LOVE
DESIGN
STUDIO

DAYLIGHT, SUNLIGHT AND OVERSHADOWING ASSESSMENT (FOR PLANNING)

61 Redington Road, London, NW3 7RP
by Love Design Studio

April 2022
PR462_V2

CONTENTS

EXECUTIVE SUMMARY

Love Design Studio are appointed to prepare a daylight and sunlight assessment for the proposed development at 61 Redington Road, London, NW37RP, Camden; this is to assess the potential reduction of daylight and sunlight access to the neighbouring properties, based on relevant industry guidance.

To ensure that this assessment has correctly considered the daylight and sunlight access experienced by the neighbouring residential properties, it has been conducted 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").

Daylight and sunlight access is typically in greatest desirability for occupants of 'habitable' rooms within residential buildings. This is acknowledged within the BRE guidelines, which place the most emphasis on these uses; mainly living rooms.

Where a neighbouring property has windows close to a joint site boundary, it should not take more than its share of light and there should be equality between the constraints imposed on neighbouring sites and the existing neighbouring buildings.

A summary of each test is written overleaf.

DAYLIGHT SUMMARY

18 windows and four adjoining rooms were tested for daylight impact. All other neighbouring property windows are at a significant distance away from the property or meet either of the 25-degree plane and/or 45-degree angle rules, as per the BRE criteria. We were unable to obtain records of internal layout arrangements of the property known as 63 Redington Road.

VERTICAL SKY COMPONENT (VSC)

17 of the 18 neighbouring windows assessed meet at least a 27% VSC or have a greater than 0.8 relative VSC result. The remaining window located at ground floor of 63 Redington Road appears either to be a single window to a bathroom space or adjoins a room that is dual aspect with unobstructed windows facing away from the development.

Based on the results of our analysis, it is considered that the aims of the BRE Guidelines are achieved, and the proposals will not have a significant effect on the daylight enjoyed by the properties assessed.

NO-SKYLINE TEST

All four rooms assessed have a No-skyline lit area greater than 80% of the overall area under the proposed scheme – this therefore meets at least 0.8 times the existing area of each habitable room.

Based on the results of our analysis, it is considered that the aims of the BRE Guidelines are achieved, and the proposals will not have a significant effect on the daylight distribution enjoyed by the properties.

SUNLIGHT SUMMARY

Eight windows facing 90 degrees of south were tested for sunlight impact. All other neighbouring property windows are at a significant distance away from the property or meet either of the 25-degree plane and/or 45-degree angle rules, as per the BRE criteria.

All assessed windows meet the annual and winter sunlight criteria with the exception of one window at ground floor of 63 Redington Road; this window appears either to be a single window to a bathroom space or adjoins a room that is dual aspect with unobstructed windows that meet the sunlight criteria.

Based on the results of our analysis, it is considered that the aims of the BRE Guidelines are achieved, and the proposals will not have a significant effect on the sunlight enjoyed by the properties.

GENERAL COMMENTS

The daylight and sunlight impact of the proposed development to the neighbouring properties and amenity spaces is deemed to be acceptable.

Love Design Studio's recommendation is to consider the daylight and sunlight impact on neighbours as acceptable for this scheme.

INTRODUCTION

Love Design Studio have been instructed to carry out an impact assessment of daylight & sunlight to neighbouring properties in proximity to the proposed 61 Redington Road scheme.

The existing building on-site houses three residential apartments, the proposed development will be conversion of these residential units into one family dwelling and a one-bedroom flat at lower ground level.

Buildings in proximity to the scheme that have been assessed for daylight and sunlight access are:

- 59 Redington Road.
- 63 Redington Road.

The neighbouring properties assessed are indicated below with 61 Redington Road within the red line boundary.

