22 WARREN STREET & 52-56 FITZROY STREET

DAYLIGHT AND SUNLIGHT REPORT

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Contents

1	Executive Summary	3
	Introduction	
	Sources of Information	
4	Planning Policy and the BRE Guidelines	6
5	Alternative Target Values and Applying a Flexible Approach	11
6	Assumptions used in the analysis	12
7	Site Context and Scope of Assessment	13
8	Daylight and Sunlight Assessment Results to Surrounding Properties	15
9	Sunlight Amenity (Overshadowing)	19
10	Conclusions	20

APPENDICES

Appendix 1: Site Plan & 3D Drawings

Appendix 2: Daylight and Sunlight Results

Appendix 3: Sunlight Amenity (Overshadowing) Results

Appendix 4: Window Maps



Executive Summary

- 1.1 dMFK Architects have instructed Point 2 Surveyors to assess the daylight and sunlight impact of the proposed development at 22 Warren Street & 52-56 Fitzroy Street (the "Proposed Development") on the neighbouring residential properties and existing amenity space within the site.
- 1.2 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 effect on neighbouring daylight and sunlight amenity.
- 1.3 All surrounding properties will retain levels of daylight and sunlight in keeping with the recommendations within the BRE Guidelines and impacts would be acceptable in planning terms.
- The impact of the proposal to sunlight available to existing amenity within the site will be 1.4 in keeping with the recommendations within the BRE Guidelines and impacts would be acceptable in planning terms.





2 Introduction

- 2.1 dMFK Architects have instructed Point 2 Surveyors to provide daylight and sunlight analysis for the Proposed Development. The analysis assesses the impact of the Proposed Development on the neighbouring residential properties and existing amenity space within the site.
- 2.2 The analysis has been based on the scheme drawings by dMFK Architects, a measured survey of the closest surrounding properties, supplemented by a 3D photogrammetric survey of the wider context, and any relevant surrounding property information obtained through our research and site imagery.
- 2.3 The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines.





3 Sources of Information

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

Point 2 Surveyors

Site Photography

dMFK Architects

- Measured Survey received 18.3.24
- Proposed Scheme model 3D (received 25.4.24)

Local Authority's Online Planning Portal

- 52 Warren Street
- 53 Warren Street
- 18-19 Warren Street
- 21-23 Grafton Mews
- 48 Fitzroy Street
- 11B Fitzroy Square
- 39 Fitzroy Street
- 41 Fitzroy Street
- 43 Fitzroy Street
- 45 Fitzroy Street



4 Planning Policy and the BRE Guidelines

NATIONAL PLANNING POLICY

National Planning Policy Framework (NPPF) 2023

4.1 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)."

LONDON PLANNING POLICY

The London Plan (2021)

4.2 Policy D6 of the London Plan states:

"(C) House development should maximise the provision of dual aspect dwellings and normally avoid the provision of single aspect dwellings. A single aspect dwelling should only be provided where it is considered a more appropriate design solution to meet the requirements of part B in Policy D3 Optimising site capacity through the design-led approach than a dual aspect dwelling, and it can be demonstrated that it will have adequate passive ventilation, daylight and privacy, and avoid overheating.

(D) The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space."

The Mayor of London's Housing Supplementary Planning Guidance (SPG) (2016)

4.3 The Housing SPG states in paragraphs 1.3.45, 1.3.46, and 2.3.47:





- "1.3.45 Policy 7.6Bd requires new development to avoid causing 'unacceptable harm' to the amenity of surrounding land and buildings, particularly in relation to privacy and overshadowing and where tall buildings are proposed. An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time.
- 1.3.46 The degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London. Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced but which still achieve satisfactory levels of residential amenity and avoid unacceptable harm.
- 2.3.47 BRE guidelines on assessing daylight and sunlight should be applied sensitively to higher density development in London, particularly in central and urban settings, recognising the London Plan's strategic approach to optimise housing output and the need to accommodate additional housing supply in locations with good accessibility for higher density development. Quantitative standards on daylight and sunlight should not be applied rigidly, without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London."

LOCAL PLANNING POLICY

Camden draft Local Plan 2024 (not yet adopted)

- 4.4 Policy A1 Protecting Amenity
 - "B. When assessing planning applications, the factors that the Council will consider include:
 - ii. sunlight, daylight and overshadowing
 - iii. impacts of artificial lighting levels"
 - "Sunlight, Daylight & Overshadowing
 - 13.9 Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment.
 - 13.10 Any proposal with potential to negatively impact on the existing levels of daylight/sunlight of other land uses near the application site, including gardens and amenity spaces, and major applications, will be expected to be accompanied by a daylight and sunlight assessment prepared in line with the methods described in the BRE's "Site layout planning for daylight and sunlight: A guide to good practice (2011)."

POINT

4.5 Camden Planning Guidance (Housing) 2018

Residential Development Standards

"Layout

Natural light, daylight/sunlight – all the habitable rooms must have direct natural light, particularly the main living room. The applicant must ensure that the levels of daylight and sunlight that enter habitable rooms comply with BRE standards and that the report for 'Daylight and Sunlight' is submitted with the proposal."

"Amenity

Amenity of neighbours – the proposal should not have a significant detrimental impact to neighbouring amenity in terms of neighbouring outlook, privacy, sunlight, daylight, noise or vibration."

THE BRE GUIDELINES

- 4.6 The main reference used to determine the acceptability of proposals in terms of their internal daylight and sunlight and the impact on daylight and sunlight to the surrounding properties is the BRE Guidelines, used in conjunction with British Standard Daylight in Buildings, BS EN 17037. The BRE Guidelines provide scientific, objective methods for establishing the acceptability of daylight and sunlight internal to the scheme and the surrounding properties and overshadowing.
- 4.7 When assessing the effects on 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 state at paragraph 2.2.2:
 - "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."
- 4.8 Commercial properties are generally not treated as having a reasonable expectation of daylight or sunlight. This is because they are usually designed to rely on electric lighting to provide sufficient light by which to work rather than natural daylight or sunlight. In addition to commercial buildings, windows to residential properties which serve non-habitable rooms, such as entrance ways, garages, bathrooms or store rooms, are also considered not to have a reasonable expectation of daylight or sunlight and are therefore not assessed.



