# 3-5 BEDFORD ROW, CAMDEN

#### **DAYLIGHT & SUNLIGHT REPORT**

**DIRECTOR:** JUSTIN BOLTON **DATE:** OCTOBER 2022

VERSION: V1
PROJECT: P2940

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POINT

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#### **Appendices**

Appendix 1: Site Plan & 3D Drawings

Appendix 2: Daylight & Sunlight Results

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# 1 Executive Summary

- 1.1 This report has considered the daylight and sunlight to the surrounding residential properties as a result of the implementation of the proposed scheme at 3-5 Bedford Row, Camden.
- 1.2 The results of the first daylight methodology, the VSC, records full BRE compliance (100%), commensurate with the BRE's permissible 20% change from former value.
- 1.3 In terms of the NSL assessment, the technical analysis records full BRE compliance (100%), commensurate with the BRE's permissible 20% from former value.
- 1.4 The results of the sunlight methodology, the APSH, records full BRE compliance (100%), commensurate with the BRE's permissible 20% from former value.
- 1.5 The Sun Hours on Ground assessment records full BRE compliance.
- 1.6 In summary, the Proposed Development will relate exceptionally well to the neighbouring residential properties and fall within the practical application of the BRE Guidelines.



#### 2 Introduction

- 2.1 Point 2 have been instructed to review the amenity position associated with the proposed internal refurbishment of 3-5 Bedford Row and 3-5 Jockey's Fields for continuing commercial use of the building (Class E), together with external alterations to all elevations, and the erection of roof extensions at fourth, third and second floor levels, roof terraces at levels four and three and basement courtyard garden, cycle parking, waste/recycling storage, plant and other associated works.
- 2.2 The assessments contained within this report have been undertaken in accordance with the Building Research Establishment Guidelines, entitled 'Site layout planning for daylight and sunlight: A guide to good practice', more commonly known as "The BRE Guidelines".
- 2.3 The extents of the of the current site can be found on drawings P2940/01-03 within Appendix 1. The Proposed Development under assessment has been designed by Warren HUT Architecture which can also be seen on drawings P2940/13-15 also within Appendix 1.
- 2.4 The extent of the scope of the review has been determined by considering which neighbouring properties may experience a change in light as a result of the implementation of the Proposed Development. The scope zone, as shown by the pink line on Plate 01 below, considers the size and extent of the proposed HUT Architecture scheme along with the proximity and outlook of neighbouring residential properties or properties that contain a residential component.



Plate 01 – Existing 3-5 Bedford Row, Camden (highlighted in orange) and Scope Zone (outlined in pink)



#### 3 Guidance

# NATIONAL PLANNING POLICY NATIONAL PLANNING POLICY FRAMEWORK (NPPF) 2021

#### 3.1 Paragraph 125 (C) 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)."





# 4 Methodology

- 4.1 The methodologies and assessments that have been considered within this report have been undertaken in line with the 'British Research Establishment ("BRE Guidelines"): Site layout planning for daylight and sunlight: A guide to good practice (2022)'. The publication of the new 2022 guidelines supersedes the 2011 edition. Although, it should be noted that the guidance outlined within the superseded 2011 document for assessing neighbouring buildings has not altered and remains consistent within the 2022 BRE publication. The BRE Guidelines is most widely accepted by planning authorities as the means by which to judge the acceptability of a scheme. One of the primary sources for the BRE Report is the more detailed guidance contained within 'British Standard BS EN 17037.
- 4.2 When assessing any potential effects on the surrounding properties, the BRE Guidelines suggest that only those windows that have a reasonable expectation of daylight or sunlight need to be assessed. In particular the BRE Guidelines at paragraph 2.2.2 state:

"The guidelines given here 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 areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices".

- 4.3 Further to the above statement, it is considered that most commercial properties do not have a reasonable expectation of daylight or sunlight. This is because they are generally designed to rely on artificial electric lighting rather than natural light.
- 4.4 If a property is considered to have a reasonable expectation of daylight or sunlight the following methodology to assess the impacts has been used:

#### **DAYLIGHTING**

- 4.5 The BRE Guidelines are not mandatory, and they explicitly state that the numerical target values should be interpreted flexibly. While local planning authorities will consider the acceptability of a proposed scheme in relation to BRE guidance, consideration will be given to the context within which a scheme is located, and daylight and sunlight will be one of several planning considerations.
- 4.6 In relation to the properties surrounding a site, usually the local planning authority will only be concerned with the impact to main habitable accommodation (i.e. living rooms, bedrooms and kitchens) within residential properties.
- 4.7 To determine whether a neighbouring existing building may be adversely affected, the initial test provided by the BRE is to establish if any part of the proposal subtends an angle of more than 25° from the lowest window serving the existing building. If this is the case then there may be an adverse effect, and more detailed calculations are required to quantify the extent of any impact.



- 4.8 The BRE Guidelines provide two principal measures of daylight for assessing the impact on properties neighbouring a site, namely Vertical Sky Component (VSC) and No-Sky Line (NSL).
- 4.9 In terms of sunlight we examine the BRE Annual Probable Sunlight Hours (APSH); and in relation to sunlight amenity to gardens and amenity spaces, we apply the quantitative BRE overshadowing guidance.
- 4.10 These measures of daylight and sunlight are discussed in the following paragraphs -

#### **DIFFUSE DAYLIGHT**

- 4.11 **Vertical Sky Component (VSC)** VSC is a measure of the direct skylight reaching a point from an overcast sky. It is the ratio of the illuminance at a point on a given vertical plane to the illuminance at a point on a horizontal plane due to an unobstructed sky.
- 4.12 For existing buildings, the BRE guideline is based on the loss of VSC at a point at the centre of a window, on the outer plane of the wall.
- 4.13 The BRE Guidelines state that if the VSC at the centre of a window is less than 27%, and it is less than 0.8 times its former value (i.e., the proportional reduction is greater than 20%), then the reduction in skylight will be noticeable, and the existing building may be adversely affected.
- 4.14 **No-Sky Line (NSL)** NSL is a measure of the distribution of daylight within a room. It maps out the region within a room where light can penetrate directly from the sky, and therefore accounts for the size of and number of windows by simple geometry.
- 4.15 The BRE suggest that the area of the working plane within a room that can receive direct skylight should not be reduced to less than 0.8 times its former value (i.e. the proportional reduction in area should not be greater than 20%).

