Seven Dials Court and 3-11 Shorts Gardens, London, WC2

Daylight and Sunlight Report

CHP Surveyors Ltd
2-6 Boundary Row
London SE1 8HP
T 020 3714 4090
www.chpsurveyors.com

8th January 2020

Daylight and Sunlight Report

Seven Dials Court and 3-11 Shorts Gardens, London WC2

Prepared for:

Shaftesbury Covent Garden Limited

Prepared By	Reference	Date
James M A Crowley	2383	8th January 2020

Contents

1.0	Introduction
2.0	Executive Summary
3.0	Assessment
4.0	Information
5.0	Proposals
6.0	Limitations
7.0	Methodology
8.0	Surrounding Properties
9.0	Daylight Analysis
10.0	Sunlight Analysis
11.0	Conclusion

Appendices

Appendix A	Principles of Daylight and Sunlight
Appendix B	CHP Surveyors Limited's drawing numbers: - 2383-100, 101, 102, 103, 104 and 105
Appendix C	Daylight Results
Appendix D	Sunlight Results

CHP Surveyors Limited

CHP Surveyors Limited

1.0 Introduction

1.1 CHP Surveyors Limited have been instructed by Shaftesbury Covent Garden Limited to consider the implications the proposals for the above site will have on the daylight and sunlight enjoyed by the neighbouring residential properties, in accordance with the BRE guidelines.

1.2 This report considers the results of the analysis with reference to the criteria set out in the BRE guidelines as referred to in the London Borough of Camden's planning guidance with regards to Amenity dated March 2018.

2.0 Executive Summary

2.1 CHP Surveyors Limited's instructions are to consider the implications of the proposed scheme in relation to the neighbouring residential properties. It is noted that this assessment was previously completed in 2017 and found acceptable under previous application Ref: 2016/6916/P.

2.2 From our onsite observations and online research, the neighbouring residential properties that have habitable rooms overlooking the site and therefore need to be considered as part of this assessment are: -

- 1 Shorts Gardens
- 41 Monmouth Street
- 37-39 Monmouth Street

2.3 To ensure that this assessment has correctly considered the daylight and sunlight enjoyed by the neighbouring residential properties, it has been undertaken in accordance with the Building Research Establishment's publication "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.*" (2011) (the "BRE guidelines").

2.4 The technical analysis has been undertaken using the standards and tests contained in the BRE guidelines. A summary of the recommendations set out in the Principles of Daylight and Sunlight attached at Appendix A.

2.5 The results of our analysis with regard to the daylight and sunlight enjoyed by the neighbouring properties, demonstrates that, taking into account the dense urban location of the site and the close proximity of the neighbouring properties that the aims of the BRE guidelines are achieved and the proposals will not have a significant effect on these.

3.0 Assessment

3.1 Under paragraph 123 (c) of the National Planning Policy Framework (February 2019) it states with regards to daylight and sunlight when considering whether efficient use of the land is being made: -

"*....when considering applications for housing, authorities should take a flexible approach to applying policies and 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)"*

3.2 The London Borough of Camden's planning guidance dated March 2018 states under point 3 that;

"The Council expects applicants to consider the impact of development schemes on daylight and sunlight levels. Where appropriate a daylight and sunlight assessment should be submitted which should follow the guidance in the BRE's Site layout planning for daylight and sunlight: A guide to good practice."

3.3 To ensure that the assessment has been considered appropriately, the daylight and sunlight assessments have been undertaken referencing the criteria contained in the Building

Research Establishment's publication "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.*" (2011) (BRE guidelines) but taking into account the specific site constraints.

3.4 The introduction to the BRE guidelines state that: -

"*The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design.*"

3.5 It is suggested within the BRE guidelines that residential properties should have the greatest need for good daylight and sunlight and that key habitable rooms should be considered, these being Bedrooms, Living Rooms and Kitchens.

3.6 Within the BRE guidelines, there are different methodologies for calculating daylight. The first method calculates the Vertical Sky Component (VSC). This analysis establishes the amount of available daylight received directly from the sky for each individual window. The reference point for this analysis is the centre point of the window.

3.7 The second method is the No Sky Line (NSL) or Daylight Distribution analysis. This assesses the change in position of the No Sky Line between the existing and proposed situations. It does not take into account the number and size of windows to a room.

3.8 The final method for calculating daylight is to calculate the Average Daylight Factor (ADF). This analysis is more detailed and therefore is more precise in its measurement of daylight. Not only does it consider the amount of sky visible but also the window size, room use and room size.

3.9 To calculate the level of sunlight received, the BRE guidelines state that an analysis is required to windows which are within 90° of due south. An Annual Probable Sunlight Hours (APSH)

test is undertaken which establishes the level of sunlight achieved during the winter and summer months.

3.10 An extended account of the BRE guidelines is attached at Appendix A, entitled 'Principles of Daylight and Sunlight'.

4.0 Information

4.1 During the process of producing our report, we have made reference to the following information: -

Trehearne Architects

Drawing numbers; L1865-A(-)01, 02, 03, 04, E(-)00, 01, 02, 03, 10, 11, 12, 13, 14, B1, P(-)00, 01, 02, 03, 10, 11, 12, 13, 14, B1

CHP Surveyors Limited

- Site visit
- Online research on London Borough of Camden's planning portal
- Online Estate Agent sites

5.0 Proposals

5.1 The site is located on the west side of Shorts Gardens within the London Borough of Camden. Alongside wider refurbishment works at Seven Dials Court and 3-11 Shorts Gardens, the proposals are for an infill to provide residential entrance on the ground floor and the construction of a one bed room apartment above, as indicated on drawing numbers 2383-100, 101, 012 and 103 attached at Appendix B.