Daylight and Sunlight Criteria to Surrounding Properties

4.9 According to the BRE Guidelines, a surrounding existing building to a proposed scheme will retain the potential for good interior daylighting if the scheme subtends less than 25 degrees from the horizontal as measured from the lowest habitable windows in the neighbouring windows. If this is not achieved, then good daylighting to the neighbouring properties is still achieved if the Vertical Sky Component (VSC) is in excess of 27% or is reduced by less than 20% from its existing level and if the area of the room that can see the sky at desk height (known as the daylight distribution or no sky contour) is reduced by less than 20% of its existing area. The BRE Guidelines state this in paragraph 2.2.23 as:

"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- The VSC measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value
- The area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."
- 4.10 The BRE Guidelines state in paragraph 2.2.2:

"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."

- 4.11 The test for sunlight to the neighbouring properties is calculated for each living room with a main window facing within 90° of due south. Bedrooms and kitchens are considered by the BRE Guidelines as less important for sunlight. The BRE Guidelines state that any south facing window may potentially receive up to 1486 hours of sunlight per year on average, representing 100% of the annual probable sunlight hours (APSH).
- 4.12 The BRE Guidelines state in paragraph 3.2.13 that:

"If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

receives less than 25% of annual probable sunlight hours and less than 0.80 times
its former annual value; or less than 5% of annual probable sunlight hours between
21 September and 21 March and less than 0.80 times its former value during that
period;



 and also has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours."

Method for analysing acceptable sunlight amenity to the open amenity spaces within and surrounding the proposed scheme

4.13 The BRE Guidelines state that for an amenity space to appear adequately sunlit throughout the year, at least half of the amenity area should receive at least two hours of sunlight on 21st March. If as a result of new development an existing amenity area does not meet the above, it should retain at least 80% of its former value with the proposal in place. If a detailed calculation cannot be carried out and the area is a simple shape, the BRE Guidelines suggest that the centre area of each amenity space should receive at least 2 hours of sunlight on March 21st.



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."



6 Assumptions used in the analysis

- 6.1 Uses of the surrounding properties have been based on external appearance to determine whether they are residential or commercial use. We have also researched the Council Tax records for the property, which if listed would indicate residential use.
- 6.2 It is important to note that, in some cases and where no additional information is available, the window positions in the surrounding property elevations have been estimated based on brick counts from site photographs. The floor levels for the surrounding buildings are assumed unless otherwise indicated.
- 6.3 We have obtained layouts for the following properties from the local planning portal and/or estate agency listings:
 - 52 Warren Street
 - 53 Warren Street
 - 18-19 Warren Street
 - 21-23 Grafton Mews
 - 48 Fitzroy Street
 - 11B Fitzroy Square
 - 39 Fitzroy Street
 - 41 Fitzroy Street
 - 43 Fitzroy Street
 - 45 Fitzroy Street
- 6.4 Where we have not been able to obtain layouts or gain access internally to the surrounding properties, details of the internal layouts and floor level heights have been assumed from the external appearance of the building, and the locations of windows. Unless known or otherwise, appropriate the depths of rooms have been assumed at 4.27m for residential properties and 6m for commercial properties, or half the building depth if this is less than these dimensions.
- 6.5 All property addresses are taken from the Land Registry MapSearch website and we advise that these are checked by your solicitor prior to any action being taken based on this report.





7 Site Context and Scope of Assessment

7.1 The existing site and proposed scheme can be seen in the images below.

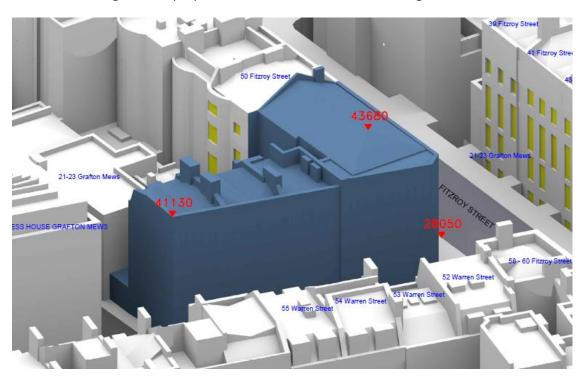


Figure 1: Existing site analysed

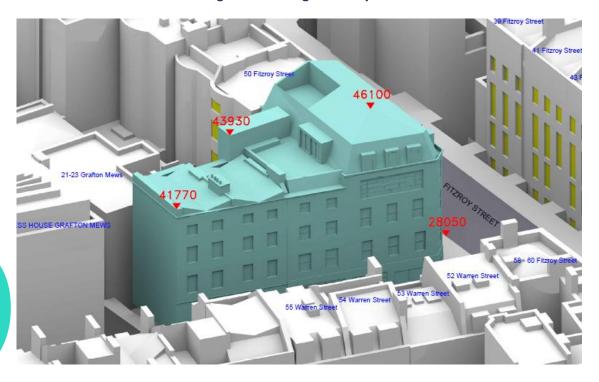


Figure 2: Proposed site analysed



- 7.2 In terms of daylight and sunlight, the properties listed below were analysed due to their proximity to the development site given the height and massing of the proposal. All other properties were deemed to be sufficiently far from the site that their daylight and sunlight is unlikely to be adversely affected by the Proposed Development.
 - 51A Warren Street, W1T 5JH Commercial
 - 52 Warren Street, W1T 5NJ Residential 1st to 4th floor flats
 - 53 Warren Street, W1T 5NL Residential 1st to 3rd floor flats
 - 54 Warren Street, W1T 5NN Residential 1st, 2nd floor flats & flat C
 - 18-19 Warren Street, Duchess House, W1T 5LR Residential 12 flats above GND fl.
 - 21-23 Grafton Mews, W1T 5HR Commercial
 - 48 Fitzroy Street, W1T 5BS Residential 1st to 4th floor flats
 - 50 Fitzroy Street, W1T 5BT Residential 3rd floor flat, Royal Anthropological Institute below.
 - 11A Fitzroy Square, W1T 6BU Residential
 - 11B Fitzroy Square, W1T 6BU Residential
 - 39 Fitzroy Street, W1T 6DY Residential BST to 3rd Residential (5 flats)
 - 41 Fitzroy Street, W1T 6DZ Hotel and premises & Residential Proprietors Accom.
 - 43 Fitzroy Street, W1T 6EA Residential BST to 1st & 3rd floor House
 - 45 Fitzroy Street, Silverstream House, W1T 6EB Residential 3rd floor flat.