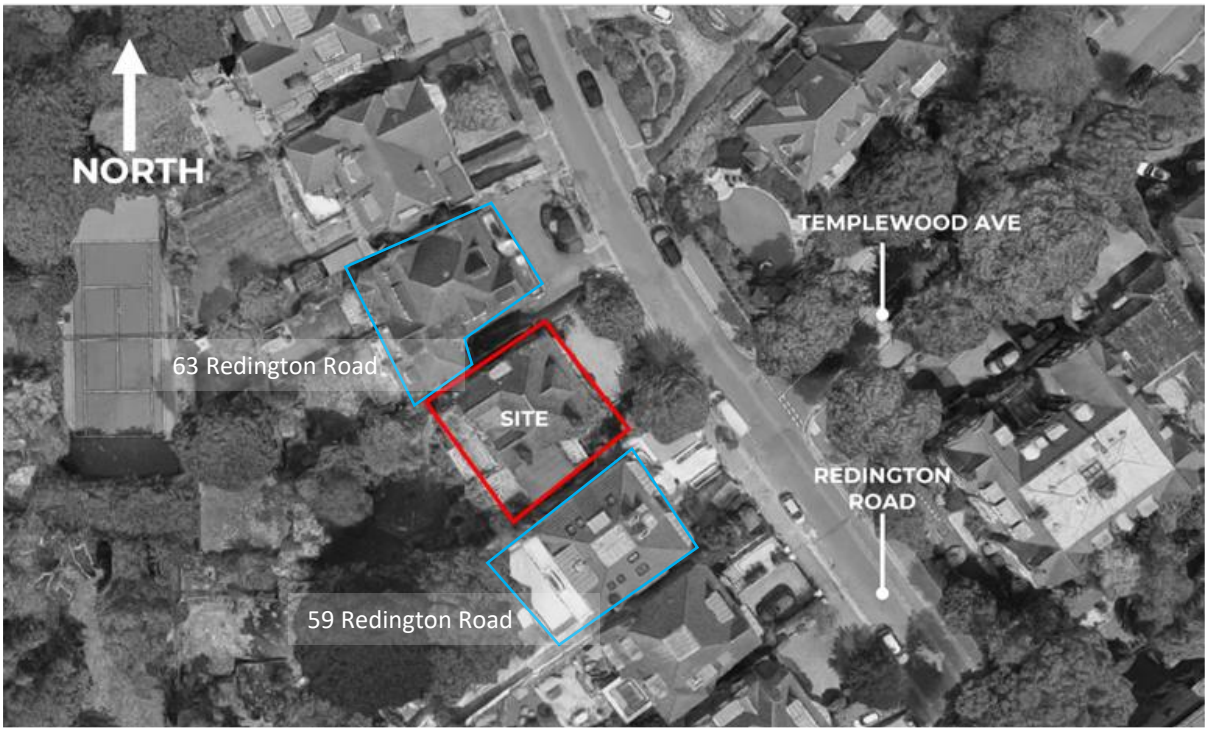


Figure 1: Site plan aerial view with the proposed development (red boundary) and assessed buildings (plan view of assessed buildings highlighted in blue)

METHODOLOGY

Using online research and onsite observations, we have produced a 3D computer model of the neighbouring residential properties to the site as indicated in the previous section; the 3D model includes the window locations and assumed internal configurations.

We have not had access to the neighbouring properties and therefore the internal configurations of these properties, and decisions on which windows serve habitable rooms has been based on onsite observations and other information we have been able to obtain. We have produced a 3D computer model of the existing structures on the site and the proposals based on 3D survey work carried out, architectural drawings and desktop research (see Assumptions & Limitations).

Using a specialist computer programme, we have undertaken the analysis set out in the BRE Guidelines, both in the existing situation to provide a base line and following the implementation of the proposals; for some buildings, an alternative baseline has been proposed, details of which are indicated within the body of this report. There is no requirement to consider the implications of reduction to daylight and sunlight access during the development and construction process as these will only be short term.

MODELLING METHODOLOGY

3D models were created in industry accepted daylight and sunlight software; these included:

- The on-site existing structures within the site boundary,
- The proposed development, and
- The neighbouring properties and other existing obstructions affecting access to daylight and sunlight.

Assessments were made of the Vertical Sky Component (VSC) & No-Skyline (NSL) tests to measure daylight access and probable sunlight hours (APSH/WPSH) to measure annual sunlight and winter sunlight exposure, respectively.

The guidelines for modelling and testing the scheme's daylight and sunlight impacts were provided by the BRE's "Site Layout Planning for Daylight and

Sunlight, A Guide to Good Practice" by PJ Littlefair (2011); accepted as good practice by Planning Authorities when assessing the applications for new schemes. For further guidance on the methodology please see the BRE's document[1].

ASSESSMENT METHODOLOGY

The numerical values contained within the BRE Guidelines to establish whether the proposals will have a significant effect on the daylight enjoyed by the neighbouring properties are based initially on a Vertical Sky Component analysis (VSC). It seeks for each window to achieve a VSC of 27% or 0.8 times the existing.

In relation to daylight, the BRE Guidelines also set out numerical values for daylight distribution and seeks to ensure that a significant portion or at least 0.8 times the existing area of each habitable room lies in front of the no-skyline.