6.0 Limitations

6.1 Our 3D computer model and resultant data analyses the proposed development and has been based on the drawings set out in Clause 4.1 provided by Trehearne Architects.

6.2 Research has been undertaken of the neighbouring properties using planning portals and other online sources to try and establish the internal configuration within these properties. Where information was unable to be sourced, reasonable assumptions have been made as to the internal room sizes, layouts and uses based on onsite observations.

7.0 Methodology

7.1 Based on online research and onsite observations, we have produced a 3D computer model of the neighbouring residential buildings to the site. This includes the window locations and internal configuration (either actual or assumed). We have not had access to the neighbouring properties and therefore the internal configuration and which windows serve habitable rooms has been based on onsite observations and other information we have been able to obtain. We have then produced a 3D computer model of the existing structures on the site and the proposals.

7.2 Using a specialist computer programme, we have undertaken analysis in accordance with the criteria contained in the BRE guidelines. We have analysed the existing situation to provide a baseline and then a further analysis following the implementation of the proposals. There is no requirement to consider the implications during the development process as these will only be short term.

7.3 As clearly stated within the BRE guidelines;

"Its aims are to help designers not constrain them and that therefore the numerical values contained within the document should be interpreted flexibly since natural light is only one of many factors in site layout design.".

7.4 The numerical values contained in the BRE guidelines are to establish whether the proposals will have a significant effect on the daylight enjoyed by the neighbouring properties and are based initially on a Vertical Sky Component (VSC) analysis. This analysis advises that each window should achieve a VSC of 27% or 0.8 times the existing value.

7.5 In relation to daylight, the BRE guidelines set out the numerical values for daylight distribution. The criteria specify that a significant portion of each habitable room (>80%), at least 0.8 times the existing area, should lie in front of the No Sky Line (NSL).

7.6 An alternative method of considering the implications of the proposals on the neighbouring properties daylight is to undertake an Average Daylight Factor (ADF) analysis in accordance with Appendix C of the BRE guidelines. This takes into account the area of the glazing serving the room as well as the size of the room and expresses the ratio of daylight within the room as a portion of the daylight outside. The BRE guidelines set out the minimum level as being dependent on the room use. The criteria state the minimum levels are as follows: -

- Kitchen – 2%
- Living Room – 1.5%
- Bedroom – 1%

7.7 Concerning sunlight, the BRE guidelines advise that all windows within 90° of due south should achieve 25% of the Annual Probable Sunlight Hours (APSH) with at least 5% during the winter months. Where this is not achieved and the difference between the existing and proposed APSH is more than 4%, the BRE guidelines state that the proposals will not have a noticeable effect on the sunlight, provided the total APSH, as well as during the winter months, are within 0.8 times the existing.

8.0 Surrounding Properties

8.1 From the information gained from our site visit and applying the criteria contained in the BRE guidelines, we consider a technical analysis is undertaken of the following properties: -

PROPERTY	ORIENTATION TO SITE	PROPERTY USE
1 Shorts Gardens	South West	Residential over three floors
41 Monmouth Street	West	Residential over three floors
37-39 Monmouth Street	West	Residential over three floors

9.0 Daylight Assessment

9.1 General

9.1.1 With regard to daylight enjoyed by the neighbouring residential properties, we have considered where the proposals will subtend a 25° line drawn from their lowest window. The BRE guidelines state that where the proposals do not subtend this, they will not have significant implications. Where this is not achieved, in accordance with the BRE guidelines we have calculated the Vertical Sky Component (VSC), both in the existing and proposed situation. This establishes the amount of daylight currently enjoyed on the face of the window and following the implementation of the proposals.

9.1.2 The guidelines state that if the VSC calculated at the centre of each window is 27% or more, then enough daylight should be reaching the window. If, with the implementation of the proposals the window does not achieve 27% VSC but is more than 0.8 times its former value, then the BRE guidelines state that daylight is unlikely to be seriously affected.

9.1.3 In addition to the above, to ensure that the room will achieve good daylight distribution the No Sky Line (NSL) is plotted. The BRE guidelines state that for a room to enjoy good daylight distribution, a significant area of the room, which is considered to be 80% or at least 0.8 times the existing area should be in front of the NSL.

9.2 Daylight Analysis

9.2.1 From our site visit and the criteria set out in the BRE guidelines, the following neighbouring properties have been analysed: -

- 1 Shorts Gardens
- 41 Monmouth Street
- 37-39 Monmouth Street

9.3 1 Shorts Gardens

9.3.1 This property is located to the south west of the site and provides residential accommodation over its upper three floors.

9.3.2 The results of the analysis are set out in the table attached at Appendix C and are based on our reasonable assumptions as to the internal configuration of this property. The analysis demonstrates that for the window that it is assumed serves a habitable room, there will be no change in the VSC enjoyed or the area of the room in front of the NSL.

9.3.3 The results of our analysis demonstrate that the proposals will not have any effect on the daylight enjoyed by this property.

9.4 41 Monmouth Street

9.4.1 This property is located to the west of the site and provides residential accommodation over its upper three upper floors.

9.4.2 The results of the analysis are set out in the table attached at Appendix C and are based on our reasonable assumptions as to the internal configuration of this property. The analysis demonstrates that for the window that it is assumed serves a habitable room, there will be no change in the VSC or the area of the room in front of the NSL.

9.4.3 The analysis therefore demonstrates that the proposals will not have an effect on the daylight enjoyed by this property.

