# LOWER GROUND AND GROUND FLOOR FLATS

# **19 HOLMDALE ROAD**

# CAMDEN

# LONDON NW6 1DS

# ANALYSIS

of

# SITE LAYOUT

for

# DAYLIGHT AND SUNLIGHT

# **18<sup>TH</sup> NOVEMBER 2020**

by

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Document Control

18 Nov 20. Flat 1 corrected.

# ANALYSIS OF SITE LAYOUT WITH REGARD TO DAYLIGHT AND SUNLIGHT

# **<u>1. Introduction</u>**

A planning application it to be made for alterations to the residential accommodation at lower ground and ground floor level of the house at 19 Holmdale Road

The daylight and sunlight to nearby houses and gardens and to the daylight to new accommodation is analysed in this report.

This report is prepared to accord with the planning requirements of London Borough of Camden, current practice, BS8206 Part 2 (2008) and the BRE Guide Site 'Layout Planning for Daylight and Sunlight: a guide to good practice (2011)'

# 2. Description of the Site.

19 Holmdale Road is a terraced house with accommodation at lower ground, ground, first and second floors.

It is proposed to alter and extend the ground and lower ground floors to provide an additional flat at lower ground floor and extension of one of the two flats at ground floor. The existing Flat 1 at ground floor is altered internally.

Other flats at first and second floors remain unaltered.

The proposals are shown on the following drawings by AS Studio Architectural Services Ltd that are submitted with the planning application:

3019(PLA)001	Existing and Proposed Site Plans, Location Plans
3019(PLA)100	Existing Lower and Upper Floor Plans
3019(PLA)200	Existing Elevations
3019(PLA)201	Existing Elevation Street View
3019(PLA)300	Existing Section AA
3019(PLA)301	Existing Section BB
2010/01 10110	
3019(PLA)110	Proposed Lower and Upper Floor Plans
3019(PLA)210	Proposed Front and Rear Elevations
3019(PLA)211	Proposed Front Elevation - Street View and Section B1-B1
3019(PLA)212	Proposed Rear Elevation
3019(PLA)310	Proposed Section AA
3019(PLA)311	Proposed Section B2-B2 and Site Elevation

# **<u>3. Planning Requirements</u>**

Camden Local Plan 2017, Policy A1, Managing the impact of development, says that the Council will seek to protect the amenity of neighbours. Factors to be included are (f) sunlight and daylight.

Paragraph 6.5 gives the following guidance

## Sunlight, daylight and overshadowing

6.5 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 (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011).* 

Camden also publish guidance in Camden Planning Guidance Amenity March 2018. Section 3 includes a key message saying

#### **KEY MESSAGES:**

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

The 45 degree and 25 degree tests cited in the BRE guidance should be used to assess ('screen') whether a sunlight and daylight report is required.

Levels of reported daylight and sunlight will be considered flexibly taking into account sitespecific circumstances and context.

The Council may seek independent verification of sunlight and daylight reports if necessary

The current version of the BRE guide is the second edition published in 2011. This document is referred to as the Guide in this report.

#### 4. General Effects of New Development on Light to Nearby Buildings.

The proposed development extends the outer envelope of the building above ground level at the rear. The extension is timber framed glass roofed 1.8 metres high at the eaves and 2.5m x 5 metres in plan. The extension is 2.5 metres beyond the existing rear wall of the house, adjacent to the boundary with the next house at 17 Holmdale Road. It is 1.5 metres from the boundary with 21 Holmdale Road on the other side of the site.

The effect on daylight and sunlight to the rear windows of 17 Holmdale Road is analysed in this report.

There will be no effect on the windows of the other flats in 19 Holmdale Road.

There are no buildings within 50 metres of the rear of the 19 Holmdale; the proposed single storey extension will therefore have no effect on sunlight or daylight to any buildings in that direction.

# 5. Daylight and Sunlight to 17 Holmdale Road

Figure 1 of this report is a plan and rear elevation showing the proposed extension in relation to the rear window of 17 Holmdale.