With regards to sunlight, the BRE Guidelines seek that all windows within 90 degrees of due south achieve 25% of the Average 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 sunlight provided the total APSH, as well as during the winter months, are within 0.8 times the existing.

The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this study. This guide recommends that at least 50% of the area of each amenity space listed above should receive at least two hours of sunlight on 21 March. If because of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sunlight on 21 March is less than 0.8 times its former value, then the

[1] https://www.bregroup.com/services/testing/indoor-environment-testing/natural-light/

loss of light is likely to be noticeable. It is understood that in many circumstances the sunlight access to amenity spaces experienced under the existing condition on 21st March will be less than 2 hours and therefore any inclusion of development will have zero impact under this test.

ASSUMPTIONS & LIMITATIONS

2D drawing files were received 14th March 2022; these files were used for window and façade placement of neighbouring properties, where possible, and desktop research, where required.

Access was not available to the surrounding properties and therefore reasonable assumptions have been made as to the internal room sizes, layouts and uses. For the 59 Redington Road property, online information via the Camden planning portal was available and is referenced within this report, no internal information was found for 63 Redington Road.

The No-Sky Line test is made based on assumed room depths and a working-plane height of 0.85m in residential buildings and residential institutions, 0.7m in other buildings.

This study does not calculate the effects of trees and hedges on daylight, sunlight and overshadowing to gardens. The BRE guide states that it is usual to ignore the effect of existing trees and shrubs.

Where limited access or information is available, assumptions will have been made which may affect the conclusions reached in this report. Where neighbouring room uses are unknown, we will either assume regarding the use of the space or take the cautious approach of treating the use of the room as being used for residential use. Therefore, the report may need to be updated if room uses are confirmed by the local authority or by the consultation responses. The report provided is solely for the use of the client and no liability to anyone else is accepted and this report is based upon and subject to the scope of work set out in Love Design Studio's quotation and standard terms and conditions.

DAYLIGHT ACCESS SUMMARY

Regarding daylight enjoyed by the neighbouring residential properties, we have considered where the proposal will sit under a 25-line drawn from the lowest window.

The BRE Guidelines state that where the proposals do not sit under the 25-line, they will have insignificant 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.

The BRE Guidelines state that if the VSC calculated at the centre of each window is 27% or more, then enough skylight should be reaching the window. If with 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 skylight is unlikely to be seriously affected.

The distribution of daylight within a room can be calculated by plotting the 'no-skyline'. The no-skyline is a line which separates areas of the working plane that do and do not have a direct view of the sky. Daylight may be adversely affected if, after the development, 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.

The BRE Guidelines state that for a room to enjoy good daylight distribution a significant area of the room should not lie behind the no-skyline but specifically states that bedrooms are less important than living rooms.

The BRE guide states that both the total amount of skylight (Vertical Sky Component) and its distribution within the building (Daylight Distribution) are important. The BRE guide states that where room layouts are known, the impact on the daylighting distribution can be found by plotting the 'no-skyline' in each of the main rooms.

Therefore, we are of the opinion that application of the test is not a requirement of the BRE guide where room layouts are not known. We therefore reject the practice of applying the test based on assumed room layouts, as the test is extremely sensitive to the depth, width, size and layout of the room and the

results are likely to be misleading. However, we have provided additional daylight distribution modelling based on assumed depths and layouts.

The BRE guidance focuses on 'relative change' which is likely to be exaggerated given the low-rise nature of the existing structures on site. Where there is more than a 20% reduction in VSC, this does not mean that the level of daylight will be unacceptable but instead that there may be a noticeable change in daylight levels to the occupants.

59 REDINGTON ROAD

This property is located to the south of the site along Redington Road and provides residential accommodation over four stories; the top floor has no windows overlooking the development. Through desktop research, Love Design Studio have been able to find floor plans that appear to match the external conditions found on site, except for the ground floor where windows have later been added like that of the first floor and above; these are set out below:

Figure 2: 59 Redington Road layout drawings Lower Ground Floor and Ground Floor (habitable rooms and adjoining windows assessed are highlighted).