9.5 37-39 Monmouth Street

9.5.1 These properties are located to the west of the site and provide residential accommodation over three floors.

9.5.2 The results of the analysis are set out in the table attached at Appendix C and are based on our reasonable assumptions as to the internal configuration of this property. The analysis demonstrates that for the windows that it is assumed serve habitable rooms, all except one will achieve a VSC of at least 0.8 times the existing. For the one window that does not achieve this, it achieves a VSC of 0.73 times the existing and is only 1% below achieving 0.8 times the existing which is considered would not be noticeable.

9.5.3 The results of the daylight distribution analysis are also set out in the table attached at Appendix C and demonstrate that all rooms will achieve at least 0.8 times the existing area in front of the NSL, if there is a change.

9.5.4 Taking into account the dense urban location and the close proximity of this property, the results demonstrate that the proposals will not have a significant effect on the daylight enjoyed.

10.0 Sunlight

10.1 General

10.2 The BRE guidelines require that all windows within 90° of due south should be considered. The recommended criteria of the BRE guidelines sets out that a window should achieve an Annual Probable Sunlight Hours (APSH) of 25%, including at least 5% during the winter months. Where the difference in APSH is more than 4% between the existing and proposed, both the total APSH and those enjoyed within the winter months are more than 0.8 times the existing values. The guidelines also state that bedrooms as less important than living rooms.

10.3 Assessment

10.4 From our inspection, due to the orientation of the neighbouring properties and in accordance with the BRE guidelines, a sunlight analysis has been undertaken of: -

- 41 Monmouth Street
- 37-39 Monmouth Street

10.5 41 Monmouth Street

10.5.1 The results of the analysis are set out in the table attached at Appendix D and demonstrate that there will be no change in the level of sunlight enjoyed and that therefore the BRE guidelines are achieved.

10.6 37-39 Monmouth Street

10.6.1 The results of the analysis undertaken are set out in the table attached at Appendix D and demonstrate that in all instances the difference in the APSH is no greater than 4% and that therefore in accordance with the BRE guidelines, the proposals will not have a significant effect on the sunlight enjoyed by this property.

11.0 Conclusion

11.1 An analysis has been undertaken in accordance with the Building Research Establishment's publication "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice*" (BRE guidelines) to establish the effect the proposals will have on the daylight and sunlight enjoyed by the neighbouring properties.

11.2 The results of the analysis set out in the table attached at Appendix C, demonstrates that for all except one window the numerical values set out in the BRE guidelines will be achieved. For the one window that does not achieve this, it does achieve what is considered appropriate for a property so close to the site in a dense urban location.

11.4 The implementation of the proposals it is therefore considered will not have a significant effect on the daylight and sunlight enjoyed by the neighbouring residential properties in accordance with the Building Research Establishments publication, "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.*" (2011)

Appendix A

CHP Surveyors Limited

PRINCIPLES OF DAYLIGHT AND SUNLIGHT

In 2011 the Building Research Establishment (BRE) published a handbook titled "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.*" It's aim was to provide advice to building designers on site layout planning in order to achieve good daylight and sunlight amenity to the proposed development, the open spaces between the proposed blocks and the existing surrounding properties.

The content of this guide is well established and is used by most Local Authorities as the methodology for measuring daylight and sunlight, the guidelines should be applied flexibly to take account of the specific circumstances of each site. The BRE guidelines are suited more to low density suburban development sites where there is greater flexibility for site layout planning. In dense urban development sites, these are usually constrained often by adjacent buildings and the guidelines state that these should be applied more flexibly in these instances. Within the Introduction of the guidelines, it states that: -

"*The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural light is only one of many factors in site layout design.*"

The Introduction of this document, continues to advise that it's purpose is also to; "*To help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions.*"

It must therefore be appreciated and as can be seen from the above extracts; the handbook is for guidance only.

Daylight

The guidelines state that daylight assessments should be undertaken to habitable rooms where the occupants can expect to receive a reasonable amount of daylight.

The first assessment that should be undertaken is to establish whether the proposals will subtend an angle of 25° from the centre of the window. If it does not, then it is considered there will be good daylight. The BRE guidelines advise: -

"*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 a lowest window, subtends an angle of more than 25° to the horizontal may be affected.*"

This assessment is most appropriate for well-spaced, low density or low rise, uniform proposed developments. It is not an appropriate assessment for dense urban environments where the existing building on the development site already subtends at an angle greater than 25° to the horizontal from the subject window. It is for this reason that this 25° assessment is generally dispensed with and the more detailed analysis outlined below is undertaken.

The BRE guidelines set out two methods for calculating daylight, these being an analysis of the Vertical Sky Component (VSC) and No Sky Line (NSL).

Vertical Sky Component (VSC)

The Vertical Sky Component (VSC) analysis establishes the amount of available daylight received directly from the sky for each individual window. The reference point for the analysis being the centre of the window, on the plan of the outer window wall.

The VSC is the amount of direct sky a window enjoys, expressed as a percentage of the amount of direct sky a horizontal, unobstructed rooflight would receive.

The maximum percentage of direct skylight a vertical window can receive is 40%. The BRE have determined that where a VSC of 27% is achieved, then daylight should reach the window of an existing building.

Where a VSC of less than 27% is achieved either enjoyed before the implementation of the proposals or it is enjoyed following the implementation, then the BRE guidelines state that provided the new value is greater than 0.8 times the existing value, daylight will not be significantly affected.

No Sky Line (NSL)

The daylight distribution analysis is undertaken at working plane level, with this set at 0.85m above the floor level of a dwelling.

The BRE guidelines state that provided a significant area of the room, which is considered to be 80%, is in front of the No Sky Line (the point behind which at desk top level no sky is visible) or at least 0.8 times the existing area, then the room will enjoy good distribution.