#### **SUNLIGHT**

- 4.16 **Annual Probable Sunlight Hours (APSH)** In relation to sunlight, the BRE recommends that the APSH received at a given window in the proposed case should be at least 25% of the total available, including at least 5% in winter.
- 4.17 Where the proposed values fall short of these, and the absolute loss is greater than 4%, then the proposed values should not be less than 0.8 times their previous value in each period (i.e. the proportional reductions should not be greater than 20%).
- 4.18 The BRE Guidelines state 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 out too much sun'.



4.19 The APSH figures are calculated for each window, and where a room is served by more than one window the contribution of each is accounted for in the overall figures for the room. The acceptability criteria are applied to overall room-based figures.



# 5 Sources of Information

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

#### **ZMapping Ltd**

3D Model (received 21/12/21)

#### **HUT Architecture**

3D Model (received 23/09/22) PDF Drawings (received 13/10/22)





# 6 Existing Site & Proposals

- 6.1 The development site is known as 3-5 Bedford Row situated within the London Borough of Camden.
- The existing site is depicted in drawings P2940/01-03 which can be found within Appendix 1 of this report and on the Plate 02 below.



Plate 02 – Existing Site

6.3 Our understanding of the massing of the Proposed Development is shown on drawings P2940/13-15 in Appendix 1. A further 3D view of the proposal is included for ease of reference below.





Plate 03- Proposed HUT Architecture Scheme



# 7 Site Context and Scope of Assessment

- 7.1 It is understood that the following properties are registered with a residential usage or have a certain requirement for natural light, which in turn could experience a change in light as a result of the implementation of the proposed scheme:
  - 44 Bedford Row
- 7.2 The above scope has been determined by reference to the scale of Proposed Development and those residential receptors that could experience a change in light as a result of its implementation. The scoping exercise demonstrates that the only residential property within the immediate context of the proposed development is 44 Bedford Row. The location of this property is shown below on Plate 04 (aqua).
- 7.3 The BRE Guidelines mainly focuses on residential properties in terms of daylight and thus this review concentrates on those specific buildings. Those residential receptors (highlighted in aqua) and commercial buildings (highlighted in dark blue) in vicinity of the site (as shown in orange) with a clear view of the proposed massing are shown on Plate 04.



Plate 04 – Plan showing residential (aqua) and non-residential (dark blue) surrounding the 3-5 Bedford Row, Camden (orange)



# 8 Daylight & Sunlight Results

- 8.1 Following the identification of those properties that are considered to have a reasonable expectation for daylight and sunlight, VSC, NSL, and where appropriate, APSH tests have been undertaken.
- 8.2 The tabulated daylight and sunlight results for each window and room can be found in Appendix 2.

#### **DAYLIGHT**

8.3 A summary of the VSC impacts has been provided in Table 1 below:

Table 1 – VSC Summary

VSC SUMMARY											
	Total that	В	S								
Address	Meet BRE Guidelines	20- 29% Loss	30- 39.9% Loss	>=40% Loss	Total	Total No. of Windows					
44 Bedford Row	36	0	0	0	0	36					
Total	36	0	0	0	0	36					

- 8.4 The VSC technical analysis shows that any light change to 44 Bedford Row is fully BRE compliant (100%), commensurate with the BRE's permissible 20% change from former value.
- 8.5 A summary of the NSL effects has been provided in Table 2 below:

Table 2 – NSL Summary

NSL SUMMARY											
	Below BRE Guidelines										
Address	Total that Meet BRE Guidelines	20- 29% Loss	30- 39.9% Loss	>=40% Loss	Total	Total No. of Rooms					
44 Bedford Row	18	0	0	0	0	18					
Total	18	0	0	0	0	18					

8.1 The NSL technical analysis shows that any light change to 44 Bedford Row is fully BRE compliant (100%), commensurate with the BRE's permissible 20% change from former value.



#### **SUNLIGHT**

8.2 A summary of the APSH effects has been provided in Table 3 below:

Table 3 – APSH Summary

							1	Tuble 3	AI JII	Summury
Address	Meet BRE Guidelin es	N	30 40 >40 Tota					reshold I APSH >40 %		Total No. Room s
44 Bedford Row	4	0	0	0	0	0	0	0	0	4
Total	4	0	0	0	0	0	0	0	0	4

8.3 The APSH technical analysis shows that any light change to 44 Bedford Row is fully BRE compliant (100%), commensurate with the BRE's permissible 20% change from former value.



# 9 Sun Hours on Ground Assessment

9.1 An assessment of the sun-on-ground overshadowing to the spaces within the Proposed Development has been undertaken. The results showing the existing and proposed sunlight position on March 21st are highlighted on drawing P2640/07 in Appendix 3. Plate 05 below shows the existing SHoG results, whereas Plate 06 illustrates the proposed SHoG results.