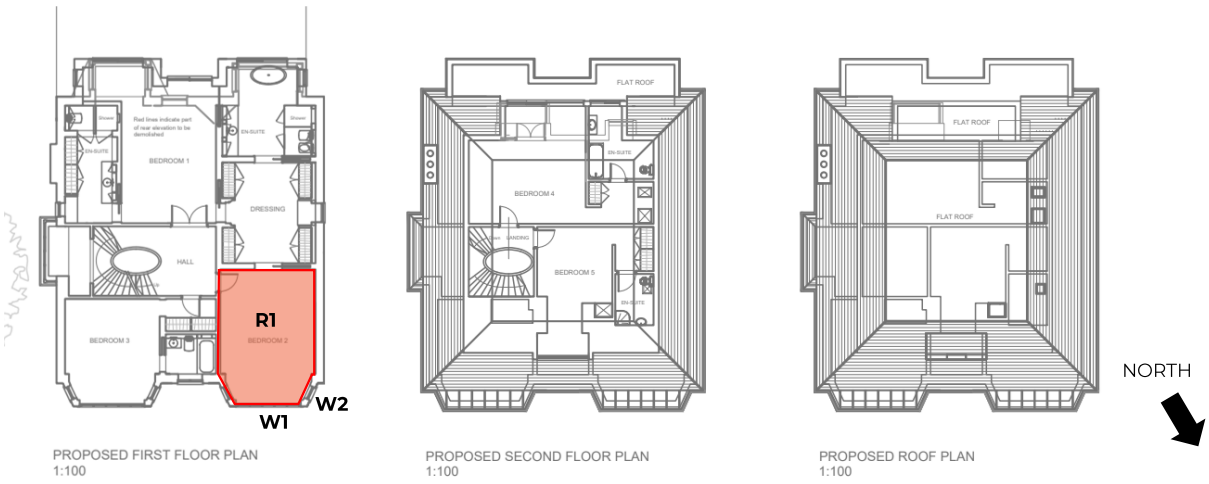


Figure 3: 59 Redington Road layout drawings First Floor, Second Floor and Roof Plan (habitable rooms and adjoining windows assessed are highlighted).

We have not been able to establish the precise internal configuration via internal survey, but from the layouts and external inspection, the spaces appear to correspond to the desktop research conducted.

The results of the VSC analysis demonstrates that all eleven windows analysed will achieve a VSC of greater than 27% and/or a relative VSC of greater than 0.8 times the existing value.

We have also considered the level of daylight distribution within each room. This analysis demonstrates that in all instances the no-skyline is greater than 0.8 its former value in all rooms assessed.

Based on the results of our analysis, it is considered that the aims of the BRE Guidelines are achieved, and the proposals will not have a significant effect on the daylight enjoyed by the property at 59 Redington Road.

63 REDINGTON ROAD

This property is located to the north of the site along Redington Road and provides residential accommodation over four stories; there are windows facing the property at each floor; the top floor windows are not obstructed by the development. Through desktop research Love Design Studio have been unable to find floor plans that match the external conditions found on site therefore the assessment is based on window VSCs only

Figure 4: South view of the 63 Redington Road property.

Figure 5: 63 Redington Road with the various windows assessed highlighted.

We have not been able to establish the precise internal configuration via internal survey, but from the layouts and external inspection the spaces appear to be open plan.

The results of the VSC analysis demonstrates that all windows analysed will achieve a VSC of greater than 27% and a relative VSC of greater than 0.8 times the existing value.

We have also considered the level of daylight distribution within the master bedroom. This analysis demonstrates that the no-skyline is greater than 0.8 its former value in all rooms assessed.

Based on the results of our analysis, it is considered that the aims of the BRE Guidelines are achieved, and the proposals will not have a significant effect on the daylight enjoyed by the property at 63 Redington Road.

SUNLIGHT ACCESS SUMMARY

The BRE Guidelines require that all windows to living spaces within 90 degrees of due south should be considered.

The recommended numerical values set out within the BRE Guidelines are for a window to achieve Annual Probable Sunlight Hours (APSH) of 25%, including at least 5% during the winter months or where the difference in the 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 however also state that bedrooms are less important than living rooms.

All assessed windows meet the annual and winter sunlight hours except for one window that falls short at ground floor at 63 Redington Road. This window appears either to be a single window to a bathroom space or adjoins a room that is dual aspect with unobstructed windows that meet the sunlight criteria.

The analysis of sunlight hours received to the windows at the analysed buildings therefore demonstrates that the BRE Guidelines for sunlight access are achieved.

DETAILED RESULTS – 59 REDINGTON ROAD

This property is located to the south of the site along Redington Road and provides residential accommodation over four stories; the top floor has no windows overlooking the development.