8 Daylight and Sunlight Assessment Results to Surrounding Properties

Table 1: Summary of Daylight (VSC) results

VSC SUMMARY									
Address	Total that Meet BRE Guidelines	20-29% Loss	30-39.9% Loss	>=40% Loss	Total	Total No. of Windows			
39 Fitzroy Street	10	0	0	0	0	10			
41 Fitzroy Street	10	0	0	0	0	10			
43 Fitzroy Street	9	0	0	0	0	9			
45 Fitzroy Street	5	0	0	0	0	5			
52 Warren Street	6	0	0	0	0	6			
53 Warren Street	6	0	0	0	0	6			
54 Warren Street	6	0	0	0	0	6			
55 Warren Street	6	0	0	0	0	6			
Duchess House Grafton Mews	12	0	0	0	0	12			
50 Fitzroy Street	4	0	0	0	0	4			
Total	74	0	0	0	0	74			



Table 2: Summary of Daylight (NSL) results

NSL SUMMARY									
Address	Total that Meet BRE Guidelines	20-29% Loss	30-39.9% Loss	>=40% Loss	Total	Total No. of Rooms			
39 Fitzroy Street	6	0	0	0	0	6			
41 Fitzroy Street	6	0	0	0	0	6			
43 Fitzroy Street	5	0	0	0	0	5			
45 Fitzroy Street	3	0	0	0	0	3			
52 Warren Street	3	0	0	0	0	3			
53 Warren Street	3	0	0	0	0	3			
54 Warren Street	3	0	0	0	0	3			
55 Warren Street	3	0	0	0	0	3			
Duchess House Grafton Mews	10	0	0	0	0	10			
50 Fitzroy Street	5	0	0	0	0	5			
Total	47	0	0	0	0	47			



Table 3: Summary of Sunlight (APSH) results

APSH ROOM SUMMARY										
	Meet BRE Guidelines		No. of rooms below the APSH stated in BRE Guidelines							Total
Address		Below Threshold for Winter APSH				Below Threshold for Total APSH				No.
	Guidelines	20-30%	30-40%	>40%	Total	20-30%	30-40%	>40%	Total	Rooms
52 Warren Street	3	0	0	0	0	0	0	0	0	3
53 Warren Street	3	0	0	0	0	0	0	0	0	3
54 Warren Street	3	0	0	0	0	0	0	0	0	3
55 Warren Street	3	0	0	0	0	0	0	0	0	3
Duchess House Grafton Mews	9	0	0	0	0	0	0	0	0	9
Total	21	0	0	0	0	0	0	0	0	21



8.1 Tables 1 to 3 above summarise the daylight and sunlight results for the impacts of the proposal on the neighbouring properties. Detailed results are available in Appendix 2. The results show that all properties meet the target values a set out in the BRE Guidelines for daylight (in terms of VSC and NSL) and sunlight (in terms of APSH).





9 Sunlight Amenity (Overshadowing)

9.1 We have assessed the level of sunlight to the outdoor amenity spaces within the proposed development, see Figure 3 below. The overshadowing results can be found in Appendix 3.

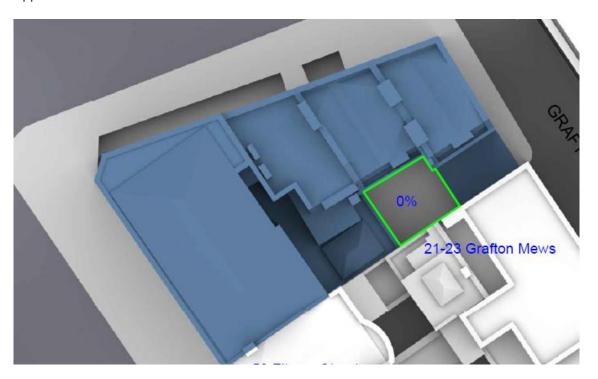


Figure 3: Amenity space analysed

9.2 The BRE Guidelines recommend that an outdoor amenity space receives at least 2 hours of sunlight on March 21st to at least 50% of its area in the proposed situation or retains at least 80% of its former value with the proposal in place.

Results

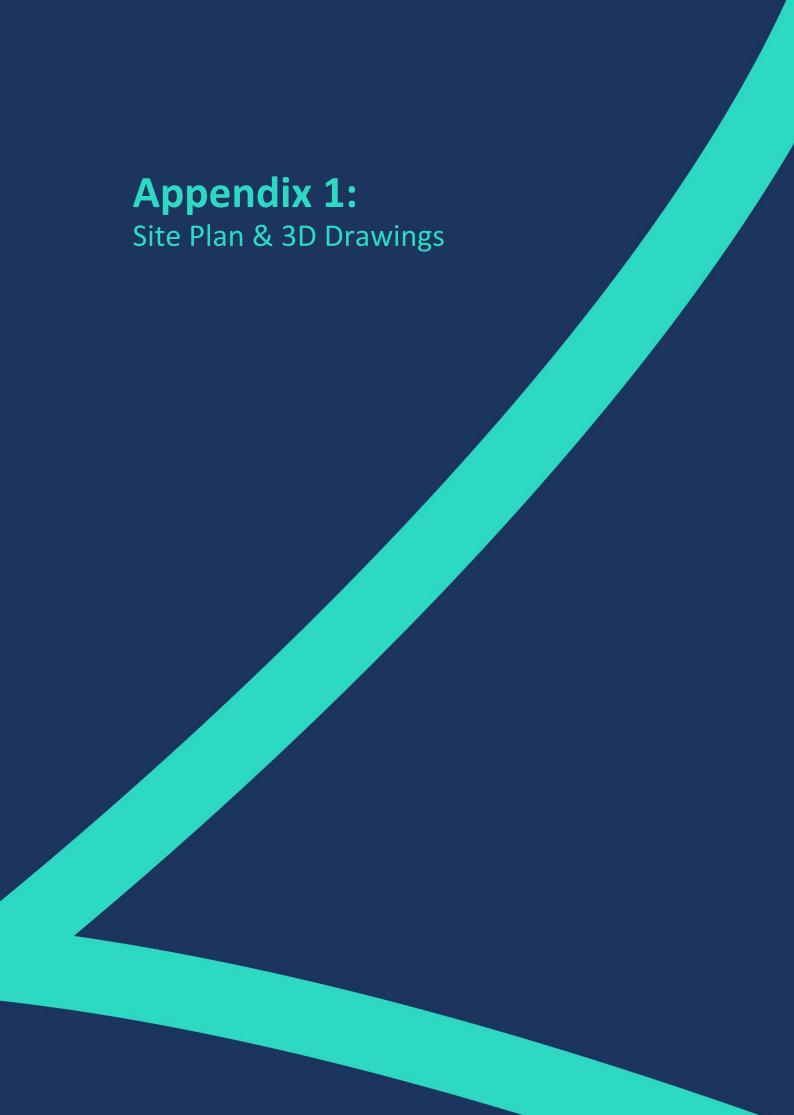
9.3 This space will retain at least 80% of the area that can see 2 hours of sunlight on March 21st and therefore meets the BRE Guidelines.