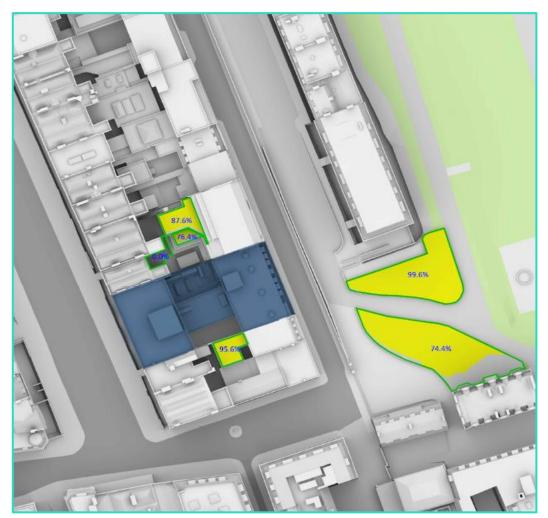


Plate 05 – Sun Hours on Ground – Existing





Plate 06 – Sun Hours on Ground - Proposed

9.2 The results of the technical overshadowing assessment show that on 21st March, shows that all 6 amenity spaces record full BRE compliance (100%). Notably, 5 of the 6 amenity spaces record retained sunlight in excess of the BRE's 50% target value. The remaining amenity space retains 0% and is consistent with the result recorded within the existing condition, given the density of the neighbouring context.

