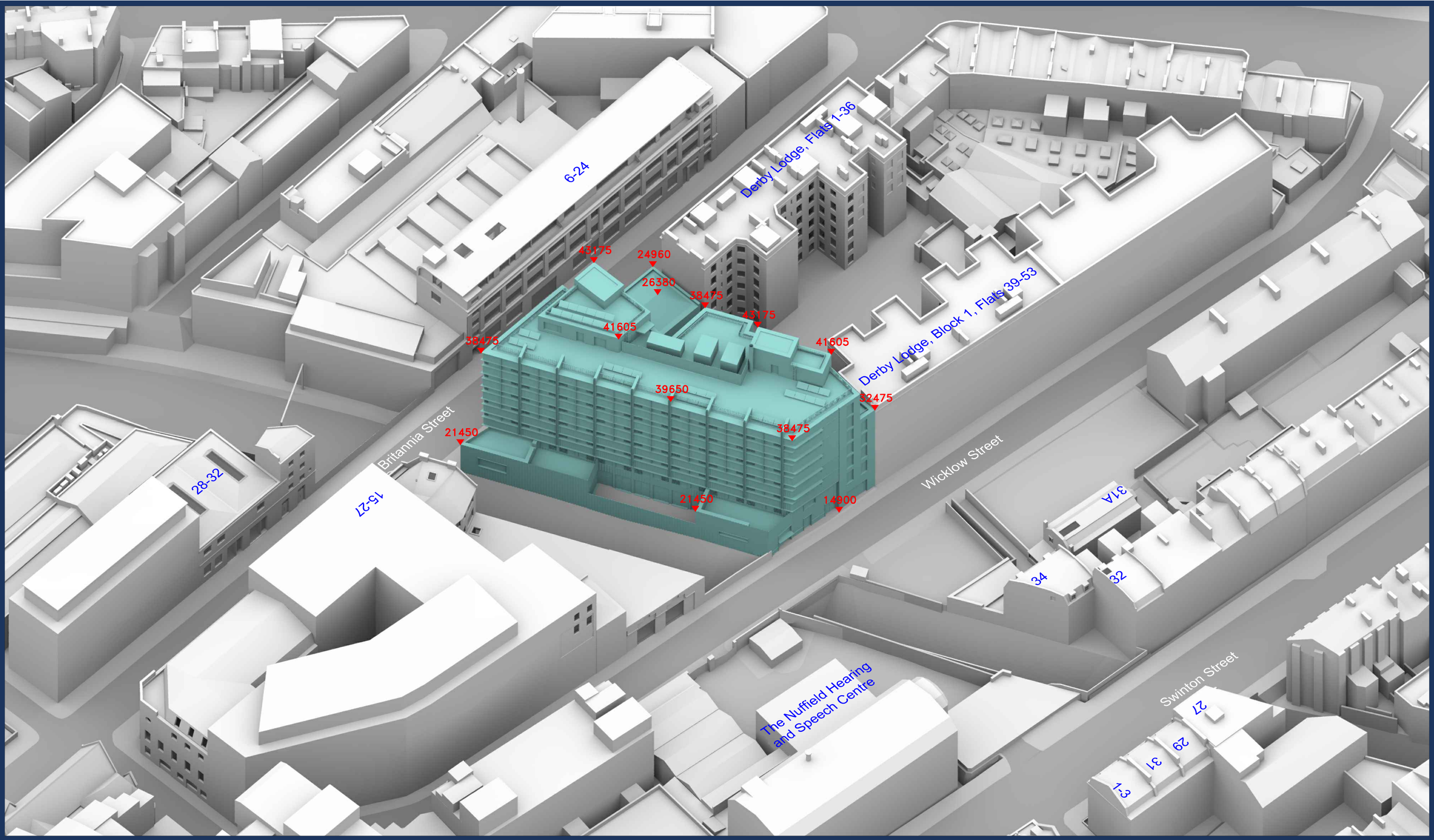

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Drawing (1).PDF

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Britannia Street Car Park
Kings Cross
London

Title: 3D View
Proposed Scheme 02/01/25

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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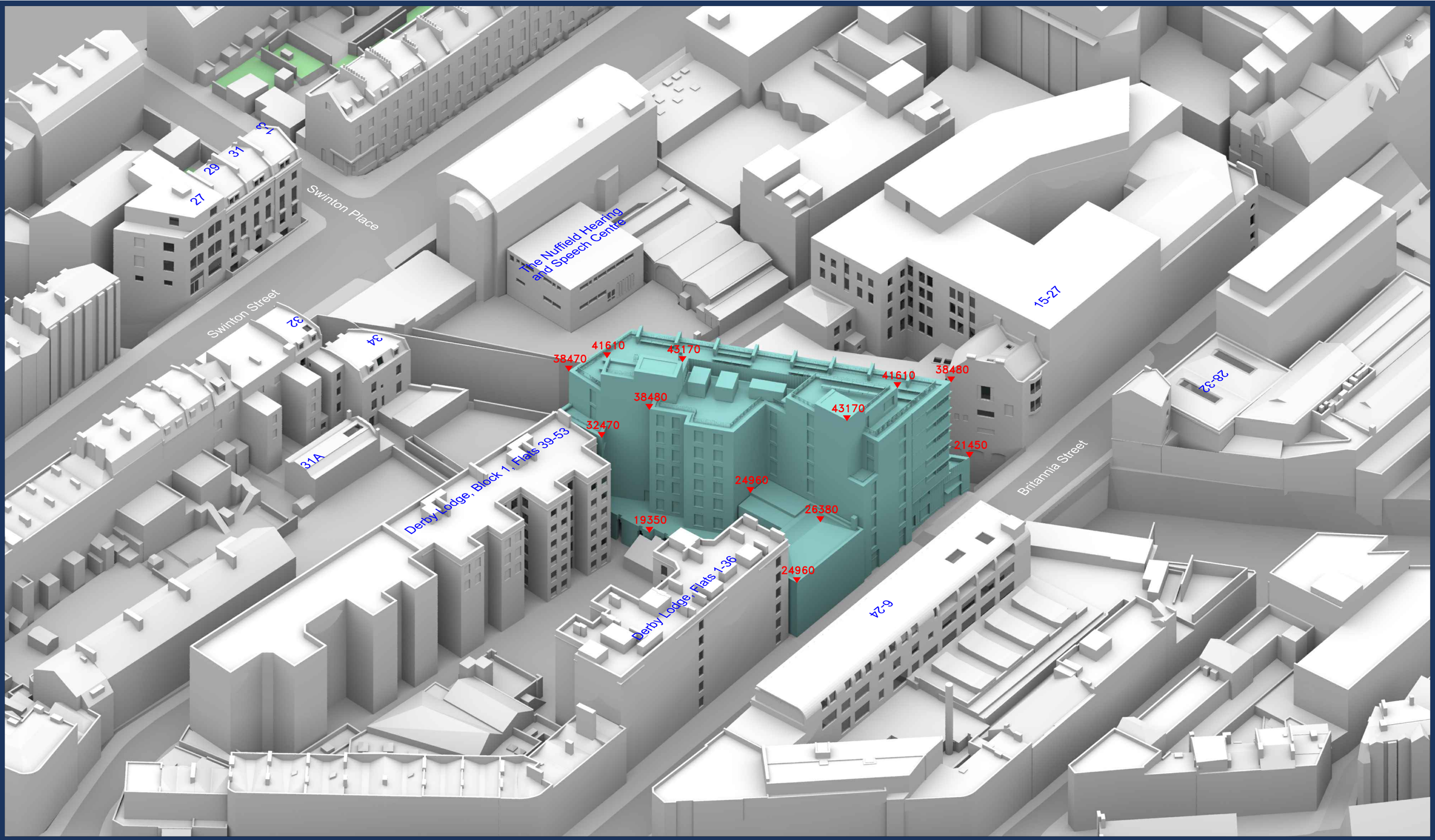