If, in the existing situation this is not the case, the BRE guidelines state that provided the area following the implementation of the proposals is at least 0.8 times the existing area, there will not be a significant affect.

Average Daylight Factor (ADF)

This analysis is more detailed and therefore is more precise in its measurement of daylight. Not only does it consider the amount of sky visible but also the window size, room use and room size.

The BRE guidelines provides set criteria for calculating the Average Daylight Factor for specific room uses within a property.

- Kitchen – 2%
- Living Room – 1.5%
- Bedroom – 1%

Sunlight

This analysis is undertaken in a similar method to calculating VSC. Within residential accommodation the analysis undertaken to establish the levels of sunlight relate to the main windows that are within 90° of due south. It is considered that sunlight to kitchens and bedrooms is less important, although care should be taken not to block out too much.

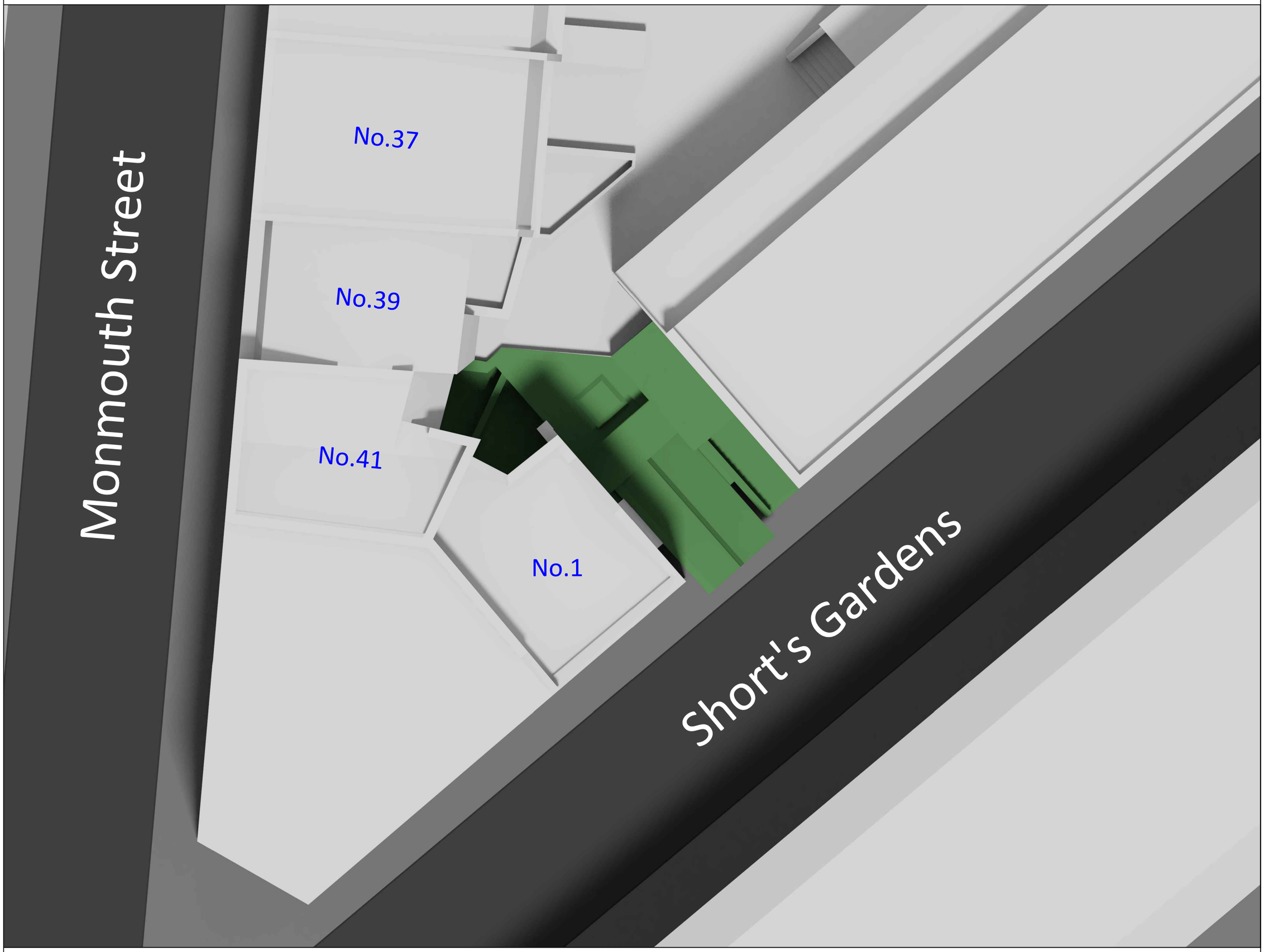
Within commercial or non-domestic buildings, the use of the building will determine whether a sunlight assessment is required.

In relation to neighbouring residential buildings, if a window is facing within 90° of due south and overlooking any part of the proposals 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 sunlight of the existing dwelling may be affected.

Annual Probable Sunlight Hours (APSH)

The 'Probable Sunlight Hours' can be defined as the total number of hours in the year that sun is expected to shine.