The proposed extension is lower than the existing wall on the boundary between 17 and 19. There is therefore no reduction in daylight or sunlight to the windows of 17 or to any part of the garden.

### 6. Sunlight to Proposed Communal Garden.

The BRE Guide Recommends that gardens should have at least two hours of sunlight over 50% of the area on March 21<sup>st</sup>.

Figure 3 shows the garden with the angles of sun from 7 am. The garden has sun all morning and until around 2 pm, The shaded part of the garden at 1.30 pm is shown hatched.

The drawing shows that more than 50% of the garden is in sun for more than 2 hours. It therefore complies with the recommendations of the BRE Guide

## 7. Daylight to Rooms within the New Flats 1, 2 and 3

Figures 4 shows plans of the proposed flats with windows numbered for reference in this report.

#### 7.1. Requirements.

The Camden Supplementary Planning Guides, in common with the usual Local Authority requirements and the BRE Guide recommend that new developments satisfy criteria for

- Average daylight factor
- Sunlight.
- Room depth as given by the equation L/W+L/H < 2/(1-R) where the terms have the meanings in the BRE Guide

These requirements are applied to habitable rooms being Living Rooms, Dining Rooms and Bedrooms. Bathrooms, dressing rooms, kitchens and store cupboards are not required to meet the criteria.

#### 7.2 Average Daylight Factor.

The Average Daylight Factor (Df) for rooms within the proposed flats have been calculated by the methods described in BRE Guide Appendix C5 and BS 8206 using the formula:

Df=Aw T  $\Theta$  / A(1-R<sup>2</sup>)

Where,

Df = Daylight factor Aw = window area A = Sum of areas of walls, floors and ceilings

R = Average reflectance of walls floors and ceilings taken as 0.5.

 $\Theta$  = Angle from Table C1 of the 2011 Guide

T = Transmittance of the glass taken as 0.68.

The value of  $\Theta$  is derived from the vertical sky component at the window. The vertical sky component is evaluated from a Waldram Sky Availability diagram using the methods described in Appendix B of the Guide.

The Waldram diagram for the living room window W3-4 is in Figure 2 of this report. For this window the VSC is 20.4%. The value of  $\Theta$  is then 52 degrees from Table C1 of the Guide. Values of  $\Theta$  for the other windows is derived by the same method.

The BRE Guide and BS 8206 recommend that average daylight factor exceeds the following values:

For kitchens2%For living rooms and dining rooms1.5%For bedrooms1%Average daylight factor is not applicable to bathrooms, dressing rooms and utility rooms.

The calculations for average daylight factor for all relevant rooms in the development are given in Appendix 2

All rooms have adequate daylight but the criteria of the BRE Guide.

7.3. Room Depth

The BRE Guide C13 recommends that the following is calculated.

L/W + L/H < 2/(1-R)Where W is the room width H is the window head height R is the average reflectance, taken as 0.5 in this case.

The room is considered adequately lit if L/W + L/H < 2/(1-R)

Rooms with windows on two sides or with roof light are considered to pass the test.

Calculations for the habitable rooms is in included in the Appendix.

All rooms satisfy the recommendations of the BRE Guide for room depth.

7.4 Sunlight

The BRE Guide 3.1.10 recommends that rooms for which occupants expect sunlight should receive 25% of annual probable sunlight hours and 5% in winter.

For the whole flat the sunlight should be better than 25% annual probable sunlight hours for whole year and 5% in winter.

Sunlight to rooms is estimated using the method described in the BRE Guide Appendix A. Results are included in the table in Appendix 2 of this report.

All three flats have sunlight better than the recommendations of the BRE Guide.

# 8. Conclusion

## 8.1 Daylight and Sunlight to Nearby Buildings

This development has no affect upon the daylight and sunlight to nearby buildings.

## 8.2 Sunlight to Nearby Gardens and Amenity Areas

The development has no affect on sunlight to nearby gardens or amenity areas.