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Britain from Above - Britannia Street 1951 - 2.png

Consented Scheme info (planning application approved 21/03/07)
Drawing (1).PDF

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Britannia Street Car Park
Kings Cross
London

Title: 3D View
Proposed Scheme 02/01/25

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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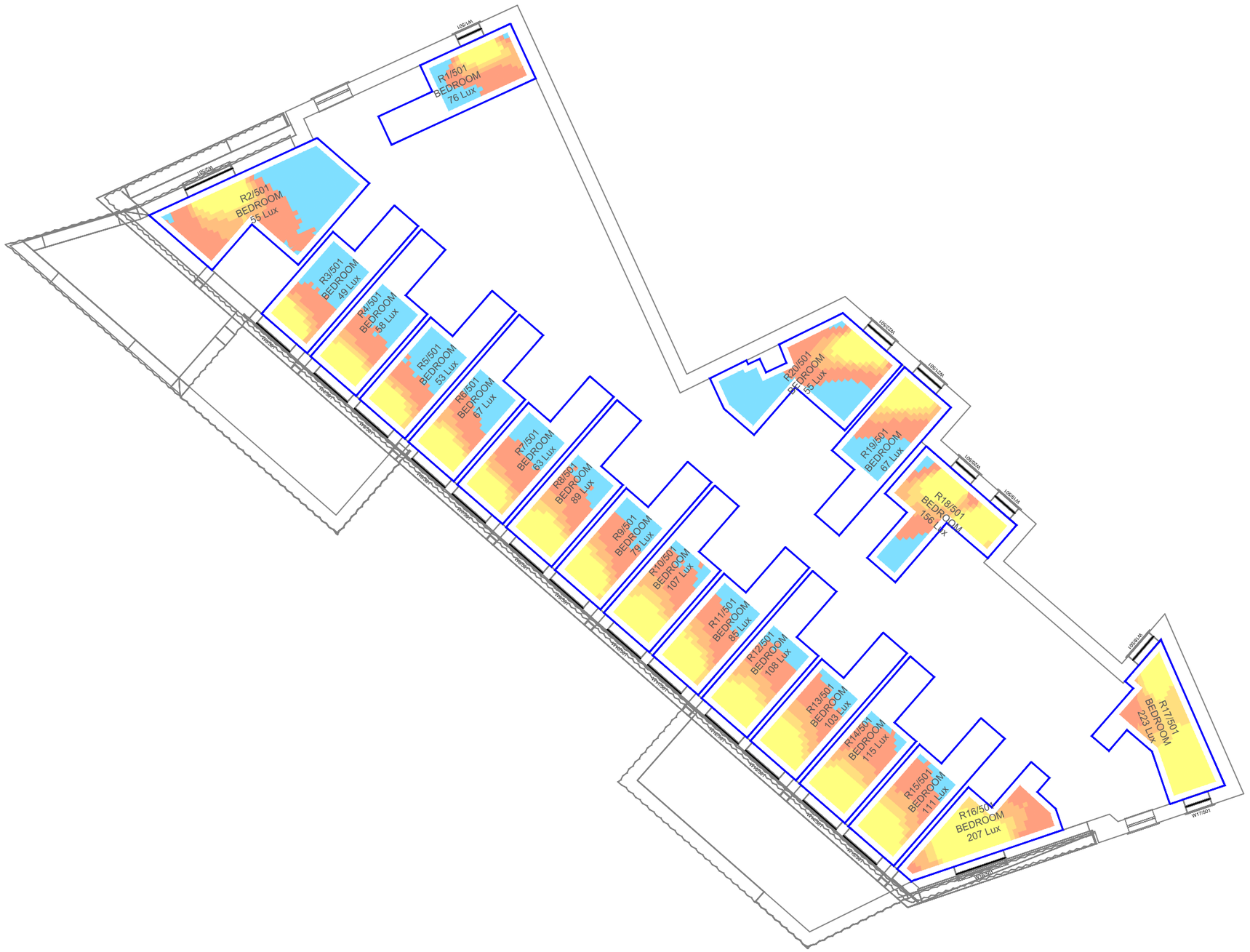
Appendix 2: Technical Analysis Drawings and Results – Daylight & Sunlight



First Floor

Sources: Plowman Craven
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Britain from Above - Britannia Street 1951.png
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Consented Scheme info (planning application approved 21/03/07)
Drawing (1).PDF

