Daylight, Sunlight and Overshadowing Assessment

153-163 Broadhurst Gardens

For Kilburn & District Houses Ltd

April 2016

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About us:
XCO2 Energy are a low-carbon consultancy working in the built environment. We are a multi-disciplinary company consisting of both architects and engineers, with specialists including CIBSE low carbon consultants, Code for Sustainable Homes, EcoHomes and BREEAM assessors, BRE trained daylight consultants and LEED accredited professionals.

	Issue 01	Issue 02	Issue 03		
Remarks	Draft				
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Checked by	SP	SP	SP		
Authorised by	RM	RM	RM		
Date	23/12/2014	30/01/2015	25/04/2016		
Project reference	8504	8504	8504		

Executive Summary

Sunlight and daylight analysis was carried out for the proposed development at 153-163 Broadhurst Gardens, which is located within the London Borough of Camden. This report outlines the results of the analysis for the planning application, assessing the daylight and sunlight impacts on the surrounding properties.

The methodology set out in this report is in accordance with BRE's "*Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice*" by PJ Littlefair (2011) which is accepted as good practice by Planning Authorities.

The following assessments were carried out:

- Daylight: 25 Degree Line
- Daylight: Vertical Sky Component
- Sunlight: Sunlight Access
- Sunlight: Sunlight Overshadowing

Computer modelling software was used to carry out the daylight and sunlight impact assessments.

Daylight Assessment

The daylight analysis indicates that the impact on surrounding properties arising from the proposed development will be within acceptable limits. A total number of 74 windows were assessed for daylight access. The results are as follows:

- 31 of the windows have passed the 25 degree line test;
- 12 windows achieved a VSC of greater than 27%;
- 31 windows achieved relative VSC values of over 80% of their former values

All of the assessed windows were found to meet the daylight criteria as per the BRE guidance. Therefore, it can be concluded that the proposed development is considered to have no significant impact on the daylight hours received by the surrounding properties.

In addition, 32 rooms across 11 dwellings on the lower, ground and first floors of the proposed development were selected for a detailed Average Daylight Factor (ADF) assessment. All of the assessed rooms achieved ADF levels exceeding the target recommended in the BRE guidance.

In conclusion, all internal spaces within the proposed development will receive satisfactory levels of daylight to ensure the wellbeing of the occupants.

Sunlight Assessment

A total of 58 windows within 90 degrees of south on surrounding properties were assessed for annual and winter sunlight hours. Sunlight assessment results are as follows:

- 28 windows assessed passed the 25 degree line test;
- all of the remaining windows assessed achieved at least 25% of probable annual sunlight hours and at least 5% of probable winter sunlight hours

These results are within the BRE guidelines and show that the proposed development is considered to have no significant impact on the sunlight hours received by the surrounding properties.

Overshadowing Assessment

No open spaces or amenity areas were identified to be in close proximity to the proposed development. Overshadowing analysis is therefore not required.

Summary

In summary, all of the existing windows on the properties surrounding the proposed development at 153-163 Broadhurst Gardens meet the sunlight and daylight targets set out in the BRE Guide. In addition, no amenity spaces were identified as being within close proximity to the proposed development.

The proposed development is not expected to cause any significant impact to daylight and sunlight access for surrounding properties and amenity spaces.

Furthermore, all habitable rooms assessed for internal daylight levels at 153-163 Broadhurst Gardens achieved satisfactory results in line with BRE recommended targets. Therefore, the development as a whole is deemed to be suitable for its intended new build proposal.

Introduction

This report assesses the daylight, sunlight and overshadowing impacts of the proposed new build development may have on the existing properties and open spaces surrounding the site.

The approach is based on the BRE's "Site Layout Planning for daylight and sunlight, a Guide to good practice" PJ Littlefair 2011, which is generally accepted as good practice by Town and Country Planning authorities.

It should be noted that although the numerical values stated in the BRE provide useful guidance to designers, consultants and planning officials, these are purely advisory and may vary depending on context. Dense urban areas, for example, may often experience greater site constraints when compared to low-rise suburban areas, and thus a high degree of obstruction is often unavoidable.

Site

The proposed development consists of a residential building located at 153-163 Broadhurst Gardens, in the London Borough of Camden, with West End Lane to the west and West Hampstead Mews to the east and south as shown in the image below.

Site analysis was carried out to identify any potential daylight and sunlight impacts on the surrounding developments. The relevant properties assessed in this report are annotated in the figure below.

Aerial view of properties surrounding the proposed scheme at Broadhurst Gardens - site area highlighted in pink

Methodology

The following methodology was used to carry out the daylight, sunlight and overshadowing assessments. The methodology is based on the guidelines set out in the BRE "*Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice" (2011).*

Daylight

1. Daylight to surrounding windows

A plane is drawn at 25 degrees from the horizontal, at the centre of an existing window. If the new development intersects with this plane, the internal daylight levels of the surrounding windows may be reduced. When an obstruction of the 25 degree plane occurs, a more detailed assessment involving the Vertical Sky Component of the affected window would need to be carried out.

2. Absolute Vertical Sky Component

The Vertical Sky Component is the ratio of the direct sky illuminance falling on the vertical wall at a reference point, to the simultaneous horizontal illuminance under an unobstructed sky. To maintain good levels of daylight, the Vertical Sky Component of a window needs to be 27% or greater. If the VSC is less than 27%, then a comparison of existing and proposed levels of VSC level would need to be calculated.

3. Relative Vertical Sky Component

Good levels of daylighting can still be achieved if VSC levels are within 0.8 of their former value.

4. Average Daylight Factor

Interior daylighting levels in new rooms can be determined using Average Daylight Factor calculations. The Average Daylight Factor is the average illuminance on the working plane in a rooms, divided by the illuminance on an unobstructed horizontal surface outdoors, and is usually expressed as a percentage.

Sunlight

Access to sunlight (APSH)

The BRE test relates mainly to existing living room windows, although care should be taken to ensure that kitchens and bedrooms receive reasonable amounts of sunlight.