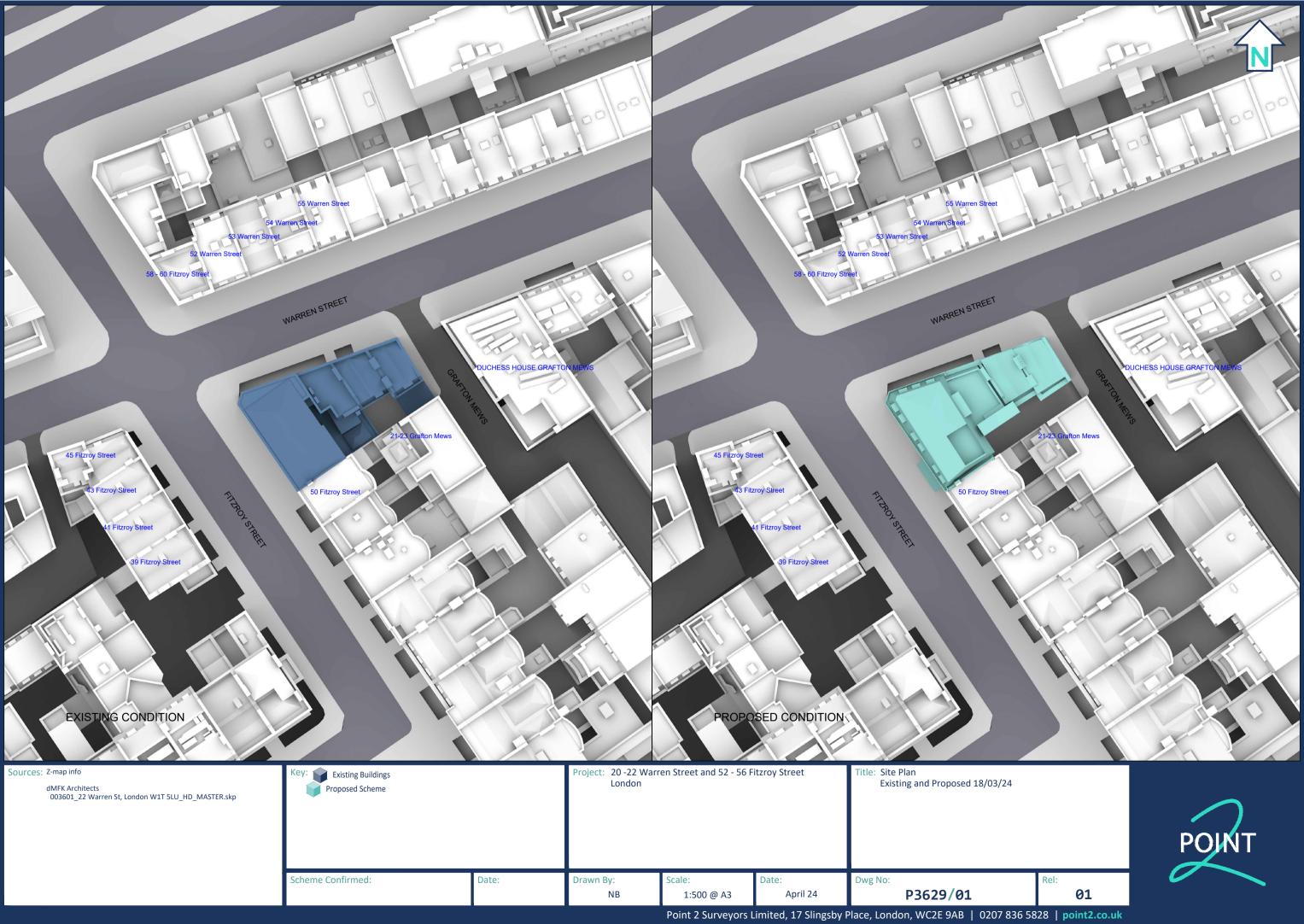


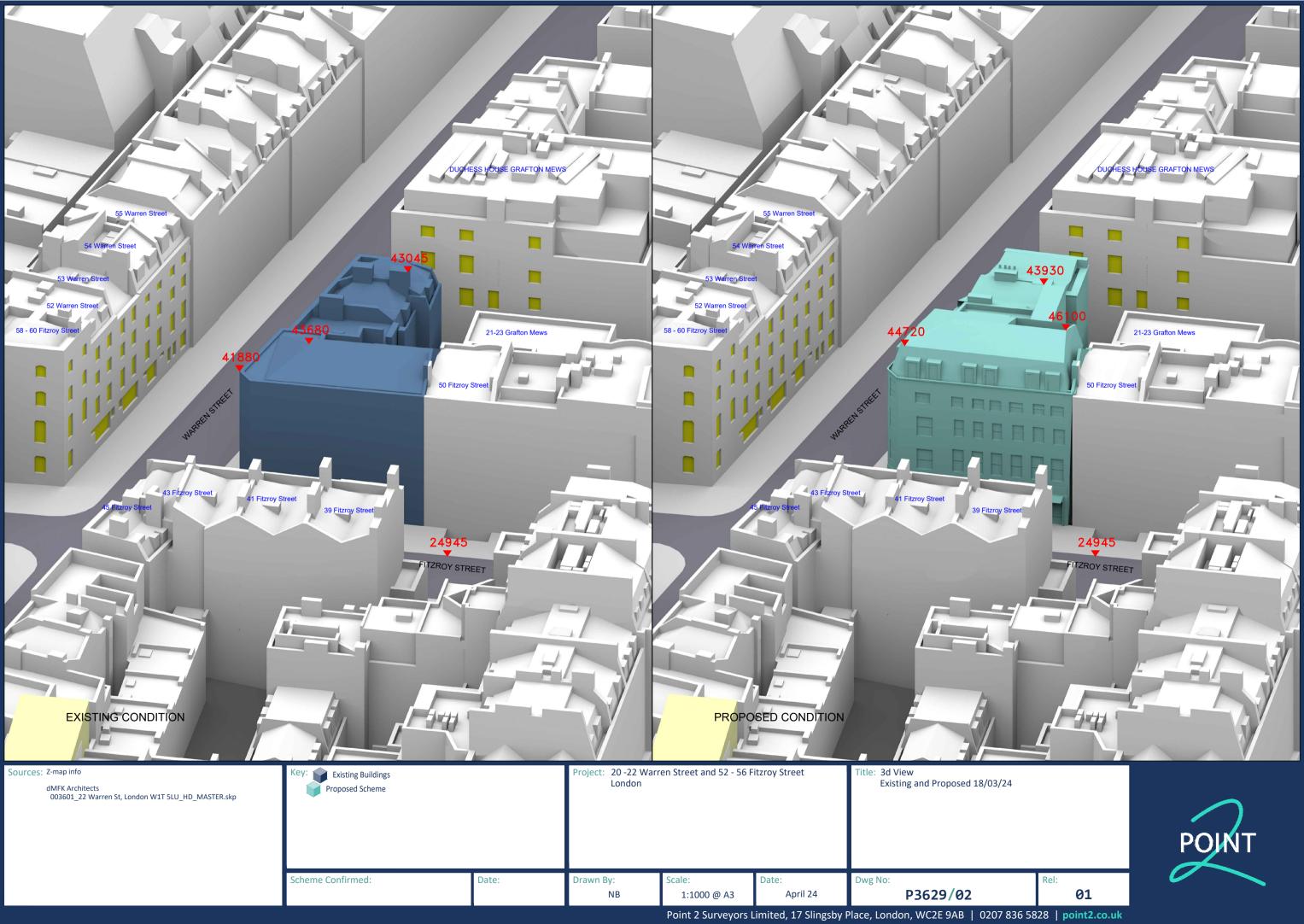
10 Conclusions

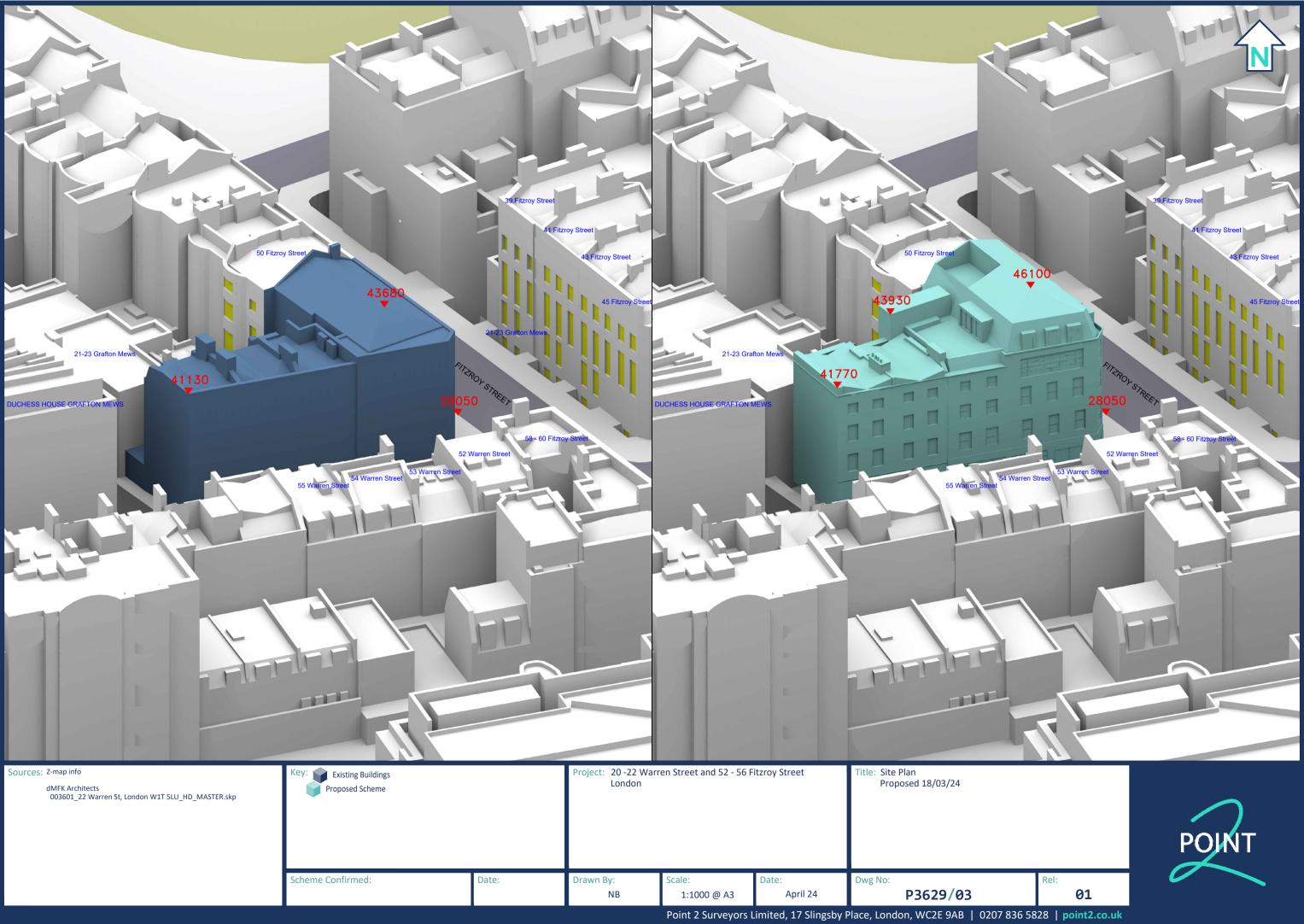
- 10.1 dMFK Architects have instructed Point 2 Surveyors to assess the daylight and sunlight impact of the Proposed Development on the neighbouring residential properties and existing amenity space within the site.
- 10.2 The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines, which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.
- 10.3 All surrounding properties will retain levels of daylight and sunlight in keeping with the recommendations within the BRE Guidelines and impacts would be acceptable in planning terms.
- 10.4 The impact of the proposal to sunlight available to existing amenity within the site will be in keeping with the recommendations within the BRE Guidelines and impacts would be acceptable in planning terms.