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
Studio	150 Lux

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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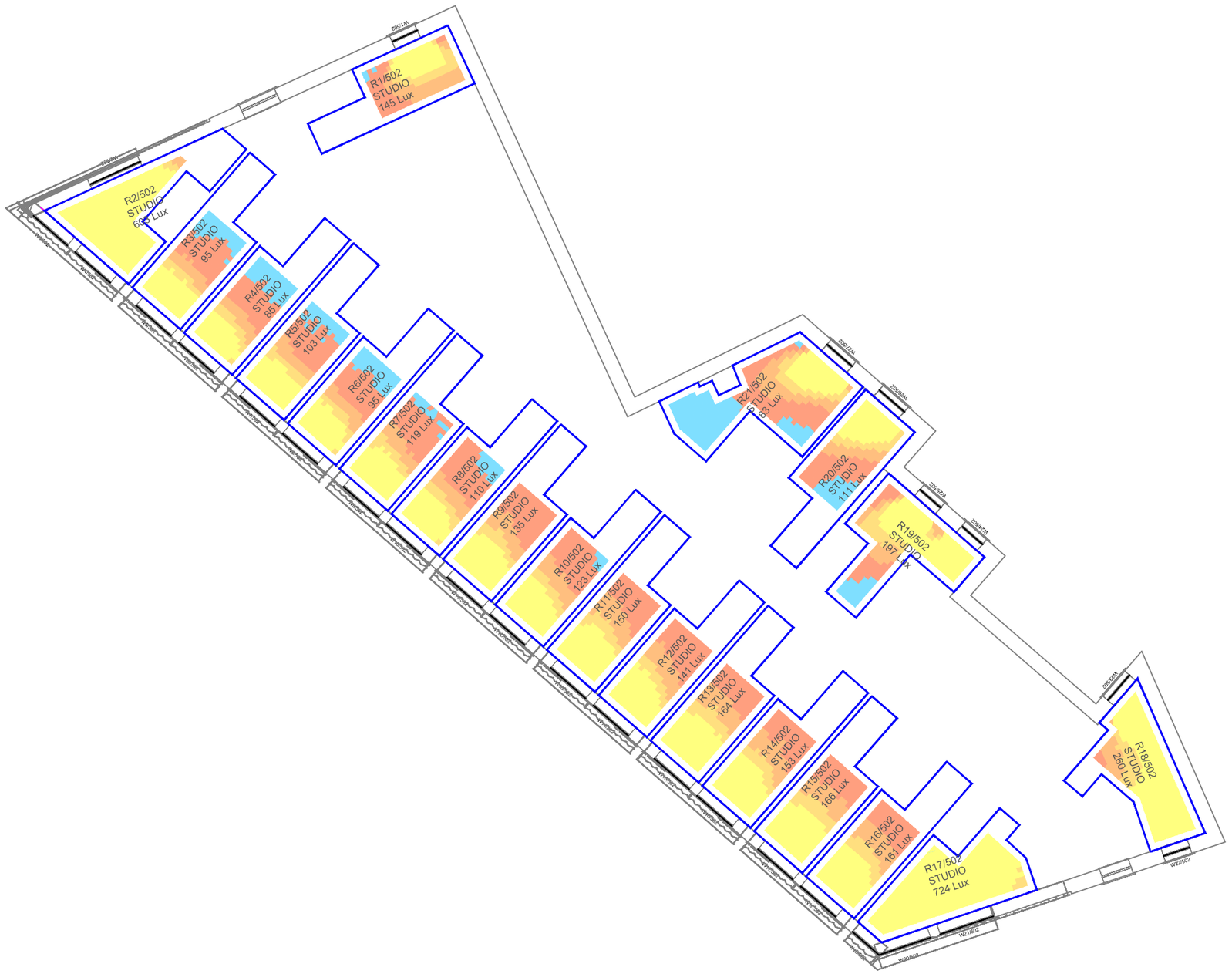

Second Floor

Sources: Plowman Craven
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Sheppard Robson
Proposed Info (received 02/01/25)
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6910-SRA-ZZ-ZZ-M3-A-00003.rvt

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Consented Scheme info (planning application approved 21/03/07)
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(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

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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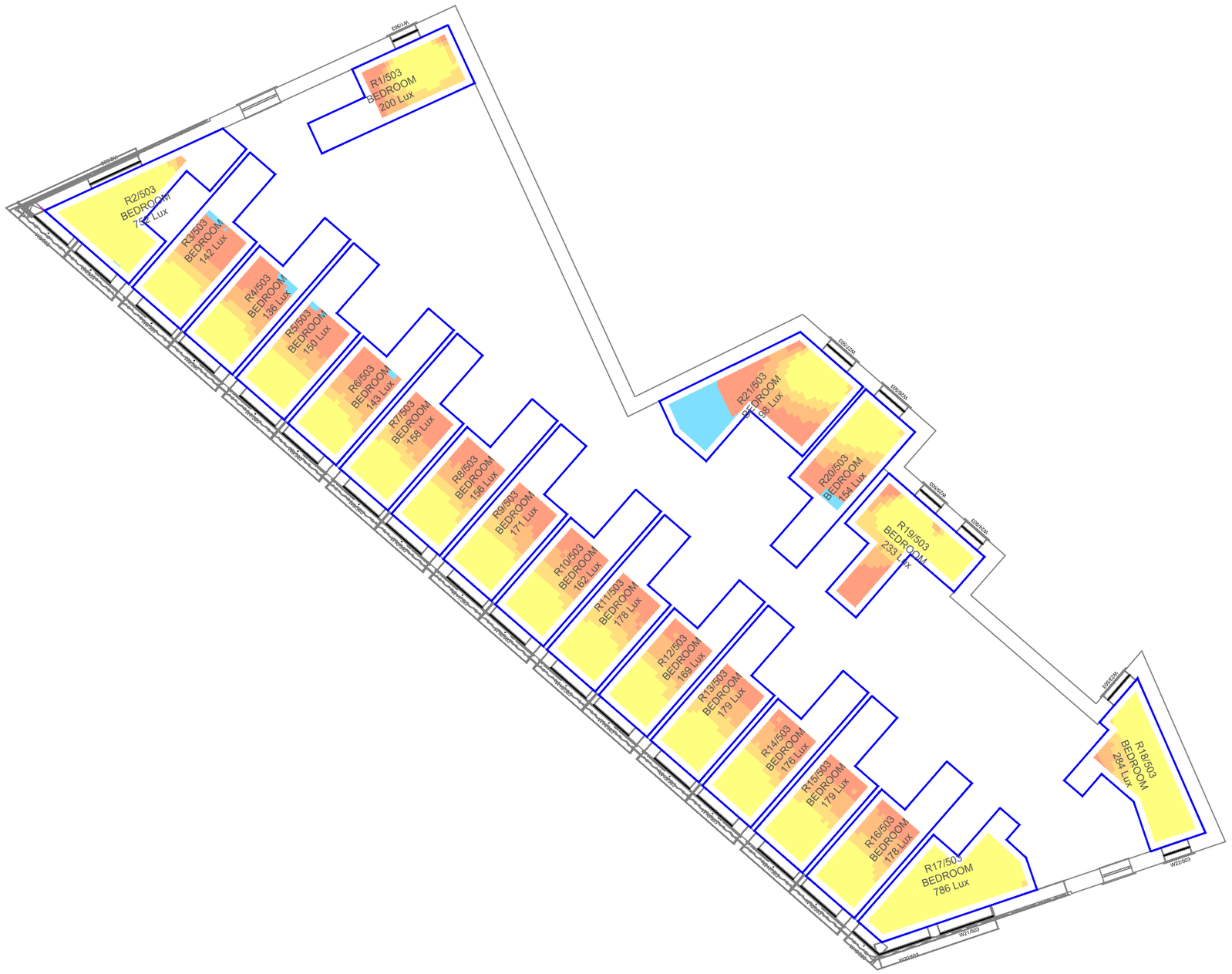