An Annual Probable Sunlight Hour (APSH) assessment is carried when:

- there is an obstruction within the 25 degree line, calculated from the centre of the window
- the proposed development is situated within 90 degrees due south of the window

The APSH assessment states that the existing living room window should receive at least:

- 25% of annual probable sunlight hours throughout the year and
- 5% of annual probable sunlight hours during the winter months and
- the difference between the APSH is not less than 0.8 times its former value; or
- Reduction in sunlight received over the whole year is greater than 4% of annual probable sunlight hours

The term 'annual probable sunlight hours' refers to the long-term average of the total of hours during a year in which direct sunlight reaches the unobstructed ground (when clouds are taken into account). The 'winter probable sunlight hours' is used to mean the same but only for the winter period (21 September – 21 March).

In order for the windows to receive adequate sunlight access, it must achieve at least 372 hours of annual probable sunlight during the year and 22 hours of winter probable sunlight. Note that the BRE guidance expects the above to be met for living room windows only.

Overshadowing

Sunlight to Amenity Spaces

Open spaces should retain a reasonable amount of sunlight throughout the year. The BRE states that for an amenity space to "appear adequately sunlit throughout the year, at least half of the area should receive at least two hours of sunlight on 21 March".

The following sections presents the daylight, sunlight and overshadowing assessment results for the proposed development at 153-163 Broadhurst Gardens.

Daylight Assessment

Analysed windows
A total of 74 windows from buildings surrounding the site were highlighted as being in close proximity to the proposed development.

The assessed surrounding buildings include:

- 180-194 Broadhurst Gardens, situated north of the site (window no. 1-55);
- 151 Broadhurst Gardens/1B West Hampstead Mews, situated east of the site (window no. 56-65);
- 22 West Hampstead Mews, situated south of the site (window no. 66-70);
- 165-167 Broadhurst Gardens, situated south and west of the site (window no. 71-74).

In accordance with the BRE methodology the windows have been tested for the 25 degree line, Vertical Sky Component (VSC) and the relative VSC where required.

The results are presented for each building group on the following pages.

180-194 Broadhurst Gardens

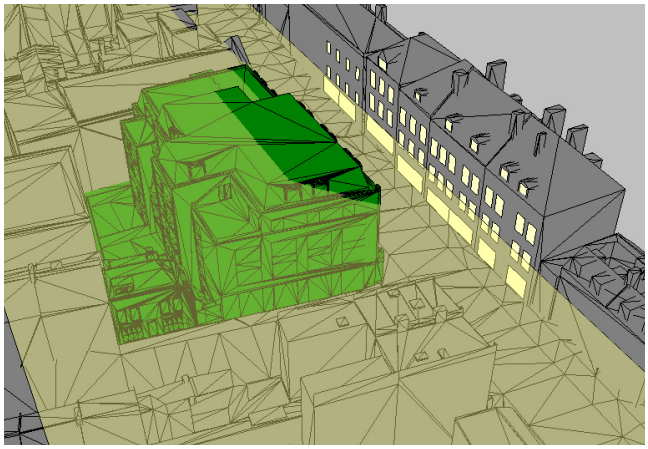
A total of 55 windows have been identified as facing the proposed development on the buildings at 180-194 as shown in the images below. These buildings are located north of the site, across Broadhurst Gardens.

The daylight analysis for this building indicates that:

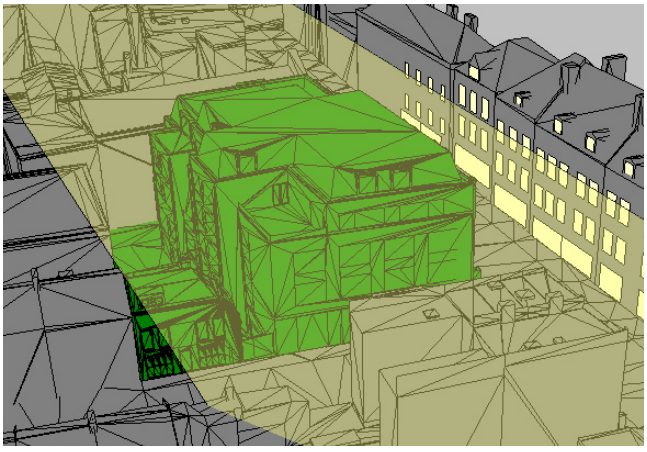
- 28 windows passed the 25 degree line test;
- 8 windows achieved VSCs of greater than 27%.
- 19 windows achieved relative VSCs of greater than 0.8

Therefore it can be concluded that the proposed development is not considered to have any significant impact on the assessed windows of 180-194 Broadhurst Gardens.

Windows on 180-194 Broadhurst Gardens



25° line emanating from the first floor windows on 180-194 Broadhurst Gardens



25° line emanating from second floor windows on 180-194 Broadhurst Gardens

Result Summary

Window No.	25 degree line test	VSC test			Comments
		Proposed VSC (%)	Existing VSC (%)	Relative VSC	
1	Further testing	21.2	22.1	0.96	No noticeable impact on daylight levels
2	Further testing	21.5	22.7	0.95	
3	Further testing	21.0	23.2	0.91	
4	Further testing	19.0	22.0	0.86	
5	Further testing	19.1	22.0	0.87	
6	Further testing	21.4	24.1	0.89	
7	Further testing	24.9	26.7	0.93	
8	Further testing	26.2	27.8	0.94	
9	Further testing	25.8	26.5	0.97	
10	Further testing	25.8	26.9	0.96	
11	Further testing	25.8	27.2	0.95	
12	Further testing	25.7	27.6	0.93	
13-15	Further testing	>27	-	-	
16	Further testing	24.4	28.1	0.87	
17	Further testing	24.3	28.3	0.86	
18	Further testing	24.4	28.4	0.86	
19	Further testing	23.4	27.3	0.85	
20	Further testing	24.0	27.7	0.87	
21	Further testing	24.6	28.2	0.87	
22	Further testing	26.1	29.3	0.89	
23-27	Further testing	>27	-	-	
28-55	Passed	-	-	-	