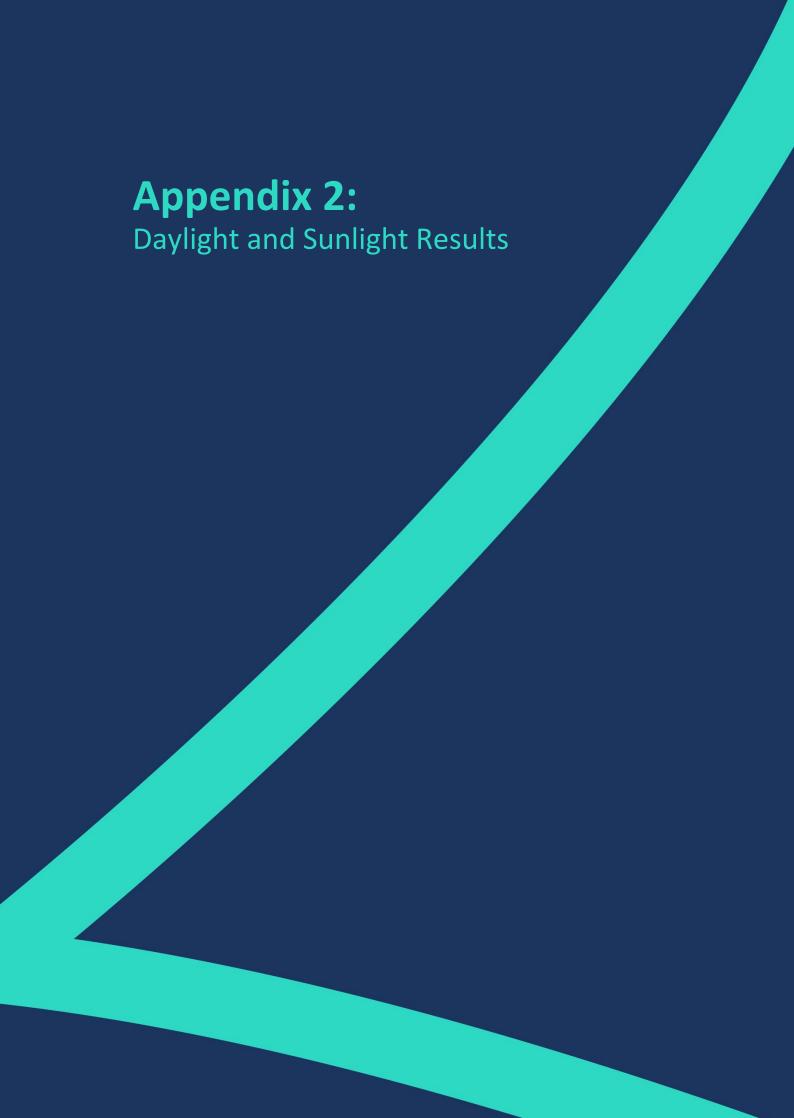














Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
Fitzroy Str	eet					
R1/9	LIVINGROOM	W1/9	15.25	14.73	0.52	3.41
R1/9	LIVINGROOM	W2/9	16.59	16.02	0.57	3.44
R1/10	LIVINGROOM	W1/10	21.31	20.69	0.62	2.91
R1/10	LIVINGROOM	W2/10	21.46	20.74	0.72	3.36
R1/11	LIVINGROOM	W1/11	26.00	25.24	0.76	2.92
R1/11	LIVINGROOM	W2/11	26.14	25.18	0.96	3.67
R2/11	KD	W3/11	26.17	25.03	1.14	4.36
R1/12	LIVINGROOM	W1/12	29.88	29.11	0.77	2.58
R1/12	LIVINGROOM	W2/12	29.92	28.98	0.94	3.14
R2/12	KD	W3/12	29.90	28.77	1.13	3.78
L Fitzroy Str	eet					
R2/9	LIVINGROOM	W3/9	16.09	15.44	0.65	4.04
R2/9	LIVINGROOM	W4/9	15.66	15.01	0.65	4.15
R2/10	LIVINGROOM	W3/10	21.47	20.51	0.96	4.47
R2/10	LIVINGROOM	W4/10	21.36	20.37	0.99	4.63
R3/11	BEDROOM	W4/11	26.15	24.78	1.37	5.24
R3/11	BEDROOM	W5/11	26.02	24.57	1.45	5.57
R4/11	BEDROOM	W6/11	26.12	24.67	1.45	5.55
R3/12	BEDROOM	W4/12	30.99	29.59	1.40	4.52
R3/12	BEDROOM	W5/12	30.92	29.38	1.54	4.98
R4/12	BEDROOM	W6/12	31.14	29.60	1.54	4.95
B Fitzroy Str	eet					
R3/9	BEDROOM	W5/9	14.61	14.40	0.21	1.44
R3/10	BEDROOM	W5/10	22.14	21.21	0.93	4.20
R3/10	BEDROOM	W6/10	22.79	21.91	0.88	3.86
R5/11	BEDSIT	W7/11	26.60	25.22	1.38	5.19
R5/11	BEDSIT	W8/11	27.06	25.78	1.28	4.73
R5/11	BEDSIT	W9/11	27.33	26.15	1.18	4.32



Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
R5/12	BEDROOM	W7/12	31.19	29.71	1.48	4.75
R5/12	BEDROOM	W8/12	31.51	30.12	1.39	4.41
R6/12	BEDROOM	W9/12	31.67	30.40	1.27	4.01
Fitzroy Stre	eet					
R4/9	UNKNOWN	W6/9	10.20	10.20	0.00	0.00
R6/11	UNKNOWN	W10/11	28.13	27.10	1.03	3.66
R6/11	UNKNOWN	W11/11	28.62	27.73	0.89	3.11
R7/12	UNKNOWN	W10/12	31.97	30.87	1.10	3.44
R7/12	UNKNOWN	W11/12	32.21	31.27	0.94	2.92
Warren Str	eet					
R1/31	LIVINGROOM	W1/31	26.37	25.34	1.03	3.91
R1/31	LIVINGROOM	W2/31	25.98	24.92	1.06	4.08
R1/32	LIVINGROOM	W1/32	30.28	28.93	1.35	4.46
R1/32	LIVINGROOM	W2/32	30.50	29.17	1.33	4.36
R1/33	LIVINGROOM	W1/33	34.00	32.52	1.48	4.35
R1/33	LIVINGROOM	W2/33	34.01	32.59	1.42	4.18
Warren Str	eet					
R2/31	LIVINGROOM	W3/31	25.49	24.55	0.94	3.69
R2/31	LIVINGROOM	W4/31	25.66	24.65	1.01	3.94
R2/32	LIVINGROOM	W3/32	30.14	28.90	1.24	4.11
R2/32	LIVINGROOM	W4/32	30.21	28.88	1.33	4.40
R2/33	LIVINGROOM	W3/33	34.04	32.63	1.41	4.14
R2/33	LIVINGROOM	W4/33	33.98	32.51	1.47	4.33
Warren Str	eet					
R3/31	LIVINGROOM	W5/31	25.70	24.97	0.73	2.84
R3/31	LIVINGROOM	W6/31	25.48	24.64	0.84	3.30
R3/32	LIVINGROOM	W5/32	30.33	29.39	0.94	3.10
R3/32	LIVINGROOM	W6/32	30.15	29.06	1.09	3.62
R3/33	LIVINGROOM	W5/33	34.08	32.96	1.12	3.29
R3/33	LIVINGROOM	W6/33	34.05	32.80	1.25	3.67