Appendix B



Sources

KEY

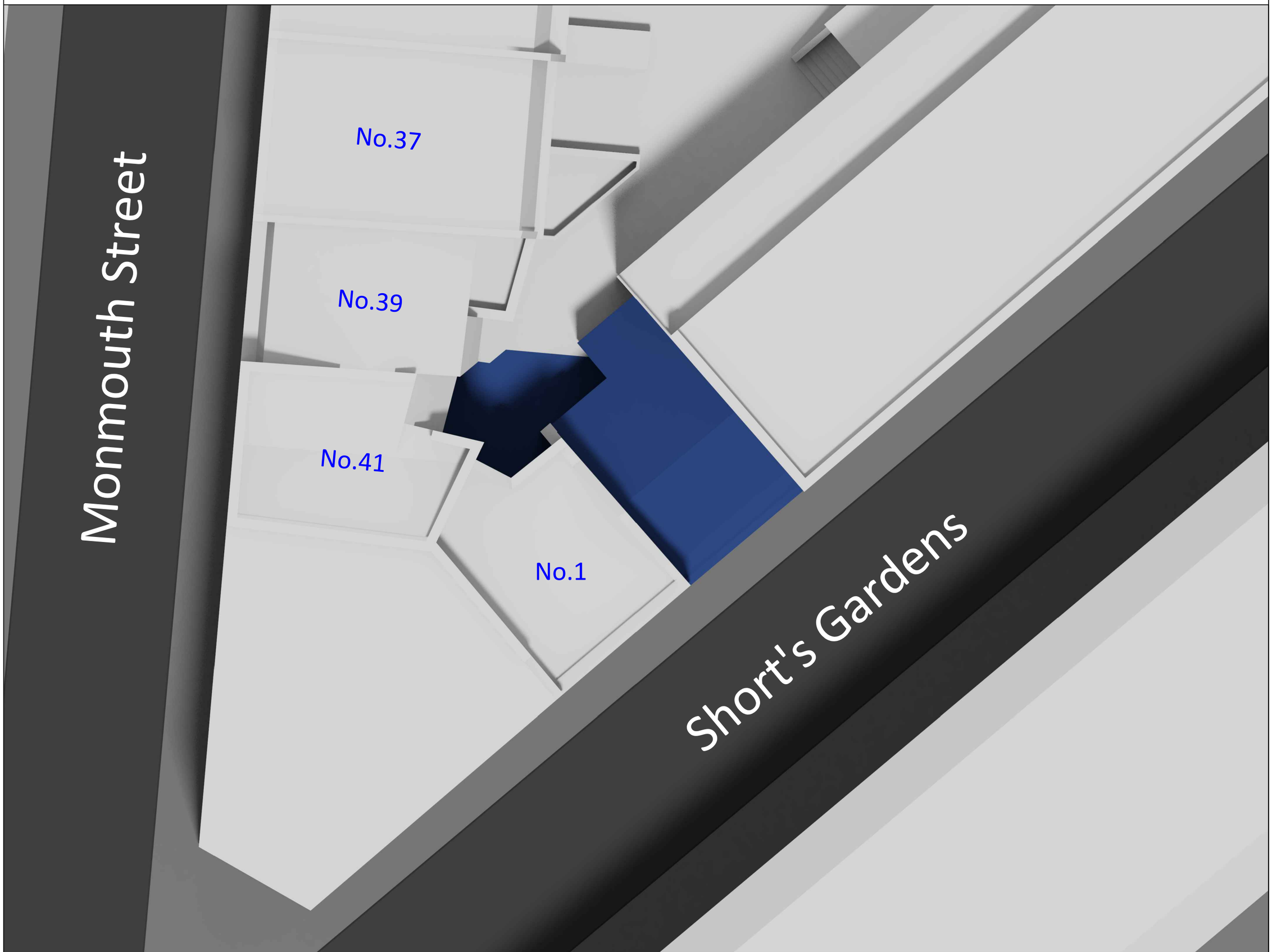
CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
Existing Plan View

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_100	-



Sources

KEY

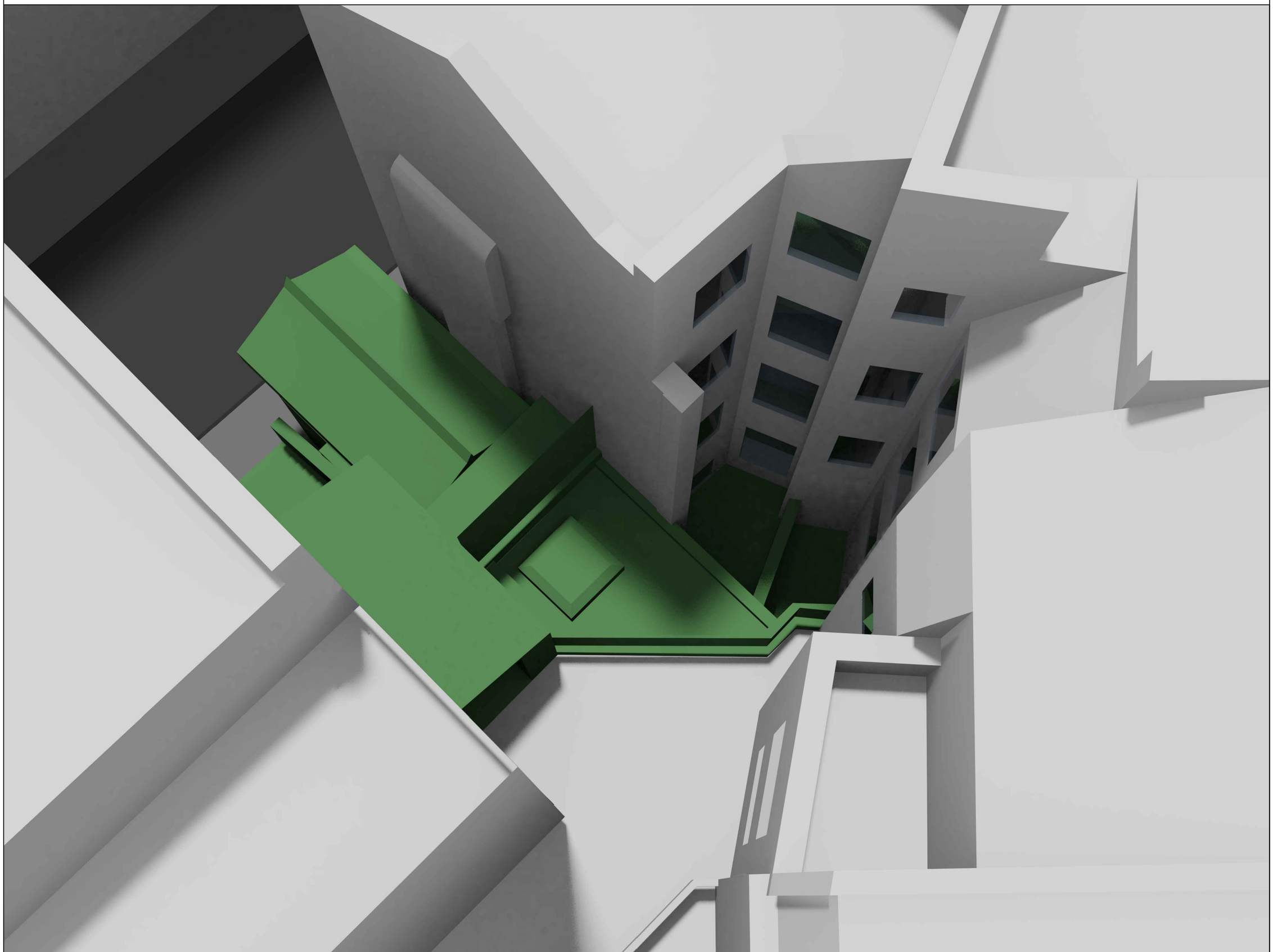
CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
Proposed Plan View