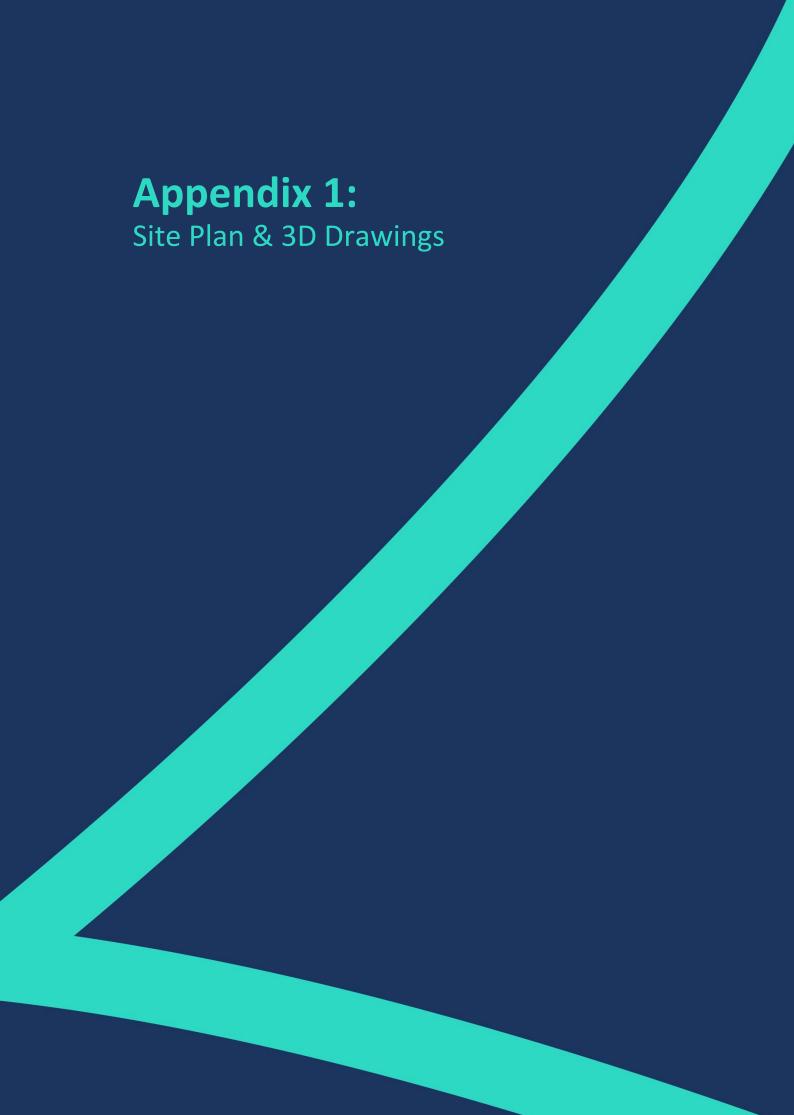


# 10 Summary

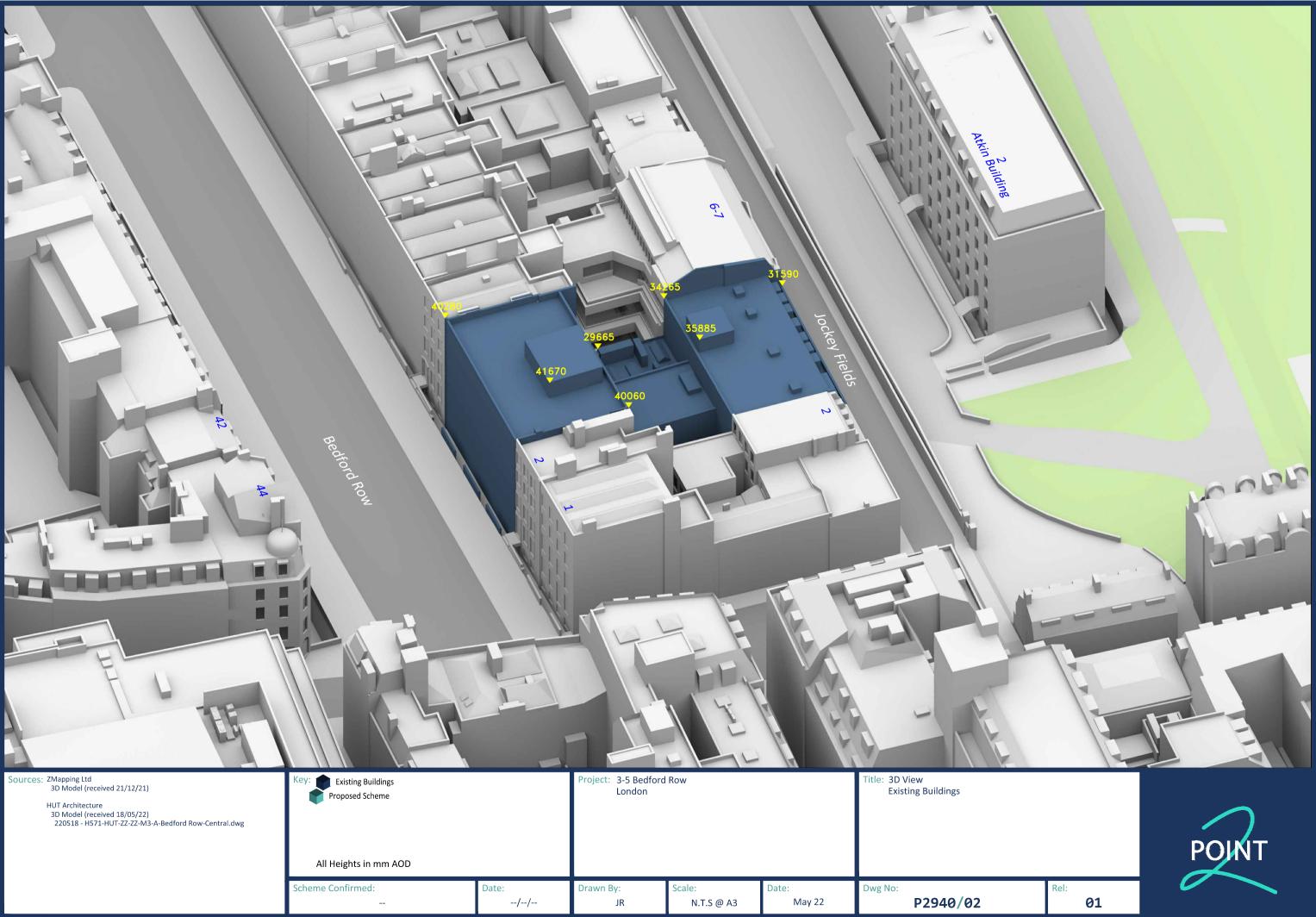
- 10.1 This report has considered the daylight and sunlight to the surrounding residential properties as a result of the implementation of the proposed scheme at 3-5 Bedford Row situated with London Borough of Camden.
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- 10.3 In terms of the NSL assessment, the technical analysis records full BRE compliance (100%), commensurate with the BRE's permissible 20% from former value.
- 10.4 The results of the sunlight methodology, the APSH, records full BRE compliance (100%), commensurate with the BRE's permissible 20% from former value.
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- 10.6 In summary, the Proposed Development will relate exceptionally well to the neighbouring residential properties and fall within the practical application of the BRE Guidelines.