Third Floor

Sources: Plowman Craven
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Proposed Info (received 02/01/25)
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Drawing (1).PDF

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(achieved for 50% of daylight hours)

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- >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
Studio	150 Lux

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

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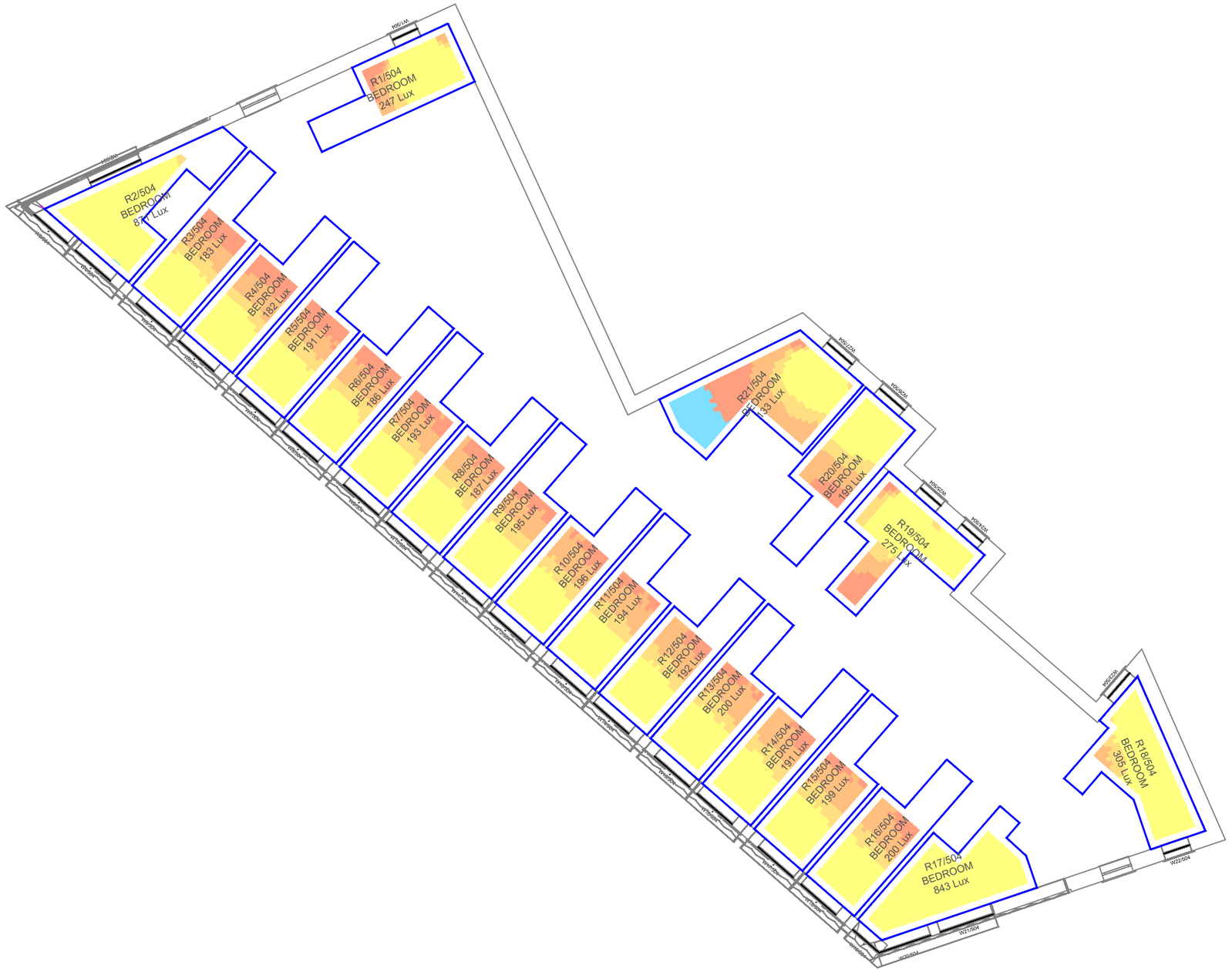

Fourth Floor

Sources: Plowman Craven
Survey Info (received 14/09/23)
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6910-SRA-ZZ-ZZ-M3-A-00003.rvt

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Consented Scheme info (planning application approved 21/03/07)
Drawing (1).PDF

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(achieved for 50% of daylight hours)

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- >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
Studio	150 Lux