Number of windows	55
Windows passing 25 degree line test	28
Windows with a VSC greater than 27%	8
Windows that have a VSC of at least 80% of existing value	19
Windows with low expected daylight levels	0

151 Broadhurst Gardens/1B West Hampstead Mews

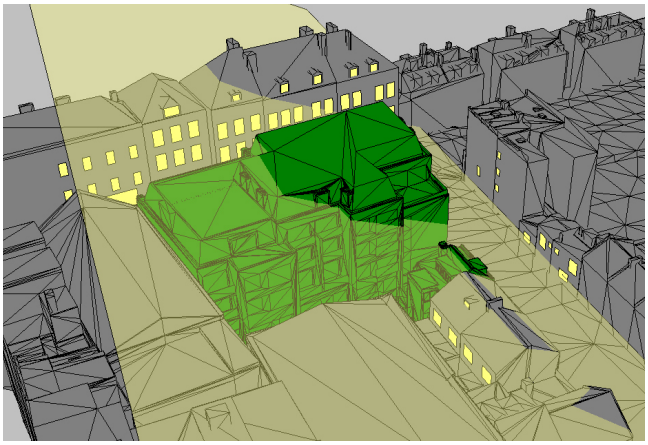
151 Broadhurst Gardens and 1B West Hampstead Mews are two buildings located to the east of the site; 10 windows have been included in the assessment as shown in the image below.

The daylight analysis for this building indicates that:

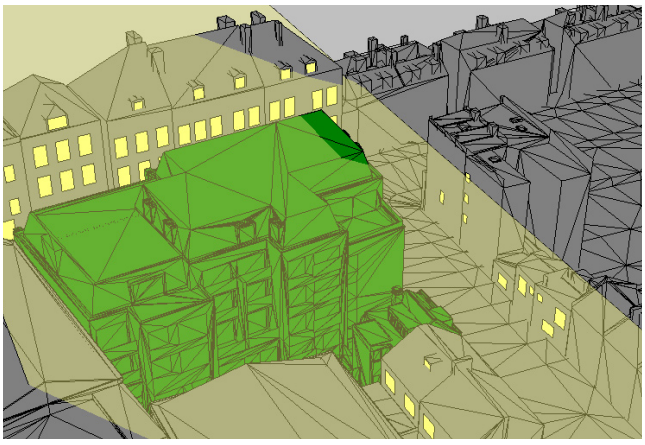
- No windows passed the 25 degree line test;
- 3 windows achieved VSCs of greater than 27%;
- 7 windows achieved relative VSCs of greater than 0.8.

It can be concluded that the proposed development is not considered to have any significant impact on the assessed windows at 151 Broadhurst Gardens/1B West Hampstead Mews.

Windows on 151 Broadhurst Gardens/1B West Hampstead Mews



25° line emanating from 1st floor window on 151 Broadhurst Gardens/1B West Hampstead Mews



25° line emanating from 1st floor window on 151 Broadhurst Gardens/1B West Hampstead Mews

Result Summary

Window No.	25 degree line test	VSC test			Comments
		Proposed VSC (%)	Existing VSC (%)	Relative VSC	
56	Further testing	21.2	23.7	0.90	No noticeable impact on daylight levels
57	Further testing	20.7	23.8	0.87	
58	Further testing	24.6	28.3	0.87	
59	Further testing	28.1	-	-	
60	Further testing	20.3	22.8	0.89	
61	Further testing	23.1	24.6	0.94	
62	Further testing	24.6	27.0	0.91	
63	Further testing	25.9	28.4	0.91	
64-65	Further testing	>27	-	-	

Number of windows	10
Windows passing 25 degree line test	0
Windows with a VSC greater than 27%	3
Windows that have a VSC of at least 80% of existing value	7
Windows with low expected daylight levels	0

22 West Hampstead Mews

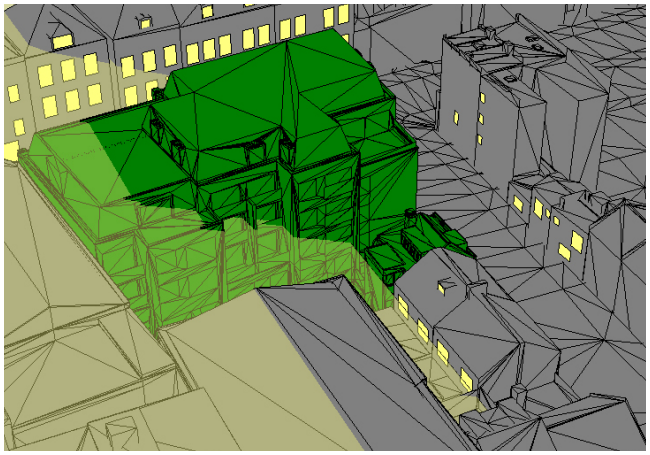
A total of 5 windows located on the building at 22 West Hampstead Mews were identified as facing the proposed development as shown in the images below. This building is located to the south of the site.

The daylight analysis for this building indicates that:

- No windows passed the 25 degree line test;
- 1 window achieved a VSC of greater than 27%;
- 4 windows achieved relative VSCs of greater than 0.8.

Therefore, it can be concluded that the proposed development is not considered to have any significant impact on the assessed windows at 22 West Hampstead Mews.

Windows on 22 West Hampstead Mews



25° line emanating from the windows on 22 West Hampstead Mews

Result Summary

Window No.	25 degree line test	VSC test			Comments
		Proposed VSC (%)	Existing VSC (%)	Relative VSC	
66	Further testing	19.0	20.6	0.92	No noticeable impact on daylight levels
67	Further testing	18.0	18.9	0.95	
68	Further testing	19.1	19.7	0.97	
69	Further testing	19.1	19.4	0.98	
70	Further testing	>27	-	-	

Number of windows	5
Windows passing 25 degree line test	0
Windows with a VSC greater than 27%	1
Windows that have a VSC of at least 80% of existing value	4
Windows with low expected daylight levels	0

165-167 Broadhurst Gardens

A total of 5 windows located on the building at 165-167 Broadhurst Gardens were identified as facing the proposed development as shown in the images below. This building is located to the south and west of the site.