Figure 6: Image of the building assessed at 59 Redington Road

Table 1: Vertical Sky Component Daylight Test results for 59 Redington Road

Windows Tested	Windows that meet BRE Guidelines		VSC Windows No. of Windows Experiencing Adverse Impacts		
	No.	%	20-29.99%	30-39.99%	>40%
11	11	100%	0	0	0

*window adversely affected is a door.

Table 2: No-Sky-Line Daylight Test results for 59 Redington Road

Rooms Tested	Rooms that meet BRE Guidelines		NSL Rooms No. of Rooms Experiencing Adverse Impacts		
	No.	%	20-29.99%	30-39.99%	>40%
4	4	100%	0	0	0

Table 3: Probable Sunlight Hours Sunlight Test results for 59 Redington Road

Windows Tested	Annual Probable Sunlight Hours		Winter Probable Sunlight Hours	
	Windows meeting BRE Guidelines	Adversely impacted	Windows meeting BRE Guidelines	Adversely impacted

	No.	%		No.	%	
4	4	100%	0	4	100%	0

DETAILED RESULTS – 63 REDINGTON ROAD

This property is located to the north of the site along Redington Road and provides residential accommodation over four stories; the top floor has no windows overlooking the development.

Figure 7: Image of the building assessed at 63 Redington Road

Table 4: Vertical Sky Component Daylight Test results for 63 Redington Road

Windows Tested	Windows that meet BRE Guidelines		VSC Windows No. of Windows Experiencing Adverse Impacts		
	No.	%	20-29.99%	30-39.99%	>40%
7	6	86%	0	0	1

Table 5: Probable Sunlight Hours Sunlight Test results for 63 Redington Road

Windows Tested	Annual Probable Sunlight Hours			Winter Probable Sunlight Hours		
	Windows meeting BRE Guidelines		Adversely impacted	Windows meeting BRE Guidelines		Adversely impacted
	No.	%		No.	%	
4	4	100%	0	3	75%	1

FULL DETAILED RESULTS TABLE

Table 6: Full Daylight and Sunlight Test results for all buildings assessed

Building	Floor	Room no.	Anticipated Room use*	Window no.	Vertical Sky Component Test			No-Sky-Line Test			Orientation	APSH Test			WPSH Test		
					Proposed %	*Existing %*	*Relative*	*Proposed %*	*Existing %*	*Relative*		*Proposed APSH >25%?*	*Existing APSH (%)*	*Relative APSH >0.8?*	*Proposed WPSH >5%?*	*Existing WPSH (%)*	*Relative WPSH >0.8?*
59 Redington Road	LG	R1	Kitchen	W1	**39.6**	**39.6**	**1.0**	**99.98**	**99.98**	**1.0**	**South**	**69**	**69**	**1**	**25**	**25**	**1**
59 Redington Road	LG	R1	Kitchen	W2	**25.3**	**30.2**	**0.84**	**99.98**	**99.98**	**1.0**	**North**	**21**	**21**	**-**	**2**	**2**	**-**
59 Redington Road	Ground	R1	Lounge	W1	**34.0**	**34.0**	**1.0**	**99.2**	**99.46**	**1.0**	**South**	**51**	**51**	**1**	**17**	**17**	**1**
59 Redington Road	Ground	R1	Lounge	W2	**39.6**	**39.6**	**1.0**	**99.2**	**99.46**	**1.0**	**South**	**69**	**69**	**1**	**25**	**25**	**1**
59 Redington Road	Ground	R1	Lounge	W6	**20.6**	**25.7**	**0.8**	**99.2**	**99.46**	**1.0**	**North**	**16**	**16**	**-**	**2**	**2**	**-**
59 Redington Road	Ground	R1	Lounge	W7	**39.6**	**39.6**	**1.0**	**99.2**	**99.46**	**1.0**	**South**	**69**	**69**	**1**	**25**	**25**	**1**
59 Redington Road	Ground	R2	Kitchen	W3	**39.6**	**39.6**	**1.0**	**99.94**	**99.98**	**1.0**	**North**	**31**	**31**	**-**	**5**	**5**	**-**
59 Redington Road	Ground	R2	Kitchen	W4	**29.3**	**29.6**	**0.99**	**99.94**	**99.98**	**1.0**	**North**	**2**	**2**	**-**	**0**	**0**	**-**
59 Redington Road	Ground	R2	Kitchen	W5	**16.9**	**19.5**	**0.86**	**99.94**	**99.98**	**1.0**	**North**	**9**	**12**	**-**	**1**	**2**	**-**
59 Redington Road	First	R1	Bedroom	W1	**39.6**	**39.6**	**1.0**	**99.98**	**99.98**	**1.0**	**North**	**31**	**31**	**-**	**5**	**5**	**-**
59 Redington Road	First	R1	Bedroom	W2	**31.8**	**32.9**	**0.97**	**99.98**	**99.98**	**1.0**	**North**	**2**	**2**	**-**	**0**	**0**	**-**
63 Redington Road	LG	-	-	W1	**9.8**	**10.0**	**0.97**	**-**	**-**	**-**	**North**	**1**	**1**	**-**	**0**	**0**	**-**
63 Redington Road	Ground	-	-	W1	**11.2**	**11.7**	**0.96**	**-**	**-**	**-**	**North**	**1**	**1**	**-**	**0**	**0**	**-**
63 Redington Road	Ground	-	-	W2	**6.2**	**7.2**	**0.86**	**-**	**-**	**-**	**South**	**5**	**7**	**0.71**	**0**	**0**	**1**
63 Redington Road	Ground	-	-	W3	**9.4**	**20.2**	**0.46**	**-**	**-**	**-**	**South**	**30**	**48**	**0.63**	**12**	**19**	**0.63**
63 Redington Road	First	-	-	W1	**16.8**	**18.2**	**0.92**	**-**	**-**	**-**	**North**	**2**	**3**	**-**	**0**	**0**	**-**
63 Redington Road	First	-	-	W2	**14.4**	**17.1**	**0.84**	**-**	**-**	**-**	**South**	**30**	**36**	**0.83**	**0**	**0**	**1**
63 Redington Road	First	-	-	W3	**16.4**	**19.4**	**0.84**	**-**	**-**	**-**	**South**	**37**	**48**	**0.77**	**3**	**3**	**1.0**