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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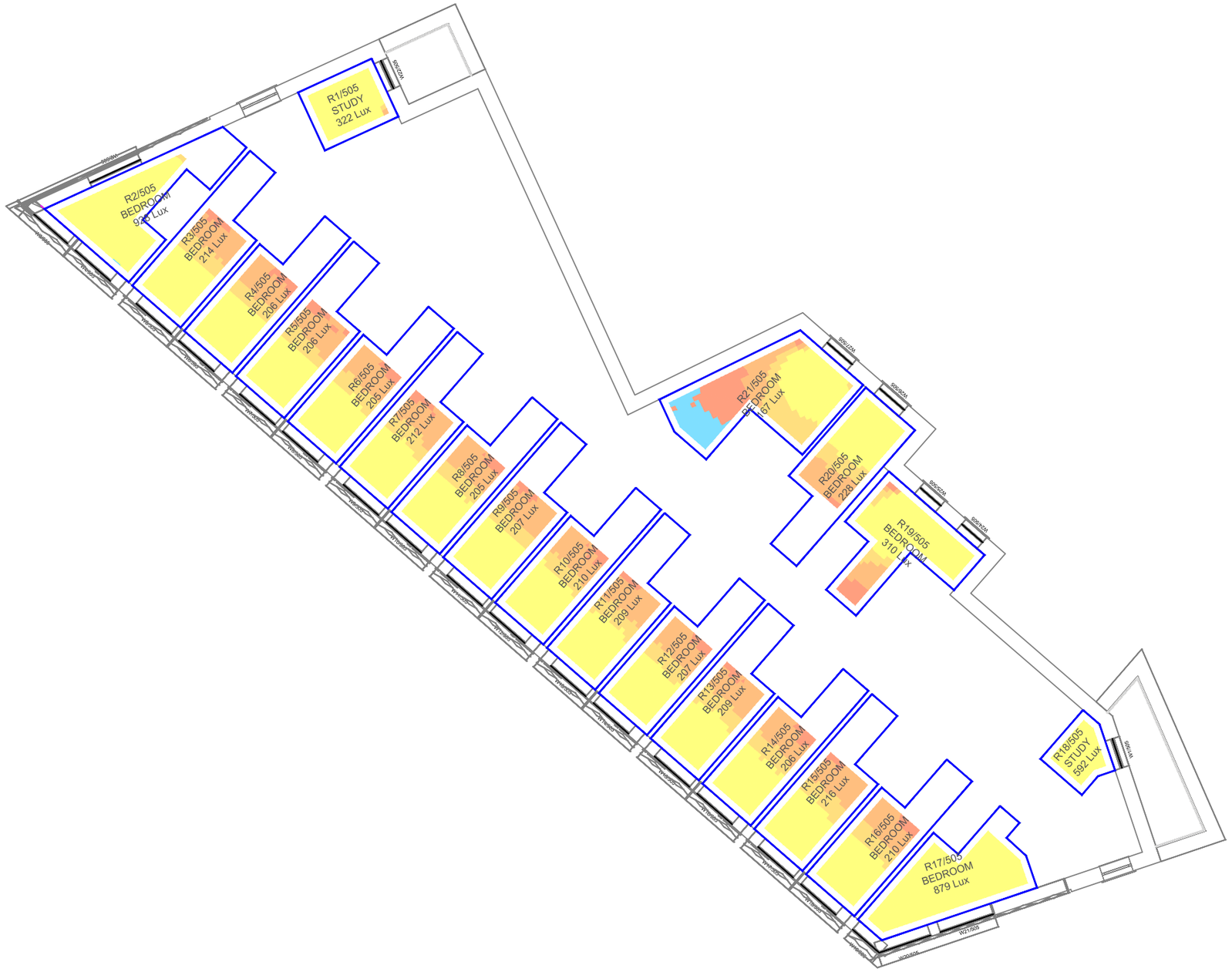

Fifth Floor

Sources: Plowman Craven
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6910-SRA-ZZ-ZZ-M3-A-00003.rvt

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(achieved for 50% of daylight hours)

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- >150 Lux
- >200 Lux

Median Illuminance (Lux) Levels shown for each room.

Recommended Targets:

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Living Room	150 Lux
Kitchen	200 Lux
Studio	150 Lux

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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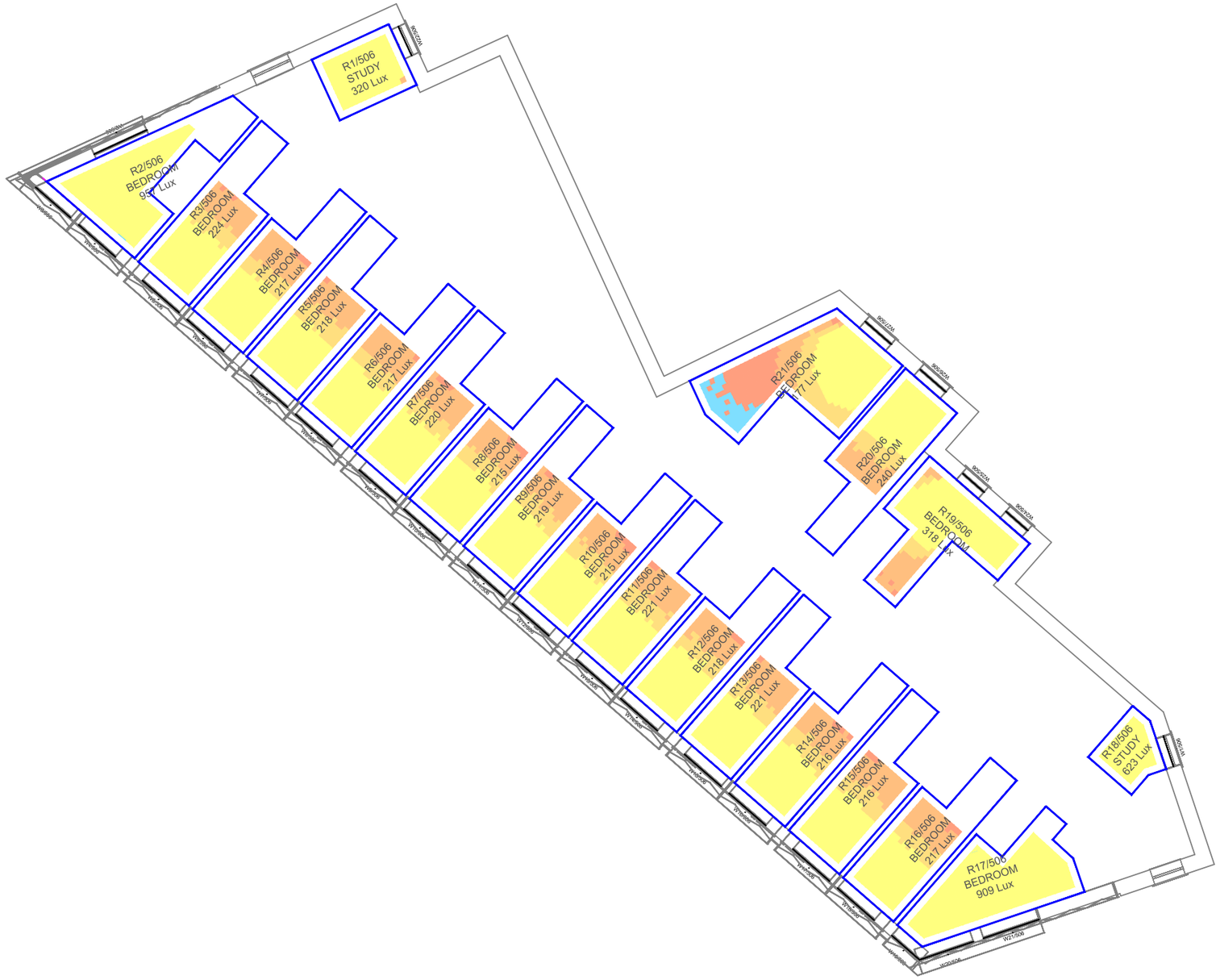