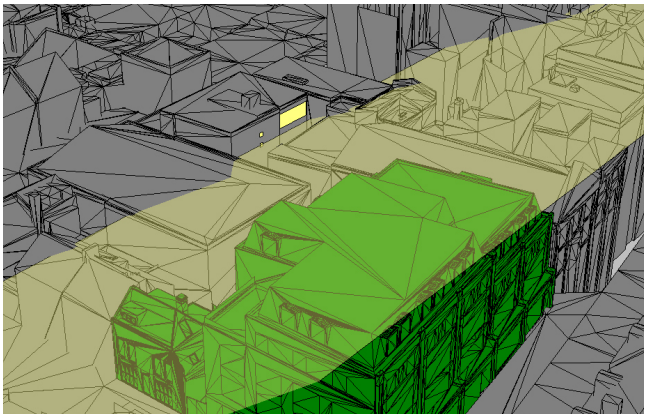
The daylight analysis for this building indicates that:

- 3 windows passed the 25 degree line test;
- No windows achieved a VSC of greater than 27%;
- 1 window achieved a relative VSC of greater than 0.8.

Therefore, it can be concluded that the proposed development is not considered to have any significant impact on the assessed windows at 165-167 Broadhurst Gardens.

Windows on 165-167 Broadhurst Gardens

Windows on 165-167 Broadhurst Gardens



25° line emanating from the windows on 65-167 Broadhurst Gardens

Result Summary

Window No.	25 degree line test	VSC test			Comments
		Proposed VSC (%)	Existing VSC (%)	Relative VSC	
71	Further testing	19.4	22.9	0.85	No noticeable impact on daylight levels
72	Passed	-	-	-	
73	Passed	-	-	-	
74	Passed	-	-	-	

Number of windows	4
Windows passing 25 degree line test	3
Windows with a VSC greater than 27%	0
Windows that have a VSC of at least 80% of existing value	1
Windows with low expected daylight levels	0

Summary of Offsite Daylight Results

The daylighting levels for the existing windows adjacent to the proposed site at Broadhurst Gardens were found to be acceptable. All of the existing windows on the surrounding properties passed the 25 degree line test or one of the VSC tests.

In summary,

- 31 of the 74 windows passed the 25 degree line test;
- 12 windows achieved a VSC of greater than 27%;
- 31 windows achieved a relative VSC value of 80% of their former value.

Therefore, it can be concluded that the proposed development will not result in significant impact on daylight received by the surrounding properties.

Summary of Daylight Results for Surrounding Windows

Total no. of windows	Test 1: Windows passing 25 degree line test	Test 2: Windows passing 27% VSC	Test 3: Windows passing Relative VSC	Windows not passing VSC tests
74	31	12	31	0

Average Daylight Factor (ADF) for proposed development

The BRE states that daylighting in new rooms can be determined using average daylight factor (ADF) calculations. BS8206-2 Code of Practice for Daylighting recommends different average daylight factors for different habitable spaces. These are as follows:

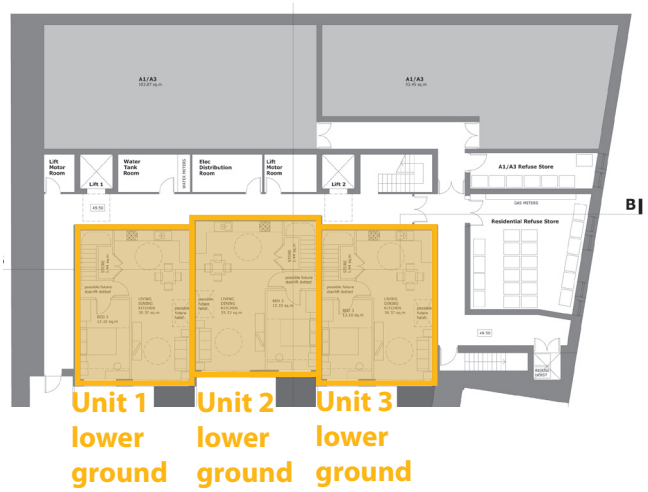
- 1% for bedrooms
- 1.5% for living rooms and
- 2% for kitchens

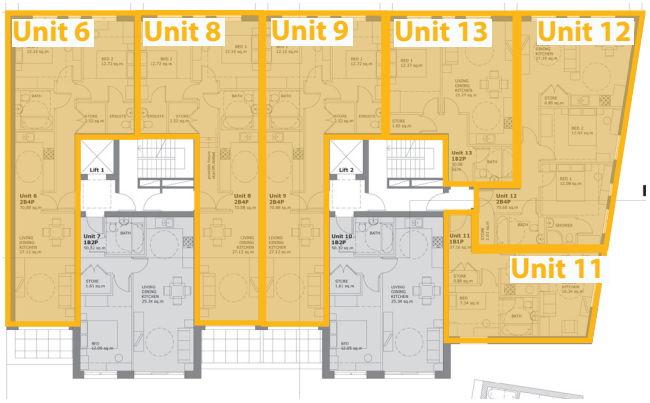
The Average Daylight Factor assessment was carried out for eleven selected dwellings within the proposed development. These dwellings are located on the lower/ground floor and first floor of the proposed scheme, and therefore represent the worst case scenarios in terms of daylight levels.

The dwellings selected are as follows, and are denoted in the figures below:

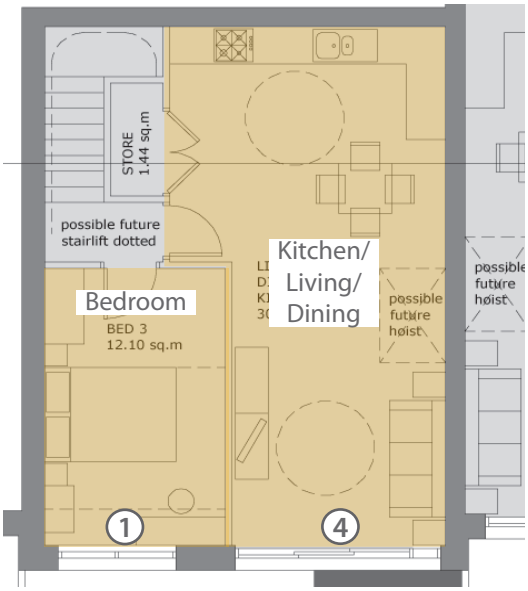
- 3 no. three bedroom basement/ground floor maisonettes (Units 1-3);
- 2 no. one bedroom ground floor flats (Flats 4-5);
- 6 no. one/two bedroom first floor flats (Flats 6; 8-9; 11-13).