8.3 Daylight and Sunlight to Rooms within Development.

The Guide recommends that the average daylight factor and room depth criteria are satisfied. As shown in Appendix 2 all rooms have adequate daylight factors as recommended in the BRE Guide, Camden Planning Guidance and the London Plan.

The BRE Guide recommends that residential accommodation should have sunlight for some rooms. In these flats the sunlight for the whole year and for winter is better than the recommended minimum.

# 8.4. Sunlight to Amenity area for the flats.

The BRE Guide recommends that amenity or garden areas should have at least two hours of sunlight over 50% of the area on 21<sup>st</sup> March. The garden at the rear of the flats has sunlight to more than 50% of the area from sunrise to 1.30pm. The recommendations of the BRE Guide are therefore satisfied for this development.

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15<sup>h</sup> November 2020.

# **References:**

Camden Local Development Framework. Camden Planning Guidance CPG 6.

Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice' published in 2011.

#### List of Attachments:

Figure 1	Ground Lower Ground Floor Plans.
Figure 2	Waldram Sky Availability Diagram W3-4
Figure 3	Sun to Garden Areas
<b>T</b> <sup>1</sup> 4	

- Figure 4Plan of Flats
- Appendix 2 Daylight within Development





Figure B1 Waldram diagram for calculating vertical sky component





	Window Ref	Room Depth	Room Width	Window Width	Window Head Height	Window H above 0.85	Room Height	ΤM	AW	As	VSC	θ Table C1	1-R2	ADF	Df by BS8206 %
				-	-							_			
Flat 1														<u> </u>	
Living Room	W1-1	3.4	4.2	2.0	2.8	1.95	2.8	0.68	3.9	71.12	30.00%	70	0.75	3.5	1.5
Bedroom	W1-2	3.3	2.7	2.9	2.6	1.75	2.8	0.68	5.075	51.42	10.20%	30	0.75	2.7	1.0
Total Sun to Flat															
Flat 2															
Bedroom	W2-1	2.1	2.8	1.0	2.2	1.25	2.4	0.68	1.25	35.28	7.60%	32	0.75	1.0	1.0
Living room:Roof Window	W2-2	2.1	2.9	2.9	2.2	2.30	2.4	0.68	6.67	36.18	50.00%	90	0.75	15.0	1.5
Total Sun to Flat															
Flat 3														<u> </u>	
Bedroom	W3-1	3.2	4.2	2.0	2.2	1.35	2.3	0.68	2.7	60.92	20.40%	54	0.75	2.2	1.0
Living room	W3-2	3.1	10.5	2.5	2.2	1.35	2.4	0.68	3.375	130.38	2.00%	15	0.75	0.4	1.5
roof window	W3-3	3.1	10.5	2.0	0.5	2.30	2.4	0.68	4.6	130.38	19.50%	40	0.75	1.3	1.5
	W3-4	10.5	3.1	2.4	2.2	1.35	2.4	0.68	3.24	130.38	20.00%	52	0.75	1.2	1.0
Total Sun to Flat														2.8	1.5

	Window Ref	ADF Meet BRE Criterion	Window Head Height	L/W+ L/H	2/1-R	Meet BRE Criterion L/W+L/H	Window Area % Floor	Sunlight %APSH	% APSH Winter	Meet BRE Criteria
Flat 1										
Living Room	W1-1	Yes	2.8	2.0	4	YES	27%	54	34	
Bedroom	W1-2	Yes	2.6	2.5	4	YES	57%	-	-	
Total Sun to Flat								54	34	YES

Flat 2										
Bedroom	W2-1	Yes	2.2	1.7	4	YES	21%	-	-	
Living room:Roof Window	W2-2	Yes	2.2	Lit by roof	window		110%	29	23	
Total Sun to Flat						YES		29	23	YES

Flat 3										
Bedroom	W3-1	Yes	2.2	2.2	4	YES	20%	33	26	
Living room	W3-2		2.2				10%	13	13	
roof window	W3-3		0.5				14%	-	-	
	W3-4		2.2				10%	-	-	
Total Sun to Flat		Yes		Lit two	sides	YES	34%	46	39	YES