Sixth Floor

Sources: Plowman Craven
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- >100 Lux
- >150 Lux
- >200 Lux

Median Illuminance (Lux) Levels shown for each room.

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Living Room	150 Lux
Kitchen	200 Lux
Studio	150 Lux

Project: Britannia Street Car Park
Kings Cross
London

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels
Proposed Scheme 02/01/24

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
--	--	DK	1:200 @ A3	Jan 25	P3859/CBDM/08	13

SUNLIGHT EXPOSURE ANALYSIS

One Westmoreland, Bromley
Proposed Scheme 02/01/25

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
Proposed Scheme							
	F1/501						
		R1/501	BEDROOM			21-Mar	0.0
				W1/501	Northerly	21-Mar	0.0
	F10/501						
		R10/501	BEDROOM			11-Feb	4.1
				W10/501	Southerly	11-Feb	4.1
	F11/501						
		R11/501	BEDROOM			21-Mar	2.7
				W11/501	Southerly	21-Mar	2.7
	F12/501						
		R12/501	BEDROOM			23-Feb	4.4
				W12/501	Southerly	23-Feb	4.4
	F13/501						
		R13/501	BEDROOM			05-Mar	3.1
				W13/501	Southerly	05-Mar	3.1
	F14/501						
		R14/501	BEDROOM			16-Feb	4.5
				W14/501	Southerly	16-Feb	4.5
	F15/501						
		R15/501	BEDROOM			14-Mar	3.6
				W15/501	Southerly	14-Mar	3.6
	F16/501						
		R16/501	BEDROOM			15-Mar	7.7
				W16/501	Southerly	15-Mar	7.7
	F17/501						
		R17/501	BEDROOM			28-Feb	5.6
				W18/501	Westerly	28-Feb	0.0
				W17/501	Southerly	28-Feb	5.6
	F18/501						
		R18/501	BEDROOM			21-Mar	0.0
				W20/501	Northerly	21-Mar	0.0
				W19/501	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE ANALYSIS

One Westmoreland, Bromley
Proposed Scheme 02/01/25

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
	F19/501						
		R19/501	BEDROOM			21-Mar	0.0
				W21/501	Northerly	21-Mar	0.0
	F2/501						
		R2/501	BEDROOM			21-Mar	0.0
				W2/501	Northerly	21-Mar	0.0
	F20/501						
		R20/501	BEDROOM			21-Mar	0.0
				W22/501	Northerly	21-Mar	0.0
	F3/501						
		R3/501	BEDROOM			21-Mar	2.3
				W3/501	Southerly	21-Mar	2.3
	F4/501						
		R4/501	BEDROOM			17-Mar	2.8
				W4/501	Southerly	17-Mar	2.8
	F5/501						
		R5/501	BEDROOM			21-Mar	2.6
				W5/501	Southerly	21-Mar	2.6
	F6/501						
		R6/501	BEDROOM			18-Mar	2.9
				W6/501	Southerly	18-Mar	2.9
	F7/501						
		R7/501	BEDROOM			21-Mar	2.8
				W7/501	Southerly	21-Mar	2.8
	F8/501						
		R8/501	BEDROOM			04-Feb	3.4
				W8/501	Southerly	04-Feb	3.4
	F9/501						
		R9/501	BEDROOM			21-Mar	2.5
				W9/501	Southerly	21-Mar	2.5
	F1/502						
		R1/502	BEDROOM			21-Mar	0.0
				W1/502	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE ANALYSIS

One Westmoreland, Bromley
Proposed Scheme 02/01/25

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
	F10/502						
		R10/502	BEDROOM			27-Feb	2.2
				W12/502	Southerly	27-Feb	2.2
	F11/502						
		R11/502	BEDROOM			01-Feb	3.7
				W13/502	Southerly	01-Feb	3.7
	F12/502						
		R12/502	BEDROOM			06-Feb	2.5
				W14/502	Southerly	06-Feb	2.5
	F13/502						
		R13/502	BEDROOM			05-Feb	3.7
				W15/502	Southerly	05-Feb	3.7
	F14/502						
		R14/502	BEDROOM			24-Feb	3.0
				W16/502	Southerly	24-Feb	3.0
	F15/502						
		R15/502	BEDROOM			01-Feb	3.8
				W17/502	Southerly	01-Feb	3.8
	F16/502						
		R16/502	BEDROOM			24-Feb	3.1
				W18/502	Southerly	24-Feb	3.1
	F17/502						
		R17/502	BEDROOM			18-Feb	7.8
				W21/502	Southerly	18-Feb	4.8
				W20/502	Southerly	18-Feb	5.6
				W19/502	Southerly	18-Feb	3.2
	F18/502						
		R18/502	BEDROOM			23-Feb	5.7
				W23/502	Westerly	23-Feb	0.0
				W22/502	Southerly	23-Feb	5.7
	F19/502						
		R19/502	BEDROOM			21-Mar	0.0
				W25/502	Northerly	21-Mar	0.0
				W24/502	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
	F2/502						
		R2/502	BEDROOM			01-Feb	2.4
				W4/502	Southerly	01-Feb	0.8
				W2/502	Northerly	01-Feb	0.0
				W3/502	Southerly	01-Feb	2.3
	F20/502						
		R20/502	BEDROOM			21-Mar	0.0
				W26/502	Northerly	21-Mar	0.0
	F21/502						
		R21/502	BEDROOM			21-Mar	0.0
				W27/502	Northerly	21-Mar	0.0
	F3/502						
		R3/502	BEDROOM			01-Feb	2.5
				W5/502	Southerly	01-Feb	2.5
	F4/502						
		R4/502	BEDROOM			24-Feb	2.1
				W6/502	Southerly	24-Feb	2.1
	F5/502						
		R5/502	BEDROOM			01-Feb	2.3
				W7/502	Southerly	01-Feb	2.3
	F6/502						
		R6/502	BEDROOM			05-Mar	2.1
				W8/502	Southerly	05-Mar	2.1
	F7/502						
		R7/502	BEDROOM			04-Feb	2.5
				W9/502	Southerly	04-Feb	2.5
	F8/502						
		R8/502	BEDROOM			11-Mar	2.1
				W10/502	Southerly	11-Mar	2.1
	F9/502						
		R9/502	BEDROOM			01-Feb	2.9
				W11/502	Southerly	01-Feb	2.9
	F1/503						
		R1/503	BEDROOM			21-Mar	0.0