The ADF calculations followed the methodology set out by the BRE (Appendix C of the 'Site Layout Planning for Daylight and Sunlight' guidance notes). The result summaries are provided in pages 18-23.

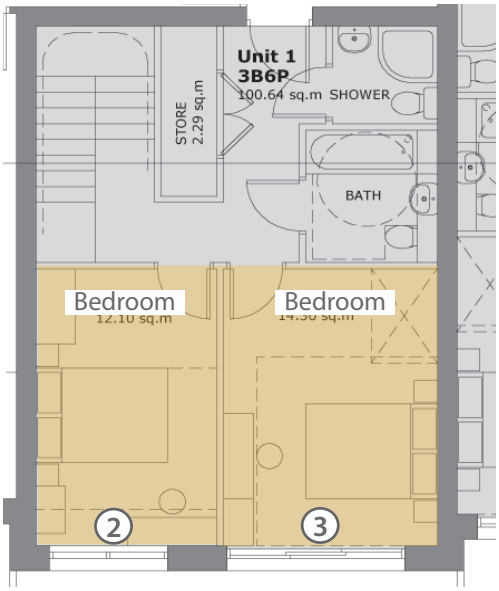




Unit 1

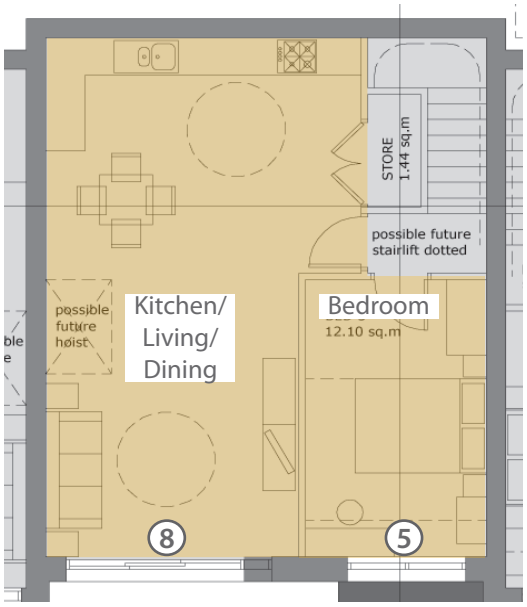


Unit 1, lower ground floor : Assessed window positions

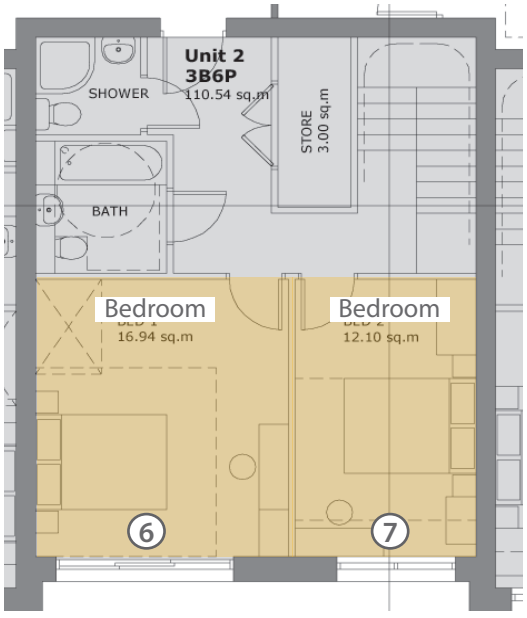


Unit 1, ground floor : Assessed window positions

Unit 2

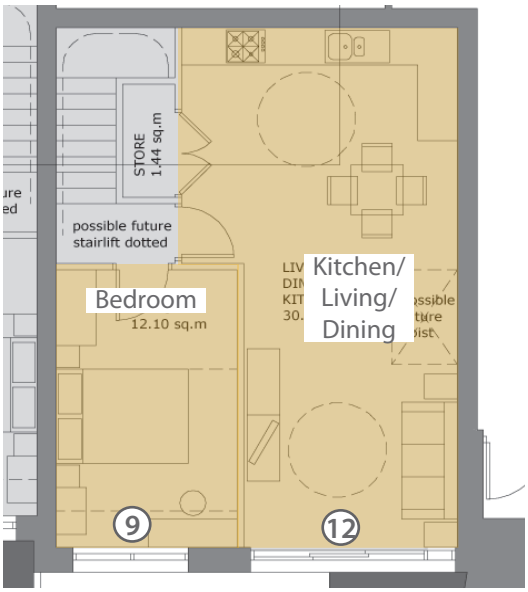


Unit 2, lower ground floor : Assessed window positions

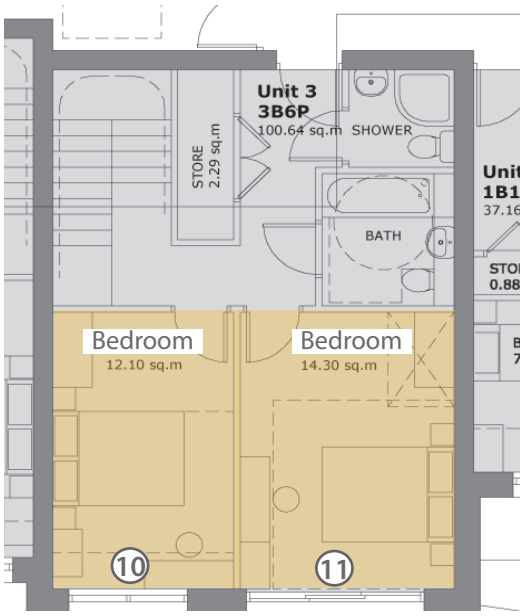


Unit 2, ground floor : Assessed window positions

Unit 3



Unit 3, lower ground floor : Assessed window positions

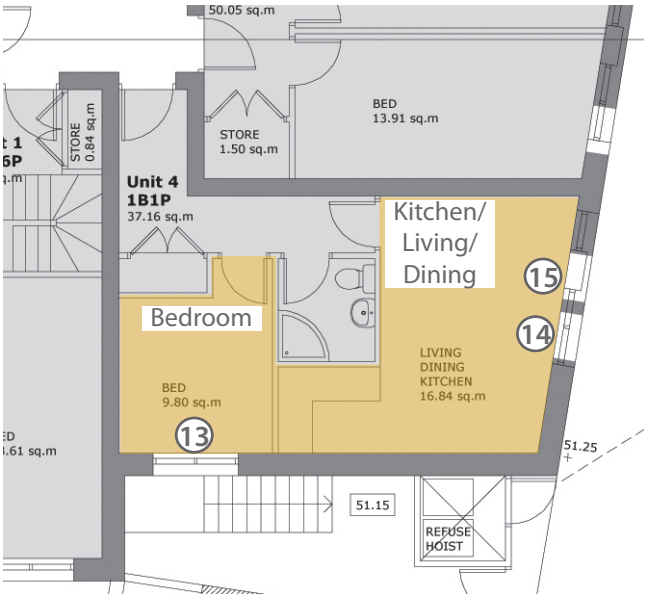


Unit 3, ground floor : Assessed window positions

ADF Results Summary for Units 1-3

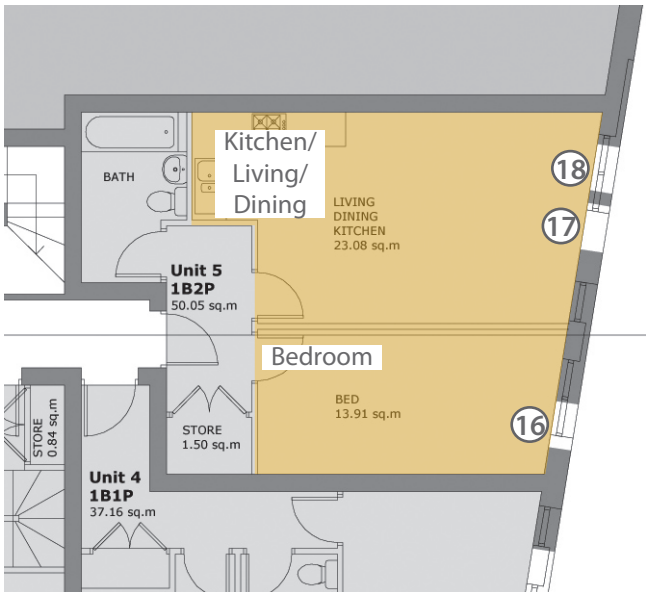