* Room uses are typically assumed based on site inspection and desktop research. Where internal layout drawings are unavailable, we will typically assume a best guess of the space use based on exterior conditions. Where neighbouring room uses are unknown, we will either assume regarding the use of the space or take the cautious approach of treating the use of the room as being used for residential use.

APPENDIX A – MODEL REFERENCES

The following images reference the assumed neighbouring room layouts, window, and room locations (where known) as per the results tables from earlier sections.

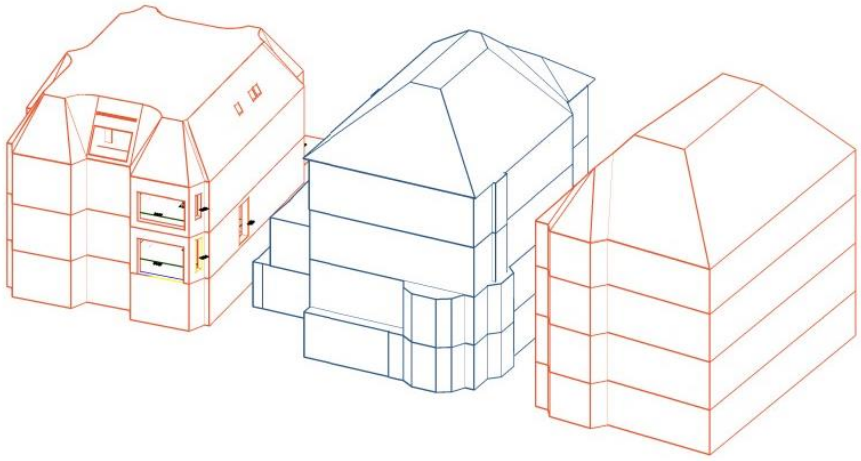


Figure 8 : Aerial views of the proposed development with neighbouring properties - 59 Redington Road (left) and 63 Redington Road (right)