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
				W1/503	Northerly	21-Mar	0.0
	F10/503						
		R10/503	BEDROOM			08-Mar	2.8
				W12/503	Southerly	08-Mar	2.8
	F11/503						
		R11/503	BEDROOM			01-Feb	3.7
				W13/503	Southerly	01-Feb	3.7
	F12/503						
		R12/503	BEDROOM			24-Feb	2.9
				W14/503	Southerly	24-Feb	2.9
	F13/503						
		R13/503	BEDROOM			02-Feb	3.9
				W15/503	Southerly	02-Feb	3.9
	F14/503						
		R14/503	BEDROOM			20-Feb	3.2
				W16/503	Southerly	20-Feb	3.2
	F15/503						
		R15/503	BEDROOM			01-Feb	3.9
				W17/503	Southerly	01-Feb	3.9
	F16/503						
		R16/503	BEDROOM			24-Feb	3.3
				W18/503	Southerly	24-Feb	3.3
	F17/503						
		R17/503	BEDROOM			19-Feb	8.4
				W21/503	Southerly	19-Feb	5.0
				W20/503	Southerly	19-Feb	5.6
				W19/503	Southerly	19-Feb	3.4
	F18/503						
		R18/503	BEDROOM			18-Feb	5.8
				W23/503	Westerly	18-Feb	0.0
				W22/503	Southerly	18-Feb	5.8
	F19/503						
		R19/503	BEDROOM			21-Mar	0.0
				W25/503	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
				W24/503	Northerly	21-Mar	0.0
	F2/503						
		R2/503	BEDROOM			27-Feb	3.2
				W4/503	Southerly	27-Feb	2.5
				W2/503	Northerly	27-Feb	0.0
				W3/503	Southerly	27-Feb	3.1
	F20/503						
		R20/503	BEDROOM			21-Mar	0.0
				W26/503	Northerly	21-Mar	0.0
	F21/503						
		R21/503	BEDROOM			21-Mar	0.0
				W27/503	Northerly	21-Mar	0.0
	F3/503						
		R3/503	BEDROOM			04-Feb	3.3
				W5/503	Southerly	04-Feb	3.3
	F4/503						
		R4/503	BEDROOM			27-Feb	2.8
				W6/503	Southerly	27-Feb	2.8
	F5/503						
		R5/503	BEDROOM			01-Feb	3.2
				W7/503	Southerly	01-Feb	3.2
	F6/503						
		R6/503	BEDROOM			24-Feb	2.9
				W8/503	Southerly	24-Feb	2.9
	F7/503						
		R7/503	BEDROOM			02-Feb	3.3
				W9/503	Southerly	02-Feb	3.3
	F8/503						
		R8/503	BEDROOM			28-Feb	2.9
				W10/503	Southerly	28-Feb	2.9
	F9/503						
		R9/503	BEDROOM			01-Feb	3.4
				W11/503	Southerly	01-Feb	3.4

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
	F1/504						
		R1/504	BEDROOM			21-Mar	0.0
				W1/504	Northerly	21-Mar	0.0
	F10/504						
		R10/504	BEDROOM			02-Mar	3.6
				W12/504	Southerly	02-Mar	3.6
	F11/504						
		R11/504	BEDROOM			05-Feb	3.9
				W13/504	Southerly	05-Feb	3.9
	F12/504						
		R12/504	BEDROOM			11-Mar	3.4
				W14/504	Southerly	11-Mar	3.4
	F13/504						
		R13/504	BEDROOM			01-Feb	4.0
				W15/504	Southerly	01-Feb	4.0
	F14/504						
		R14/504	BEDROOM			25-Feb	3.4
				W16/504	Southerly	25-Feb	3.4
	F15/504						
		R15/504	BEDROOM			02-Feb	4.1
				W17/504	Southerly	02-Feb	4.1
	F16/504						
		R16/504	BEDROOM			02-Mar	3.4
				W18/504	Southerly	02-Mar	3.4
	F17/504						
		R17/504	BEDROOM			18-Feb	9.0
				W21/504	Southerly	18-Feb	5.5
				W20/504	Southerly	18-Feb	6.3
				W19/504	Southerly	18-Feb	3.7
	F18/504						
		R18/504	BEDROOM			07-Feb	6.0
				W23/504	Westerly	07-Feb	0.0
				W22/504	Southerly	07-Feb	6.0
	F19/504						

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
		R19/504	BEDROOM			21-Mar	0.0
				W25/504	Northerly	21-Mar	0.0
				W24/504	Northerly	21-Mar	0.0
	F2/504						
		R2/504	BEDROOM			05-Mar	4.0
				W4/504	Southerly	05-Mar	3.7
				W2/504	Northerly	05-Mar	0.0
				W3/504	Southerly	05-Mar	3.8
	F20/504						
		R20/504	BEDROOM			21-Mar	0.0
				W26/504	Northerly	21-Mar	0.0
	F21/504						
		R21/504	BEDROOM			21-Mar	0.0
				W27/504	Northerly	21-Mar	0.0
	F3/504						
		R3/504	BEDROOM			04-Feb	4.1
				W5/504	Southerly	04-Feb	4.1
	F4/504						
		R4/504	BEDROOM			25-Feb	3.5
				W6/504	Southerly	25-Feb	3.5
	F5/504						
		R5/504	BEDROOM			08-Feb	4.0
				W7/504	Southerly	08-Feb	4.0
	F6/504						
		R6/504	BEDROOM			24-Feb	3.6
				W8/504	Southerly	24-Feb	3.6
	F7/504						
		R7/504	BEDROOM			17-Feb	3.8
				W9/504	Southerly	17-Feb	3.8
	F8/504						
		R8/504	BEDROOM			24-Feb	3.7
				W10/504	Southerly	24-Feb	3.7
	F9/504						
		R9/504	BEDROOM			01-Feb	3.9