Flat	Window no.	Room Type	ADF (%)	Target ADF (%)	PASS / FAIL
Unit 1	1	Bedroom	1.6	1	Pass
	2	Bedroom	2.1	1	Pass
	3	Bedroom	4.4	1	Pass
	4	Kitchen/living/dining	2.0	2	Pass
Unit 2	5	Bedroom	5.0	1	Pass
	6	Bedroom	2.6	1	Pass
	7	Bedroom	1.8	1	Pass
	8	Kitchen/living/dining	2.2	2	Pass
Unit 3	9	Bedroom	2.1	1	Pass
	10	Bedroom	2.7	1	Pass
	11	Bedroom	4.2	1	Pass
	12	Kitchen/living/dining	2.0	2	Pass

Unit 4



Unit 4: Assessed window positions

Unit 5

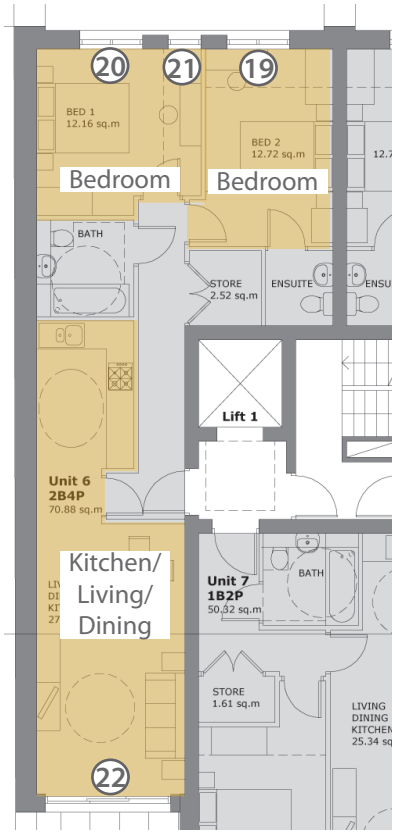


Unit 5: Assessed window positions

ADF Results Summary for Units 4 and 5

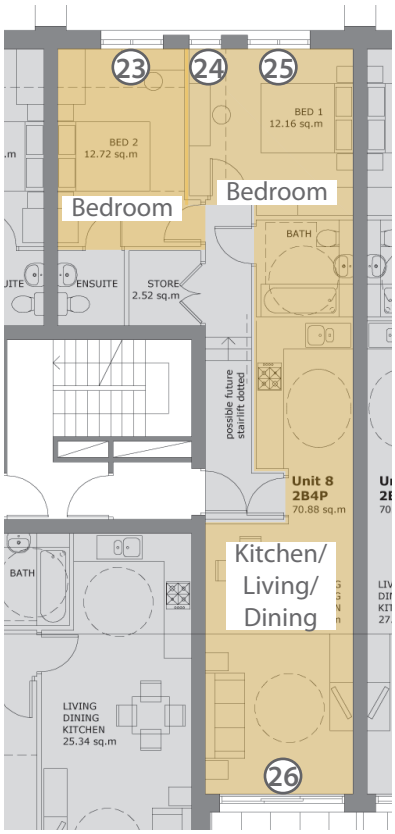
Flat	Window no.	Room Type	ADF (%)	Total ADF (%)	Target ADF (%)	PASS / FAIL
Unit 4	13	Bedroom	2.04	2.04	1	Pass
	14	Kitchen/living/dining	2.04	3.05	2	Pass
	15	Kitchen/living/dining	1.00			
Unit 5	16	Bedroom	2.39	2.39	1	Pass
	17	Kitchen/living/dining	0.77	2.28	2	Pass
	18	Kitchen/living/dining	1.51			