Boom Hos Window Existing Proposed Loss (Vices									
Room	Room Use	Window	VSC	VSC	Loss	%Loss			
5 Warren Sti	reet								
R4/31	LIVINGROOM	W7/31	26.28	25.78	0.50	1.90			
R4/31	LIVINGROOM	W8/31	26.10	25.50	0.60	2.30			
R4/32	LIVINGROOM	W7/32	30.64	30.01	0.63	2.06			
R4/32	LIVINGROOM	W8/32	30.68	29.91	0.77	2.51			
R4/33	LIVINGROOM	W7/33	33.85	33.11	0.74	2.19			
R4/33	LIVINGROOM	W8/33	34.08	33.17	0.74	2.19			
uchess Hous	se Grafton Mews								
R1/40		W1/40	14.98	14.75	0.23	1.54			
R1/41	LIVINGROOM	W1/41	20.01	19.32	0.69	3.45			
R1/41	LIVINGROOM	W2/41	22.81	21.72	1.09	4.78			
R2/41	BEDROOM	W3/41	24.56	23.17	1.39	5.66			
R4/41	BEDROOM	W4/41	26.00	24.91	1.09	4.19			
R1/42	LIVINGROOM	W1/42	27.17	25.56	1.61	5.93			
R1/42	LIVINGROOM	W2/42	29.46	27.84	1.62	5.50			
R1/43	LIVINGROOM	W1/43	34.17	33.37	0.80	2.34			
R1/43	LIVINGROOM	W2/43	34.47	33.98	0.49	1.42			
R4/43	BEDROOM	W3/43	34.91	34.41	0.50	1.43			
R4/50		W1/50	17.55	17.20	0.35	1.99			
R4/52	BEDROOM	W4/52	30.57	29.61	0.96	3.14			
0 Fitzroy Str	eet								
R1/60	BEDROOM	W1/60	9.09	9.08	0.01	0.11			
R1/61	BEDROOM	W1/61	25.17	24.32	0.85	3.38			
R1/62	BEDROOM	W1/62	31.04	30.15	0.89	2.87			
R1/63	BEDROOM	W1/63	33.84	33.35	0.49	1.45			



Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
itzroy Street						
R1/9	LIVINGROOM	226.7	67.6	69.1	-1.5	-2.2
R1/10	LIVINGROOM	245.3	150.5	152.5	-2.0	-1.3
R1/11	LIVINGROOM	190.9	187.4	187.4	0.0	0.0
R2/11	KD	140.1	137.6	132.9	4.6	3.3
R1/12	LIVINGROOM	190.9	182.6	182.0	0.6	0.3
R2/12	KD	140.1	135.1	119.5	15.6	11.5
itzroy Street						
R2/9	LIVINGROOM	283.1	83.6	83.3	0.3	0.4
R2/10	LIVINGROOM	193.7	155.5	150.7	4.8	3.1
R3/11	BEDROOM	150.9	149.4	149.4	0.0	0.0
R4/11	BEDROOM	78.3	77.7	77.7	0.0	0.0
R3/12	BEDROOM	150.9	146.9	146.9	0.0	0.0
R4/12	BEDROOM	78.3	76.6	76.6	0.0	0.0
itzroy Street						
R3/9	BEDROOM	196.5	48.3	47.2	1.1	2.3
R3/10	BEDROOM	240.8	200.8	198.2	2.6	1.3
R5/11	BEDSIT	246.7	244.9	244.9	0.0	0.0
R5/12	BEDROOM	150.9	147.2	147.2	0.0	0.0
R6/12	BEDROOM	78.3	76.6	76.6	0.0	0.0
itzroy Street						
R4/9	UNKNOWN	194.9	96.1	94.5	1.6	1.7
R6/11	UNKNOWN	194.9	191.7	191.7	0.0	0.0
R7/12	UNKNOWN	194.9	190.6	190.6	0.0	0.0
Varren Street						
R1/31	LIVINGROOM	160.9	152.8	153.0	-0.1	-0.1
R1/32	LIVINGROOM	201.7	195.9	195.9	0.0	0.0
R1/33	LIVINGROOM	201.7	195.9	195.9	0.0	0.0
Varren Street						
R2/31	LIVINGROOM	193.9	179.8	180.8	-1.0	-0.6
R2/32	LIVINGROOM	193.9	188.7	188.7	0.0	0.0
R2/33	LIVINGROOM	193.9	188.5	188.5	0.0	0.0
Warren Street						
R3/31	LIVINGROOM	193.9	174.7	175.2	-0.5	-0.3
,	2	155.5	±,	1,3,2	5.5	0.5



Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
D2 /22		400.0	407.0	407.0	0.0	0.0
R3/32	LIVINGROOM	193.9	187.8	187.8	0.0	0.0
R3/33	LIVINGROOM	193.9	185.5	185.5	0.0	0.0
Varren Street	i .					
R4/31	LIVINGROOM	193.9	180.2	180.7	-0.5	-0.3
R4/32	LIVINGROOM	193.9	188.3	188.3	0.0	0.0
R4/33	LIVINGROOM	193.9	188.3	188.3	0.0	0.0
hess House G	irafton Mews					
R1/40		350.8	209.1	211.3	-2.2	-1.1
R1/41	LIVINGROOM	386.0	357.1	356.2	0.9	0.3
R2/41	BEDROOM	96.0	91.5	91.5	0.0	0.0
R4/41	BEDROOM	126.8	110.4	95.9	14.5	13.1
R1/42	LIVINGROOM	386.0	372.1	372.1	0.0	0.0
R2/42	BEDROOM	95.3	95.3	95.3	0.0	0.0
R1/43	LIVINGROOM	386.0	368.9	368.9	0.0	0.0
R4/43	BEDROOM	126.8	116.9	116.9	0.0	0.0
R4/50		126.8	79.0	78.3	0.7	0.9
R4/52	BEDROOM	126.8	117.3	117.3	0.0	0.0
itzroy Street						
R1/59	KD	202.2	0.0	0.0	0.0	0.0
R1/60	BEDROOM	137.4	58.0	57.5	0.5	0.9
R1/61	BEDROOM	137.4	136.2	136.2	0.0	0.0
R1/62	BEDROOM	137.4	136.2	136.2	0.0	0.0
R1/63	BEDROOM	137.4	136.1	136.1	0.0	0.0