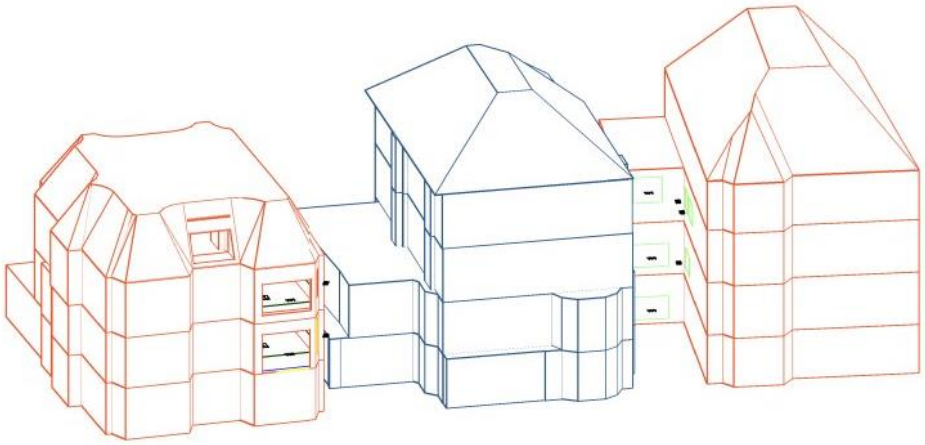


Figure 9 Aerial views of the proposed development with neighbouring properties - 59 Redington Road (left) and 63 Redington Road (right)

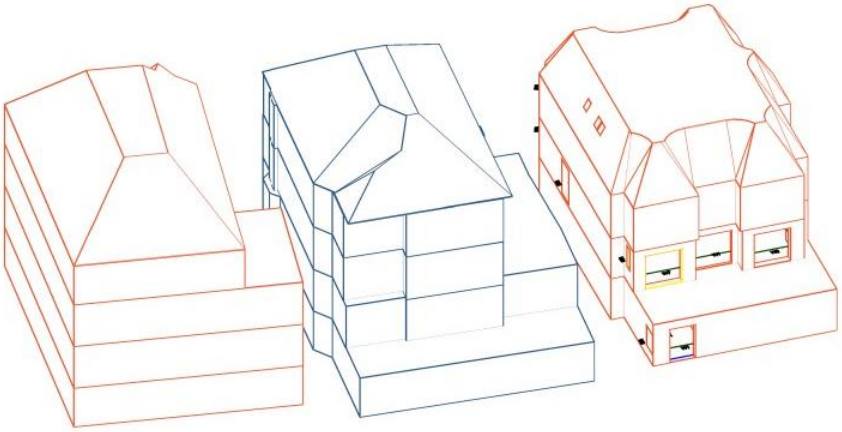
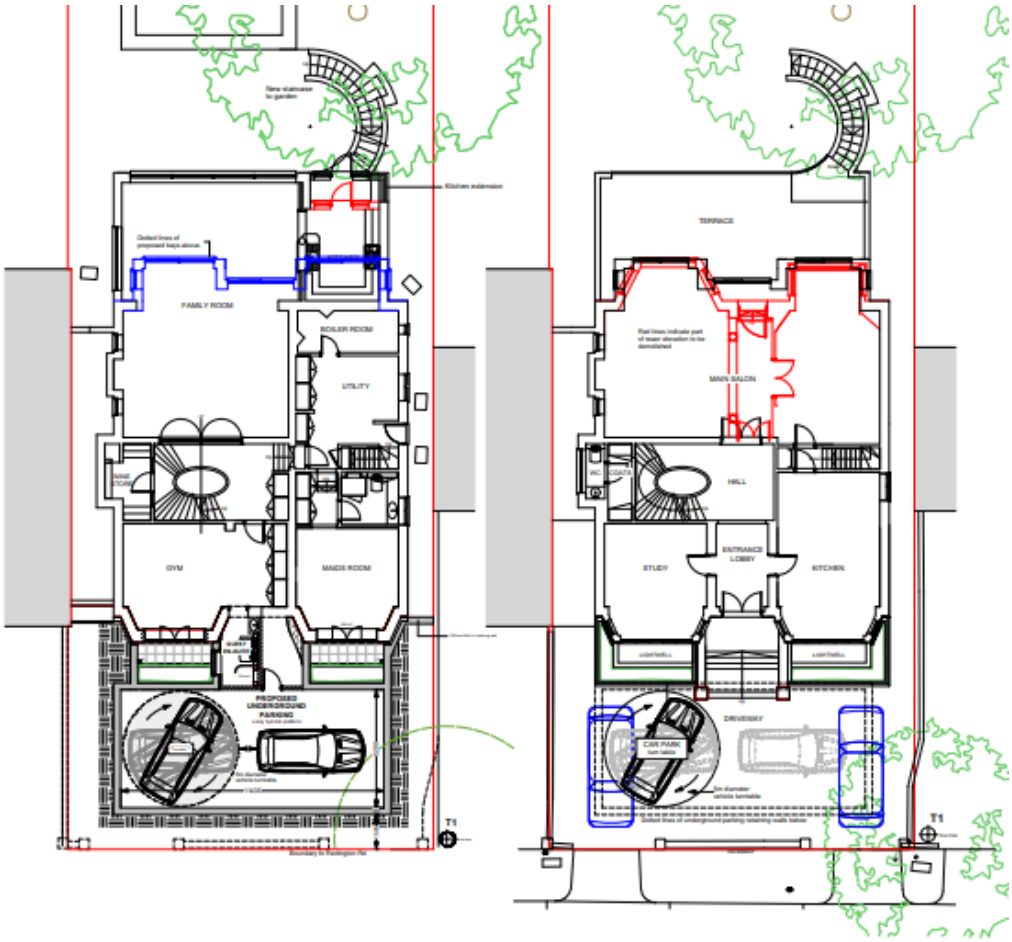