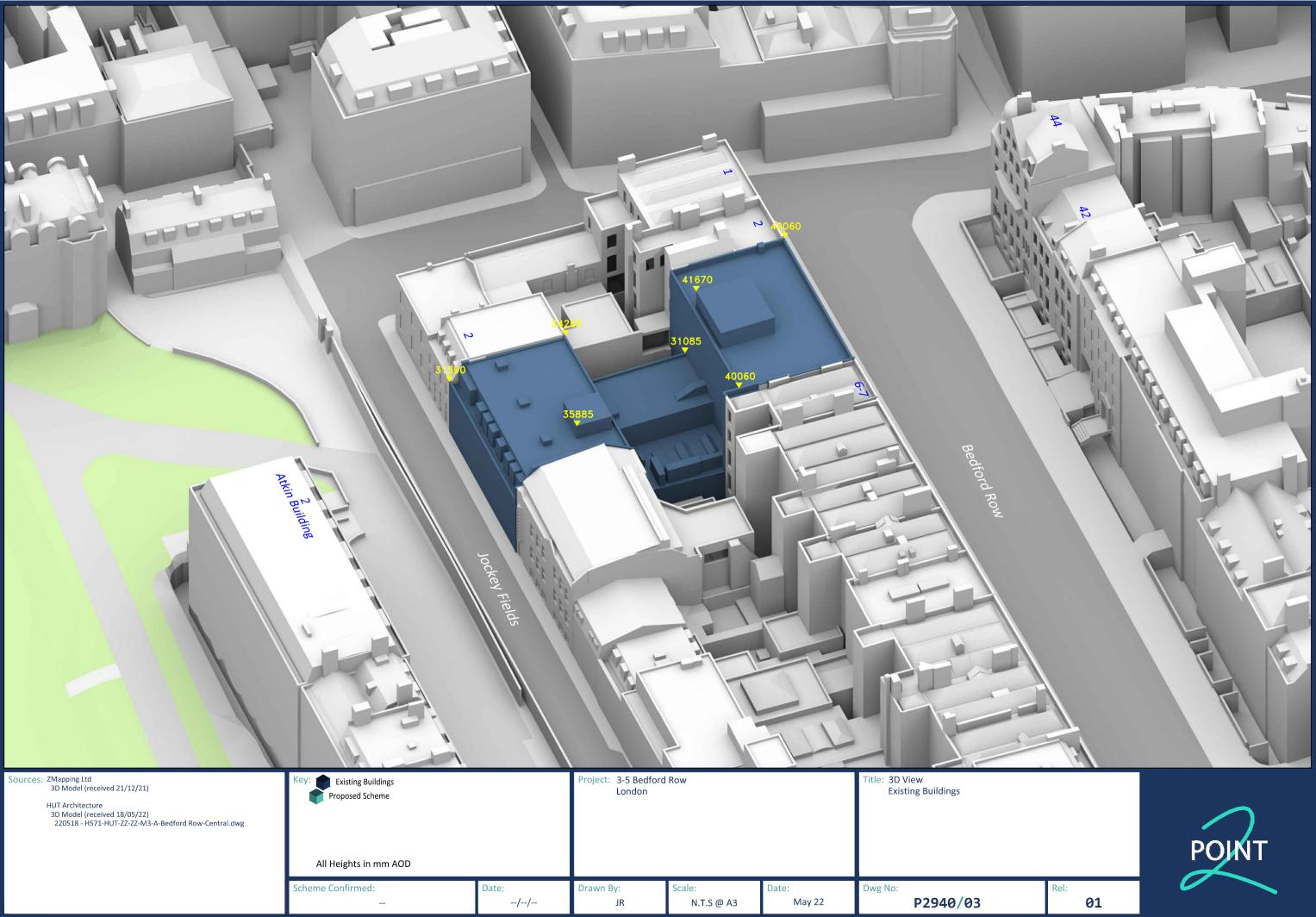


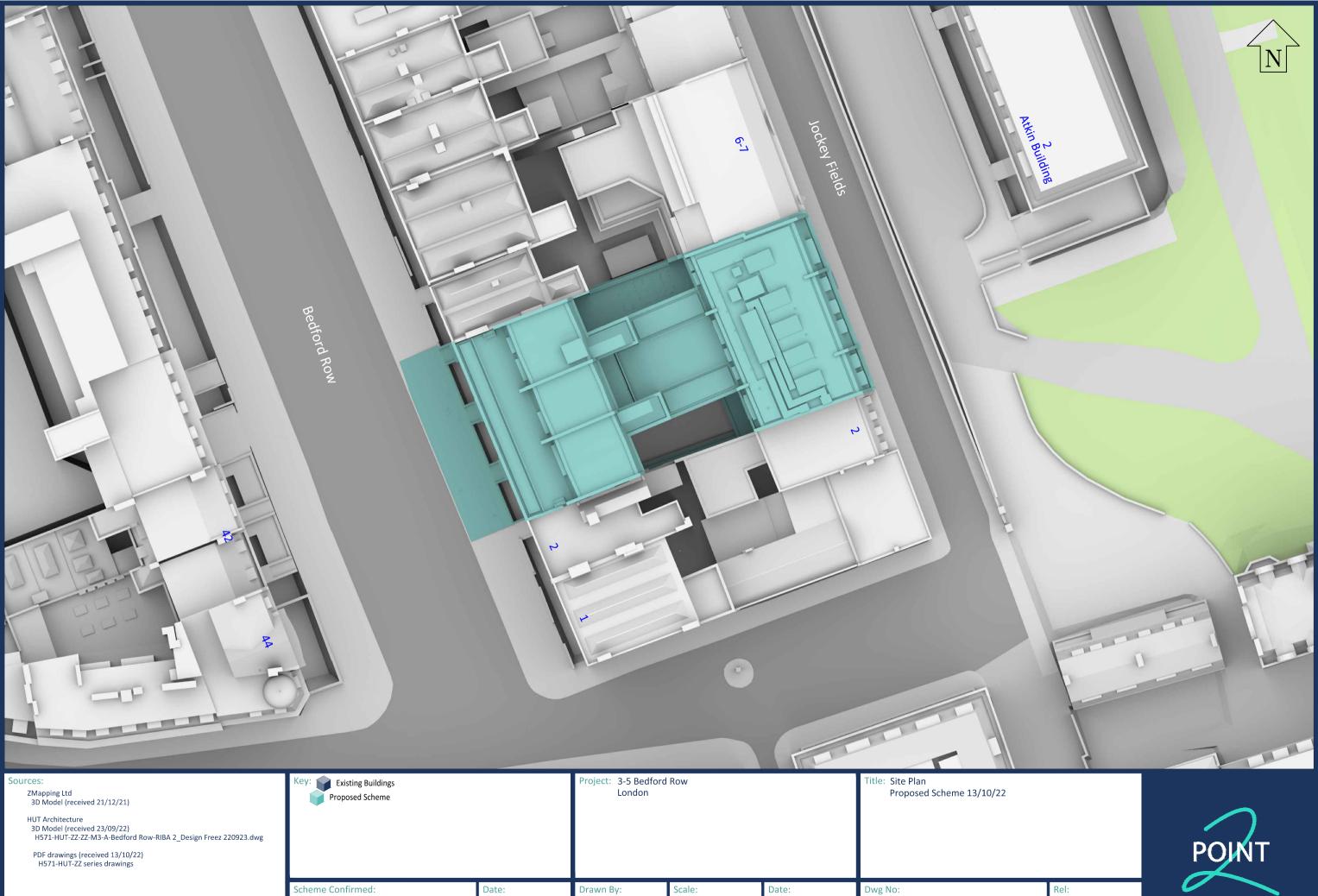












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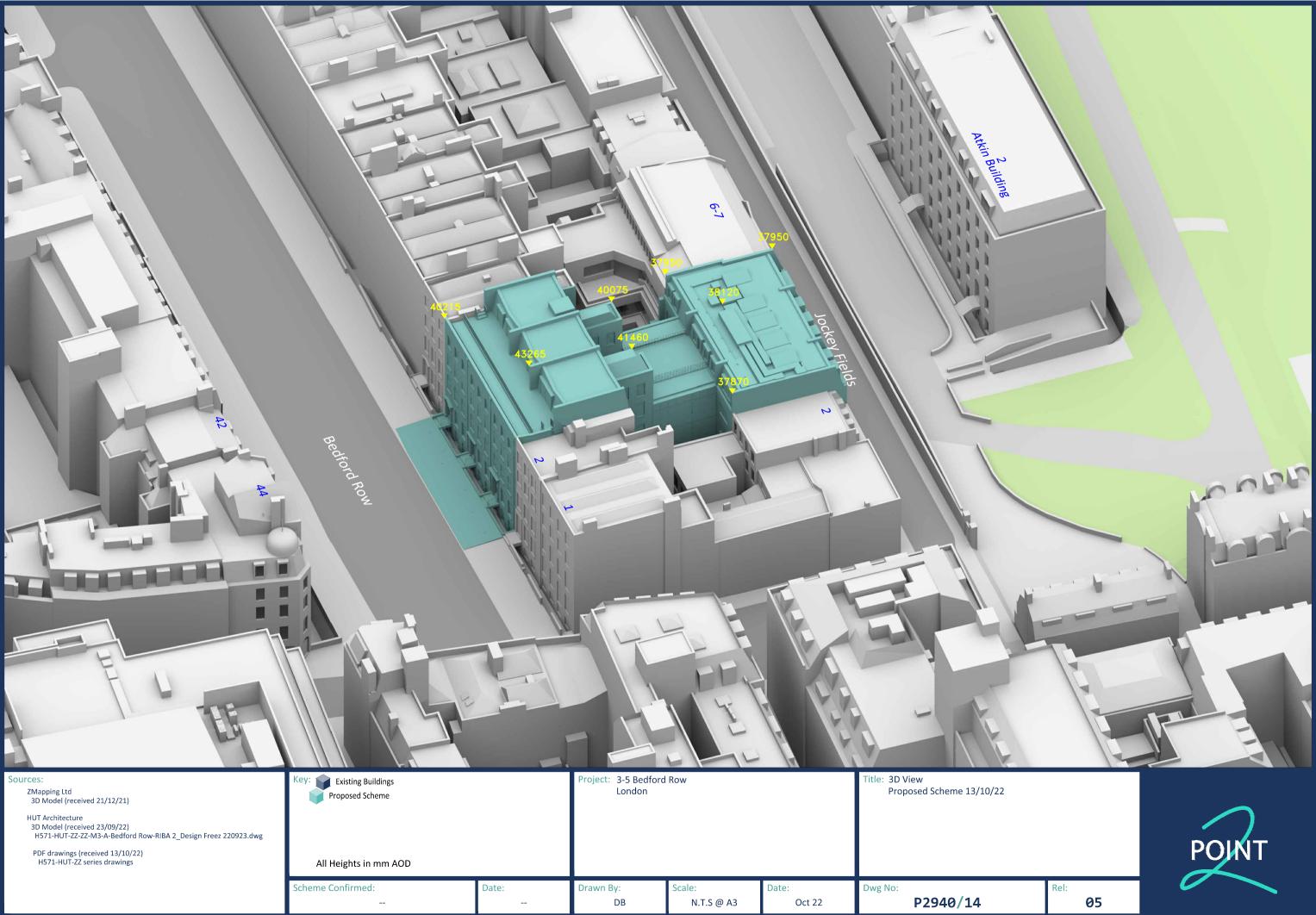
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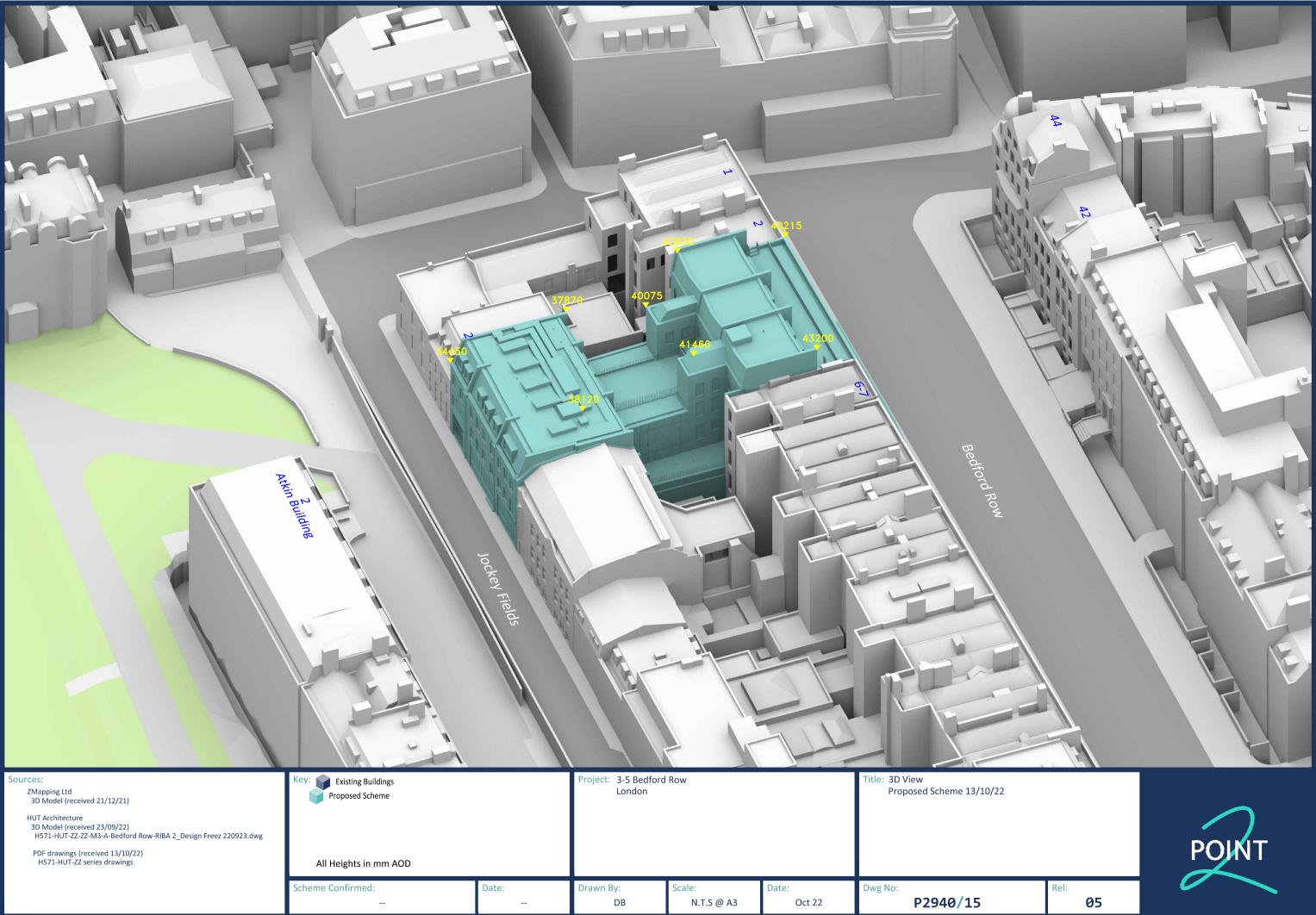