Unit 6



Unit 6: Assessed window positions

Unit 8

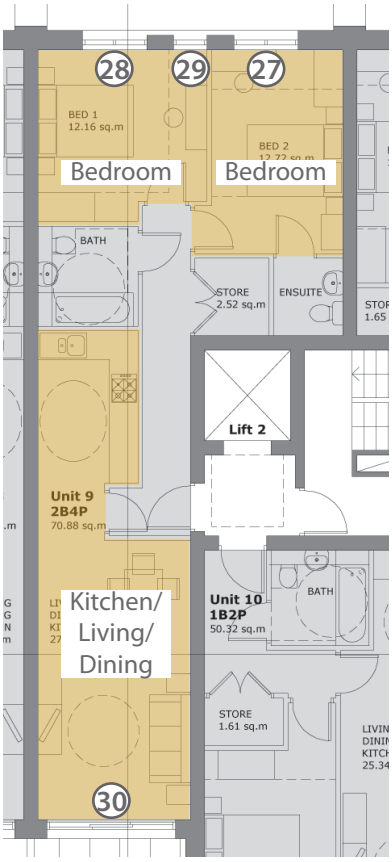


Unit 8: Assessed window positions

ADF Results Summary for Units 6 and 8

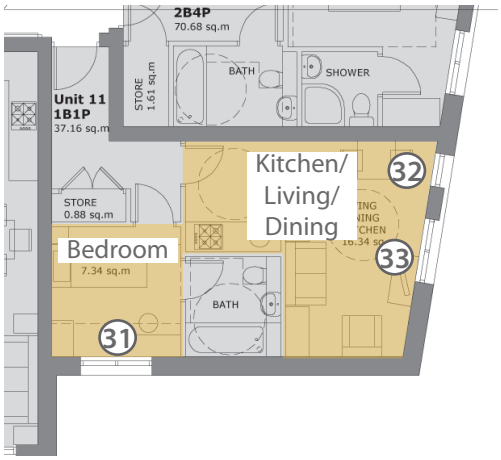
Flat	Window no.	Room Type	ADF (%)	Total ADF (%)	Target ADF (%)	PASS / FAIL
Unit 6	19	Bedroom	2.14	2.14	1	Pass
	20	Bedroom	2.31	3.47	1	Pass
	21	Bedroom	1.16			
	22	Kitchen/living/dining	5.5	5.5	2	Pass
Unit 8	23	Bedroom	2.12	2.12	1	Pass
	24	Bedroom	1.19	3.44	1	Pass
	25	Bedroom	2.25			
	26	Kitchen/living/dining	2.01	2.01	2	Pass

Unit 9



Unit 9: Assessed window positions

Unit 11

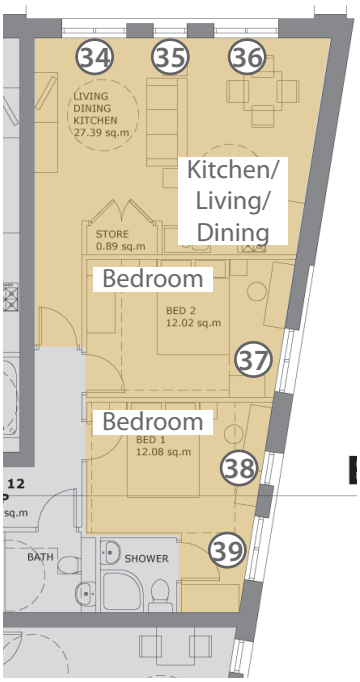


Unit 11: Assessed window positions

ADF Results Summary for Units 9 and 11

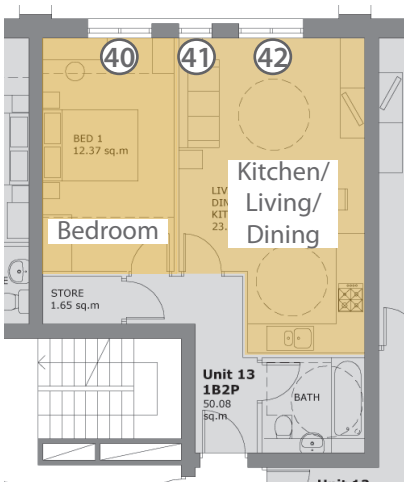
Flat	Window no.	Room Type	ADF (%)	Total ADF (%)	Target ADF (%)	PASS / FAIL
Unit 9	27	Bedroom	2.10	2.10	1	Pass
	28	Bedroom	2.22	3.36	1	Pass
	29	Bedroom	1.14			
	30	Kitchen/living/dining	2.03	2.03	2	Pass
Unit 11	31	Bedroom	3.23	3.23	1	Pass
	32	Kitchen/living/dining	1.04	3.03	2	Pass
	33	Kitchen/living/dining	1.98			

Unit 12



Unit 12: Assessed window positions

Unit 13



Unit 13: Assessed window positions

ADF Results Summary for Units 12 and 13

Flat	Window no.	Room Type	ADF (%)	Total ADF (%)	Target ADF (%)	PASS / FAIL
Unit 12	34	Kitchen/living/dining	1.21	3.08	2	Pass
	35	Kitchen/living/dining	0.63			
	36	Kitchen/living/dining	1.24			
	37	Bedroom	2.36	2.36	1	Pass
	38	Bedroom	1.32	3.63	1	Pass
	39	Bedroom	2.31			
Unit 13	40	Bedroom	2.24	2.34	1	Pass
	41	Kitchen/living/dining	0.70	2.05	2	Pass
	42	Kitchen/living/dining	1.35			

Average Daylight Factor (ADF) for proposed development

As the assessed windows are on the lower ground, ground and first floor levels they represent the worst case scenarios in terms of daylight levels. However, large windows have been incorporated into the proposed scheme where possible, to enable satisfactory daylight penetration into the habitable spaces.