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_101	-



Sources

KEY

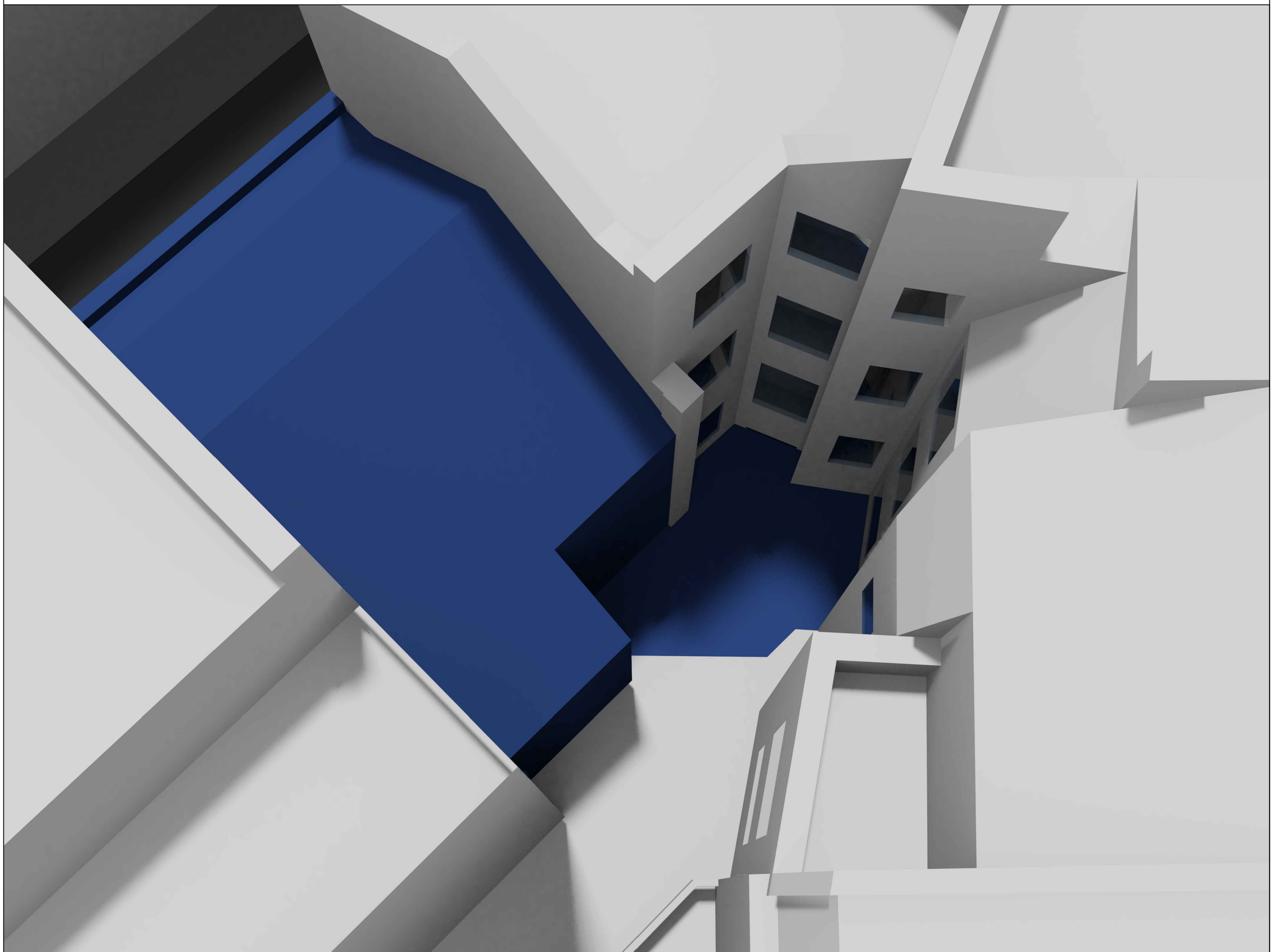
CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
3D Existing View