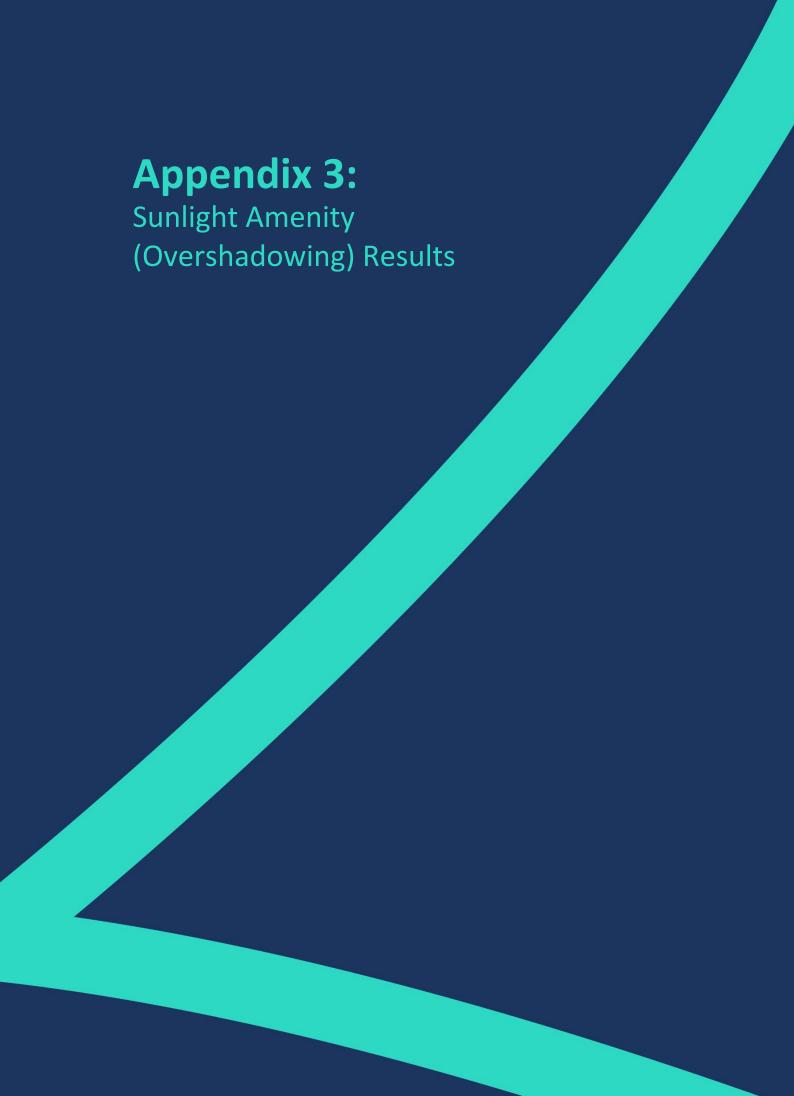


				Win						
Room	Window	Room Use	Exis	sting	Prop	oosed	Winter	Annual		
			Winter APSH	Annual APSH	Winter APSH	Annual APSH	%Loss	%Loss		
52 Warre	52 Warren Street									
32 Warre	T Street									
R1/31	W1/31	LIVINGROOM	14	70	12	68	14.3	2.9		
R1/31	W2/31	LIVINGROOM	15	70	13	68	13.3	2.9		
R1/32	W1/32	LIVINGROOM	21	77	19	75	9.5	2.6		
R1/32	W2/32	LIVINGROOM	21	77	20	76	4.8	1.3		
R1/33	W1/33	LIVINGROOM	28	84	25	81	10.7	3.6		
R1/33	W2/33	LIVINGROOM	28	84	25	81	10.7	3.6		
53 Warre	n Street									
R2/31	W3/31	LIVINGROOM	13	68	10	65	23.1	4.4		
R2/31	W4/31	LIVINGROOM	14	69	12	67	14.3	2.9		
R2/32	W3/32	LIVINGROOM	19	75	18	74	5.3	1.3		
R2/32	W4/32	LIVINGROOM	20	76	18	74	10.0	2.6		
R2/33	W3/33	LIVINGROOM	27	83	25	81	7.4	2.4		
R2/33	W4/33	LIVINGROOM	27	83	25	81	7.4	2.4		
54 Warre	n Street									
R3/31	W5/31	LIVINGROOM	13	68	12	67	7.7	1.5		
R3/31	W6/31	LIVINGROOM	14	69	13	68	7.1	1.4		
R3/32	W5/32	LIVINGROOM	18	74	18	74	0.0	0.0		
R3/32	W6/32	LIVINGROOM	19	75	18	74	5.3	1.3		
R3/33	W5/33	LIVINGROOM	27	83	25	81	7.4	2.4		
R3/33	W6/33	LIVINGROOM	27	83	25	81	7.4	2.4		
55 Warre	n Street									
R4/31	W7/31	LIVINGROOM	16	69	15	68	6.3	1.4		
R4/31	W8/31	LIVINGROOM	14	69	14	69	0.0	0.0		
R4/32	W7/32	LIVINGROOM	20	74	19	73	5.0	1.4		
R4/32	W8/32	LIVINGROOM	17	73	16	72	5.9	1.4		



APSIT

				Win						
Room	Window	Room Use	Exis	ting	Prop	osed	Winter	Annual %Loss		
			Winter APSH	Annual APSH	Winter APSH	Annual APSH	%Loss	%LUSS		
R4/33	W7/33	LIVINGROOM	27	81	26	80	3.7	1.2		
R4/33	W8/33	LIVINGROOM	27	83	26	82	3.7	1.2		
Duchess House Grafton Mews										
R1/40	W1/40		10	29	10	29	0.0	0.0		
R1/41	W1/41	LIVINGROOM	15	39	15	37	0.0	5.1		
R1/41	W2/41	LIVINGROOM	16	45	16	44	0.0	2.2		
R2/41	W3/41	BEDROOM	15	47	15	46	0.0	2.1		
R4/41	W4/41	BEDROOM	15	51	15	50	0.0	2.0		
R1/42	W1/42	LIVINGROOM	17	53	17	51	0.0	3.8		
R1/42	W2/42	LIVINGROOM	20	56	20	52	0.0	7.1		
R1/43	W1/43	LIVINGROOM	22	62	22	62	0.0	0.0		
R1/43	W2/43	LIVINGROOM	22	63	22	62	0.0	1.6		
R4/43	W3/43	BEDROOM	22	63	22	64	0.0	-1.6		
R4/50	W1/50		8	34	8	34	0.0	0.0		
R4/52	W4/52	BEDROOM	19	57	19	56	0.0	1.8		





Appendix 4: Window Maps