The analysis results show that all rooms assessed had ADF levels exceeding the target ADFs recommended in the BRE guidance.

Overall, the daylight levels to all the dwellings have been shown to be adequate following BRE guidance and methodology.

Sunlight Assessment

Sunlight Assessment

A sunlight assessment was carried out on the existing facades to determine acceptable sunlight levels. The sunlight tests only apply to those windows which face within 90 degrees of due south. A total of 58 windows were analysed for sunlight access. These include:

- Windows no. 1-55 on 190-194 Broadhurst Gardens
- Windows no. 61, 64 and 65 on 151 Broadhurst Gardens/1B West Hampstead Mews

The sunlight assessment calculates the amount of sunlight hours the window receives across a whole year and over the winter period (21 September - 21 March). The following criteria should be met to ensure good levels of sunlight:

- the 25 degree line plan emanating from the window is not obstructed; or
- windows receive at least 25% of annual probable sunlight hours and at least 5% of probable sunlight hours in the winter (21 September - 21 March); or
- windows under proposed conditions receiving more than 0.8 times it's former value during either periods; or
- the reduction in sunlight received over the whole year is less than 4% of annual probable sunlight hours

The term 'annual probable sunlight hours' (APSH) refers to the long-term average of the total of hours during a year in which direct sunlight reaches the unobstructed ground. The 'winter probable sunlight hours' (WPSH) is used in the same way but only for the winter period (21 September – 21 March).

As seen from the results on the next page, 28 of the windows assessed pass the 25 degree line test, and all remaining 30 windows achieve 25% of probable annual sunlight hours and 5% of probable winter sunlight hours. The sunlight assessment results for these windows are presented in the table on the next page.

Sunlight Results for Surrounding Windows

Window No.	25 degree line test	Proposed Annual Probable Sunlight Hours	Proposed Winter Probable Sunlight Hours	Comments
1	Further testing	>372	>22	Good levels of sunlight access
2		>372	>22	
3		>372	>22	
4		>372	>22	
5		>372	>22	
6		>372	>22	
7		>372	>22	
8		>372	>22	
9		>372	>22	
10		>372	>22	
11		>372	>22	
12		>372	>22	
13		>372	>22	
14		>372	>22	
15		>372	>22	
16		>372	>22	
17		>372	>22	
18		>372	>22	
19		>372	>22	
20		>372	>22	
21		>372	>22	
22		>372	>22	
23		>372	>22	
24		>372	>22	
25		>372	>22	
26		>372	>22	
27		>372	>22	
28-55	Passed	-	-	
61	Further testing	>372	>22	
64		>372	>22	
65		>372	>22	

Summary of Sunlight Results

The sunlight assessment was carried out for 58 offsite windows within 90 degrees of due south. Sunlight assessment results are as follows:

- 28 of the windows passed the 25 degree line test;
- all 30 of the remaining windows assessed achieved 25% of probable annual sunlight hours and 5% of probable winter sunlight hours.

Thus, the proposed development at 153-163 Broadhurst Gardens is not considered to have any significant adverse impact on sunlight hours received by the surrounding properties.

Summary of Sunlight to Existing Buildings Results

Total no. of windows	Test 1: 25 degree line	Test 2: Windows passing		Windows not passing relevant tests
		25% of annual sunlight hours	5% of winter sunlight hours	
58	28	30	30	0

Overshadowing Assessment

Overshadowing Assessment

A review of the site plan showed that there are no amenity or open spaces in close proximity to the proposed development, as shown in the figure below. There is no requirement for an overshadowing assessment.

Aerial view showing the absence of open and amenity spaces surrounding the proposed development at Broadhurst Gardens. The approximate site area is outlined in pink.

Conclusion

The daylight analysis indicates that the impact on the surrounding properties arising from the proposed development at 153-163 Broadhurst Gardens will be well within acceptable limits.

Daylight Assessment

A total number of 74 windows were assessed for daylight access. The daylight assessment results are as follows:

- 31 of the 74 windows passed the 25 degree line test;
- 12 windows achieved a VSC of greater than 27%;
- 31 windows achieved a relative VSC value of 80% of their former value.

All assessed windows were found to meet the daylight criteria as per the BRE guidance. Therefore, it can be concluded that the proposed development is not considered to result in any significant impact on daylight received by the surrounding properties.

Further detailed Average Daylight Factor (ADF) analysis were carried out for 32 rooms in 11 dwellings on the lower, ground and first floors of the proposed development. The analysis results show that all rooms assessed had ADF levels exceeding the target levels recommended in the BRE guidance.

Sunlight Assessment

A total of 58 windows within 90 degrees of south on surrounding properties were assessed for annual and winter sunlight hours. The sunlight assessment results are as follows:

- 28 of the windows assessed passed the 25 degree line test;
- all of the 30 remaining windows assessed achieved 25% of probable annual sunlight hours and 5% of probable winter sunlight hours.

Therefore, the results are within the BRE guidelines and show that the proposed development is considered to have no significant impact on the sunlight hours received by the surrounding properties.

Overshadowing Assessment

No open spaces or amenity areas were identified to be in close proximity to the proposed development. Overshadowing analysis is therefore not required.

Summary

In summary, all of the existing windows on the properties surrounding the proposed development at 153-163 Broadhurst Gardens meet the sunlight and daylight targets set out in the BRE Guide. In addition, no amenity spaces were identified as being within close proximity to the proposed development.

The proposed development is not expected to cause any significant impact to daylight and sunlight access for surrounding properties and amenity spaces.

Furthermore, all habitable rooms assessed for internal daylight levels at 153-163 Broadhurst Gardens achieved satisfactory results in line with BRE recommended targets. Therefore, the development as a whole is deemed to be suitable for its intended new build proposal.