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_102	-



Sources

KEY

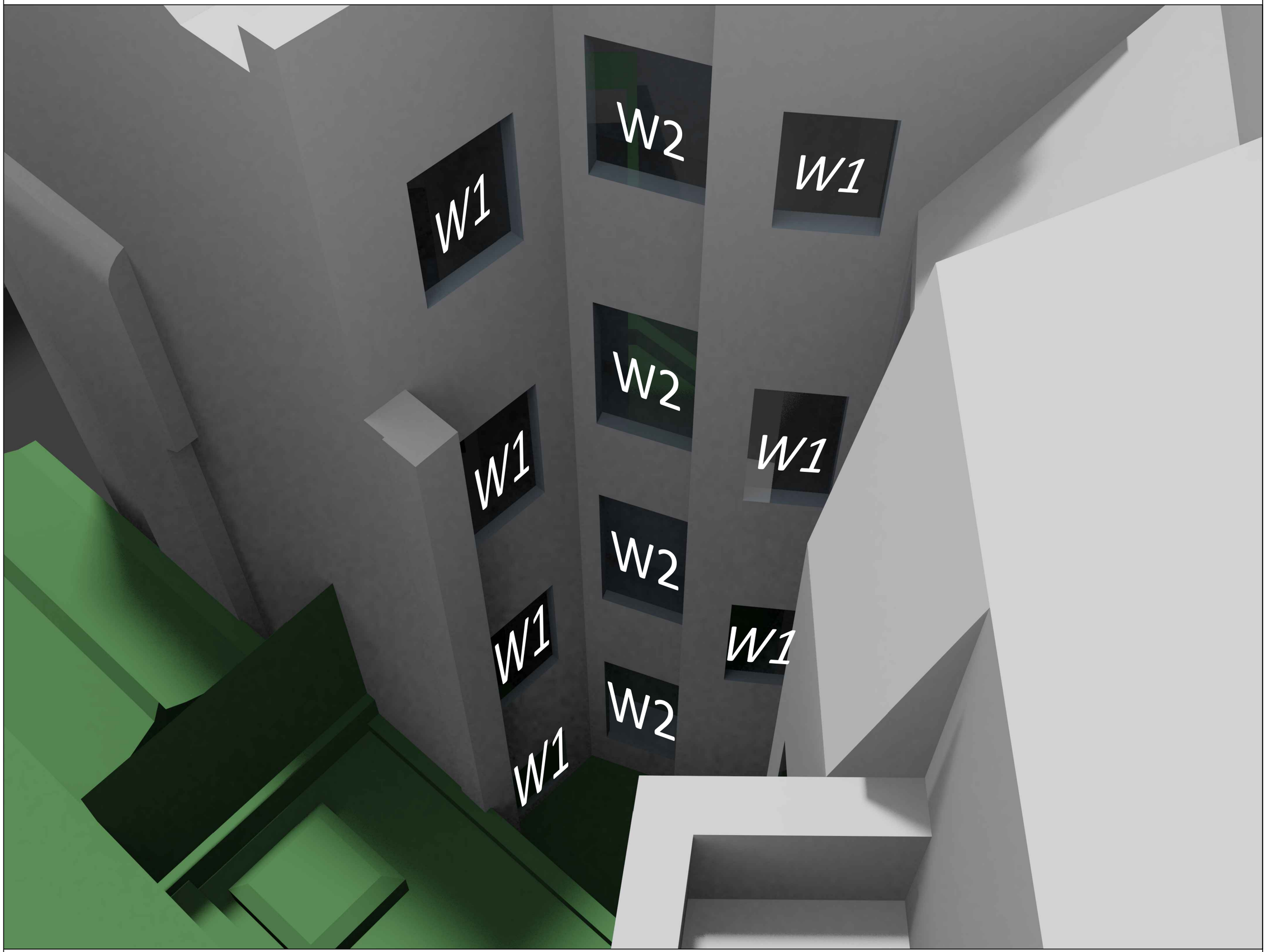
CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
3D Proposed View