Figure 10 Aerial views of the proposed development with neighbouring properties - 59 Redington Road (right) and 63 Redington Road (left)

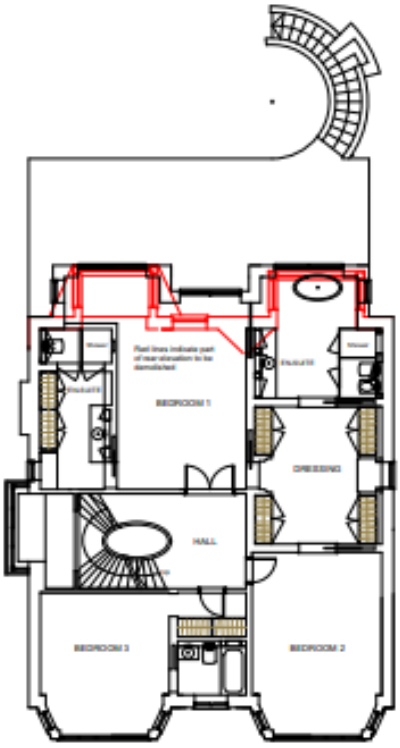
APPENDIX B – PROPERTY RESEARCH

The following documents reference the information available online documenting the internal layouts and elevations of neighbouring properties (where found).



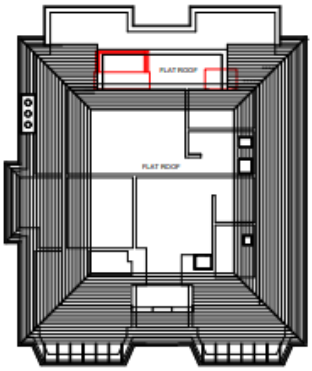
PROPOSED LOWER GROUND FLOOR PLAN
1:100

PROPOSED UPPER GROUND FLOOR PLAN
1:100



PROPOSED FIRST FLOOR PLAN
1:100

PROPOSED SECOND FLOOR PLAN
1:100



PROPOSED ROOF PLAN
1:100

Figure 11 Plans for 59 Redington Road were extracted from planningrecords.camden.

Figure 12 Elevations for 59 Redington Road were extracted from planningrecords.camden

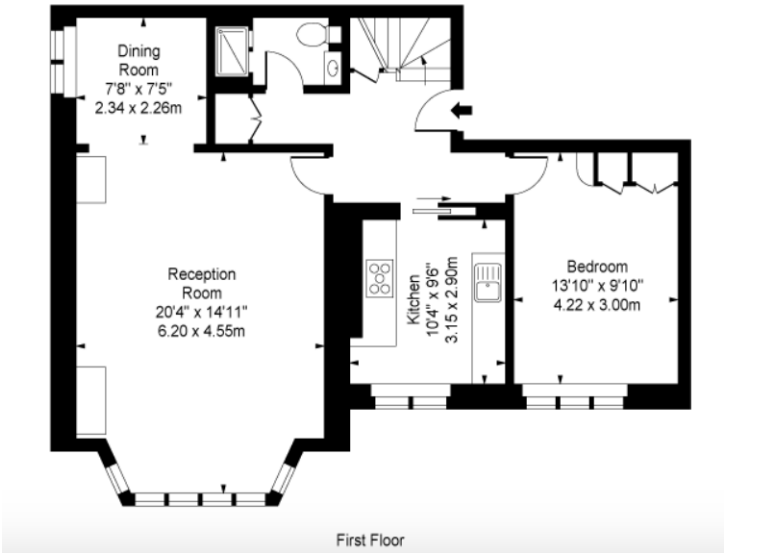


Figure 13 Plans for 63 Redington Road were extracted from Rightmove website.

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