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
				W11/504	Southerly	01-Feb	3.9
	F10/505						
		R10/505	BEDROOM			28-Feb	4.2
				W12/505	Southerly	28-Feb	4.2
	F11/505						
		R11/505	BEDROOM			01-Feb	4.3
				W13/505	Southerly	01-Feb	4.3
	F12/505						
		R12/505	BEDROOM			05-Mar	4.1
				W14/505	Southerly	05-Mar	4.1
	F13/505						
		R13/505	BEDROOM			07-Feb	4.2
				W15/505	Southerly	07-Feb	4.2
	F14/505						
		R14/505	BEDROOM			11-Mar	3.9
				W16/505	Southerly	11-Mar	3.9
	F15/505						
		R15/505	BEDROOM			01-Feb	4.3
				W17/505	Southerly	01-Feb	4.3
	F16/505						
		R16/505	BEDROOM			02-Mar	3.8
				W18/505	Southerly	02-Mar	3.8
	F17/505						
		R17/505	BEDROOM			18-Feb	9.3
				W21/505	Southerly	18-Feb	5.6
				W20/505	Southerly	18-Feb	6.3
				W19/505	Southerly	18-Feb	3.8
	F18/505						
		R18/505	STUDY			21-Mar	1.4
				W1/505	Westerly	21-Mar	1.4
	F19/505						
		R19/505	BEDROOM			21-Mar	0.0
				W25/505	Northerly	21-Mar	0.0
				W24/505	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
F2/505							
		R2/505	BEDROOM			02-Feb	4.9
				W4/505	Southerly	02-Feb	3.3
				W2/505	Northerly	02-Feb	0.0
				W3/505	Southerly	02-Feb	4.9
F20/505							
		R20/505	BEDROOM			21-Mar	0.0
				W26/505	Northerly	21-Mar	0.0
F21/505							
		R21/505	BEDROOM			21-Mar	0.0
				W27/505	Northerly	21-Mar	0.0
F22/505							
		R1/505	STUDY			21-Mar	0.0
				W22/505	Westerly	21-Mar	0.0
F3/505							
		R3/505	BEDROOM			02-Feb	4.9
				W5/505	Southerly	02-Feb	4.9
F4/505							
		R4/505	BEDROOM			24-Feb	4.3
				W6/505	Southerly	24-Feb	4.3
F5/505							
		R5/505	BEDROOM			10-Feb	4.7
				W7/505	Southerly	10-Feb	4.7
F6/505							
		R6/505	BEDROOM			24-Feb	4.3
				W8/505	Southerly	24-Feb	4.3
F7/505							
		R7/505	BEDROOM			17-Feb	4.4
				W9/505	Southerly	17-Feb	4.4
F8/505							
		R8/505	BEDROOM			25-Feb	4.3
				W10/505	Southerly	25-Feb	4.3
F9/505							

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
		R9/505	BEDROOM			17-Feb	4.2
				W11/505	Southerly	17-Feb	4.2
	F10/506						
		R10/506	BEDROOM			25-Feb	4.3
				W12/506	Southerly	25-Feb	4.3
	F11/506						
		R11/506	BEDROOM			16-Feb	4.5
				W13/506	Southerly	16-Feb	4.5
	F12/506						
		R12/506	BEDROOM			24-Feb	4.3
				W14/506	Southerly	24-Feb	4.3
	F13/506						
		R13/506	BEDROOM			01-Feb	4.4
				W15/506	Southerly	01-Feb	4.4
	F14/506						
		R14/506	BEDROOM			25-Feb	4.3
				W16/506	Southerly	25-Feb	4.3
	F15/506						
		R15/506	BEDROOM			08-Feb	4.4
				W17/506	Southerly	08-Feb	4.4
	F16/506						
		R16/506	BEDROOM			27-Feb	4.3
				W18/506	Southerly	27-Feb	4.3
	F17/506						
		R17/506	BEDROOM			18-Feb	9.3
				W21/506	Southerly	18-Feb	5.6
				W20/506	Southerly	18-Feb	6.3
				W19/506	Southerly	18-Feb	3.8
	F18/506						
		R18/506	STUDY			21-Mar	2.0
				W1/506	Westerly	21-Mar	2.0
	F19/506						
		R19/506	BEDROOM			21-Mar	0.0
				W25/506	Northerly	21-Mar	0.0

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
				W24/506	Northerly	21-Mar	0.0
	F2/506						
		R2/506	BEDROOM			04-Feb	5.0
				W4/506	Southerly	04-Feb	3.5
				W2/506	Northerly	04-Feb	0.0
				W3/506	Southerly	04-Feb	5.0
	F20/506						
		R20/506	BEDROOM			21-Mar	0.0
				W26/506	Northerly	21-Mar	0.0
	F21/506						
		R21/506	BEDROOM			21-Mar	0.0
				W27/506	Northerly	21-Mar	0.0
	F22/506						
		R1/506	STUDY			21-Mar	0.0
				W22/506	Westerly	21-Mar	0.0
	F3/506						
		R3/506	BEDROOM			01-Feb	5.1
				W5/506	Southerly	01-Feb	5.1
	F4/506						
		R4/506	BEDROOM			25-Feb	4.3
				W6/506	Southerly	25-Feb	4.3
	F5/506						
		R5/506	BEDROOM			04-Feb	5.0
				W7/506	Southerly	04-Feb	5.0
	F6/506						
		R6/506	BEDROOM			25-Feb	4.3
				W8/506	Southerly	25-Feb	4.3
	F7/506						
		R7/506	BEDROOM			05-Feb	4.9
				W9/506	Southerly	05-Feb	4.9
	F8/506						
		R8/506	BEDROOM			25-Feb	4.3
				W10/506	Southerly	25-Feb	4.3

SUNLIGHT EXPOSURE

	Unit	Room	Room Use	Window	Orientation	Date	Sunlight Exposure (Hours)
	F9/506						
		R9/506	BEDROOM			13-Feb	4.7
				W11/506	Southerly	13-Feb	4.7