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_103	-



Sources

KEY

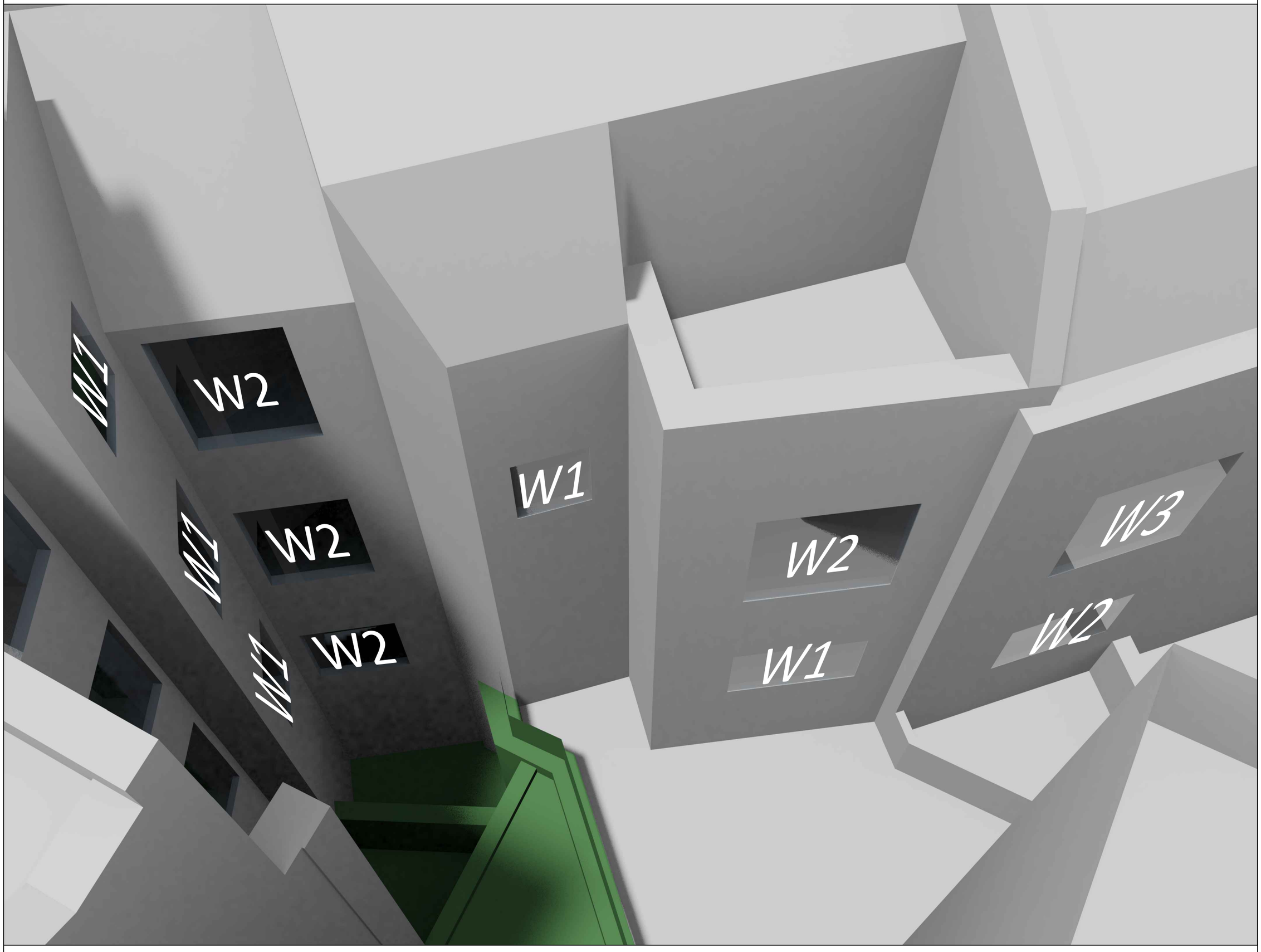
CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
No.1 & 41 Window Map

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_104	-



Sources

KEY

CHP Surveyors Ltd
2-6 Boundary Row, London, SE1 8HP www.chp.gb.com

PROJECT TITLE
Seven Dial's Court

DRAWING TITLE
No.41-37 Window Map

SCALE	DATE	ISSUE
NTS		-

DWG NO	REV
2383_105	-

Appendix C

Seven Dials Court, London WC2

November 2019

Daylight Results

LEVEL	WINDOW	ROOM	VSC		LOSS	% LOSS	NOSKY	
			EXISTING	PROPOSED			EXISTING	PROPOSED
1 Shorts Gardens								
First	W1	R1	4.7	4.7	0.0	0.0	27%	27%
	W2	R2	9.8	9.8	0.0	0.0	58%	58%
Second	W1	R1	8.5	8.5	0.0	0.0	55%	55%
	W2	R2	14.7	14.7	0.0	0.0	63%	63%
Third	W1	R1	19.7	19.7	0.0	0.0	>80%	>80%
	W2	R2	22.2	22.2	0.0	0.0	79%	79%
41 Monmouth Street								
First	W1	R1	8.0	8.0	0.0	0.0	75%	75%
	W2	R2	4.8	4.8	0.0	0.0	32%	32%
Second	W1	R1	12.5	12.5	0.0	0.0	>80%	>80%
	W2	R2	8.0	8.0	0.0	0.0	67%	67%
Third	W1	R1	24.8	24.8	0.0	0.0	>80%	>80%
	W2	R2	15.0	15.0	0.0	0.0	>80%	>80%
37-39 Monmouth Street								
First	W1	R1	13.9	10.1	3.8	27.2	41%	34%
	W2	R2	14.8	13.4	1.4	9.3	40%	38%
Second	W1	R1	14.8	13.0	1.8	12.1	78%	78%
	W2	R2	18.5	16.5	1.9	10.4	53%	53%
	W3	R3	19.9	19.2	0.8	3.9	63%	63%

Appendix D

Seven Dials Court, London WC2 November 2019

Sunlight Results

LEVEL	WINDOW	EXISTING			PROPOSED			% LOSS	
		SUMMER	WINTER	TOTAL	SUMMER	WINTER	TOTAL	WINTER	TOTAL
41 Monmouth Street									
First	W2	0%	0%	0%	0%	0%	0%	0.00	0.00
Second	W2	0%	0%	0%	0%	0%	0%	0.00	0.00
Third	W2	6%	0%	6%	6%	0%	6%	0.00	0.00
37-39 Monmouth Street									
First	W1	14%	4%	18%	14%	0%	14%	100.00	22.22
	W2	11%	3%	14%	11%	1%	12%	66.67	14.29
Second	W1	16%	3%	19%	16%	2%	18%	33.33	5.26
	W2	21%	4%	25%	21%	3%	24%	25.00	4.00
	W3	11%	5%	16%	11%	5%	16%	0.00	0.00