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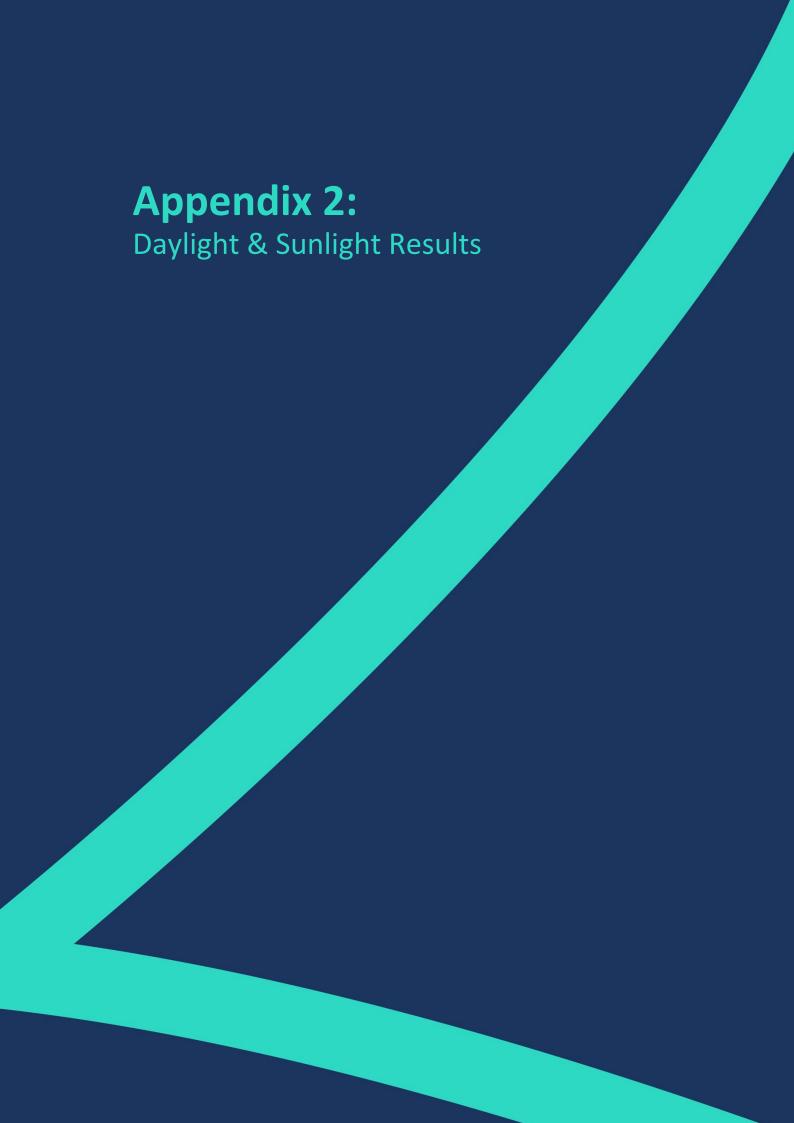
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3-5 Bedford Row, London
Existing Buildings vs Proposed Scheme Dated 13/10/22

#### DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss					
44 Bedford Ro	44 Bedford Row										
R1/41	ASSUMED_RESI	W1/41	29.38	29.21	0.17	0.58					
R1/41	ASSUMED_RESI	W2/41	29.27	29.10	0.17	0.58					
R1/41	ASSUMED_RESI	W3/41	29.17	29.03	0.14	0.48					
R2/41	ASSUMED_RESI	W4/41	28.89	28.75	0.14	0.48					
R3/41	BEDROOM	W5/41	28.70	28.55	0.15	0.52					
R3/41	BEDROOM	W6/41	28.76	28.63	0.13	0.45					
R4/41	LKD	W7/41	29.01	28.88	0.13	0.45					
R4/41	LKD	W8/41	24.06	24.03	0.03	0.12					
R4/41	LKD	W9/41	19.05	19.05	0.00	0.00					
R4/41	LKD	W10/41	19.13	19.13	0.00	0.00					
R1/42	ASSUMED_RESI	W1/42	31.79	31.43	0.36	1.13					
R2/42	ASSUMED_RESI	W2/42	22.87	22.55	0.32	1.40					
R3/42	BEDROOM	W3/42	19.70	19.39	0.31	1.57					
R3/42	BEDROOM	W4/42	22.52	22.22	0.30	1.33					
R4/42	LKD	W5/42	31.64	31.37	0.27	0.85					
R4/42	LKD	W6/42	27.86	27.80	0.06	0.22					
R4/42	LKD	W7/42	22.20	22.20	0.00	0.00					
R4/42	LKD	W8/42	22.07	22.07	0.00	0.00					
R1/43	ASSUMED_RESI	W1/43	35.54	35.10	0.44	1.24					
R2/43	ASSUMED_RESI	W2/43	35.48	35.09	0.39	1.10					
R3/43	BEDROOM	W3/43	35.41	35.02	0.39	1.10					
R3/43	BEDROOM	W4/43	35.36	35.00	0.36	1.02					
R4/43	LKD	W5/43	35.26	34.91	0.35	0.99					
R4/43	LKD	W6/43	31.06	30.98	0.08	0.26					
R4/43	LKD	W7/43	25.10	25.10	0.00	0.00					
R4/43	LKD	W8/43	24.78	24.78	0.00	0.00					
R1/44	ASSUMED_RESI	W1/44	37.95	37.49	0.46	1.21					
R2/44	ASSUMED_RESI	W2/44	37.92	37.52	0.40	1.05					
R3/44	BEDROOM	W3/44	37.86	37.47	0.39	1.03					
R3/44	BEDROOM	W4/44	37.81	37.44	0.37	0.98					



3-5 Bedford Row, London
Existing Buildings vs Proposed Scheme Dated 13/10/22

#### DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R4/44	LKD	W5/44	36.08	35.73	0.35	0.97
R4/44	LKD	W6/44	28.26	28.26	0.00	0.00
R4/44	LKD	W7/44	27.82	27.82	0.00	0.00
R1/45	ASSUMED_RESI	W1/45	38.75	38.69	0.06	0.15
R2/45	ASSUMED_RESI	W2/45	38.89	38.85	0.04	0.10
R2/45	ASSUMED_RESI	W3/45	38.85	38.81	0.04	0.10



3-5 Bedford Row, London
Existing Buildings vs Proposed Scheme Dated 13/10/22

#### NSL

Room	Room Use	Whole Room	Existing	Proposed	Loss	%Loss
		sq ft	sq ft	sq ft	sq ft	
44 Bedford Row						
R1/41	ASSUMED RESI	130.0	129.3	129.3	0.0	0.0
R2/41	ASSUMED RESI	93.5	92.4	92.4	0.0	0.0
R3/41	BEDROOM	117.2	115.1	115.1	0.0	0.0
R4/41	LKD	272.7	268.5	268.5	0.0	0.0
R1/42	ASSUMED_RESI	130.0	127.2	127.2	0.0	0.0
R2/42	ASSUMED_RESI	93.5	92.7	92.7	0.0	0.0
R3/42	BEDROOM	117.2	115.4	115.4	0.0	0.0
R4/42	LKD	272.7	272.7	272.7	0.0	0.0
R1/43	ASSUMED_RESI	130.0	127.2	127.2	0.0	0.0
R2/43	ASSUMED_RESI	93.5	92.6	92.6	0.0	0.0
R3/43	BEDROOM	117.2	115.3	115.3	0.0	0.0
R4/43	LKD	272.7	272.7	272.7	0.0	0.0
R1/44	ASSUMED_RESI	130.0	128.1	128.1	0.0	0.0
R2/44	ASSUMED_RESI	93.5	92.9	92.9	0.0	0.0
R3/44	BEDROOM	117.2	113.7	113.7	0.0	0.0
R4/44	LKD	207.5	189.5	189.5	0.0	0.0
R1/45	ASSUMED_RESI	103.5	95.7	95.7	0.0	0.0
R2/45	ASSUMED_RESI	213.1	208.4	208.4	0.0	0.0



3-5 Bedford Row, London
Existing Buildings vs Proposed Scheme Dated 13/10/22

#### **APSH**

				Wir	ndow					Roor		Room		
Room	Window	Room Use	Exi	sting	Prop	osed	Winter	Annual	Exis	isting Proposed	osed	Winter	Annual	
KOOIII	willdow	ROUIII OSE	Winter	Annual	Winter	Annual	%Loss	%Loss	Winter	Annual	Winter	Annual	%Loss	%Loss
			APSH	APSH	APSH	APSH			APSH	APSH	APSH	APSH		
44 Bedfor	rd Row													
i i bealei	a non													
R4/41	W7/41	LKD	1	26	1	26	0.0	0.0						
R4/41	W8/41	LKD	5	43	5	43	0.0	0.0						
R4/41	W9/41	LKD	6	55	6	55	0.0	0.0						
R4/41	W10/41	LKD	7	54	7	54	0.0	0.0	12	67	12	67	0.0	0.0
R4/42	W5/42	LKD	4	34	4	34	0.0	0.0						
R4/42	W6/42	LKD	5	47	5	47	0.0	0.0						
R4/42	W7/42	LKD	7	61	7	61	0.0	0.0						
R4/42	W8/42	LKD	8	63	8	63	0.0	0.0	13	72	13	72	0.0	0.0
R4/43	W5/43	LKD	6	36	6	36	0.0	0.0						
R4/43	w6/43	LKD	10	54	10	54	0.0	0.0						
R4/43	w7/43	LKD	11	69	11	69	0.0	0.0						
R4/43	W8/43	LKD	11	68	11	68	0.0	0.0	16	77	16	77	0.0	0.0
R4/44	W5/44	LKD	7	38	7	38	0.0	0.0						
R4/44	W6/44	LKD	16	74	16	74	0.0	0.0						
R4/44	W7/44	LKD	16	74	16	74	0.0	0.0	17	79	17	79	0.0	0.0

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# Appendix 3: Sun Hours on Ground Results



