



daylight&sunlight

Daylight and Sunlight Report
for the Proposed Development at
Rear of Duval House, Hamondsworth, West Drayton, UB7 0BT

Prepared for: GA&A Design
Prepared by: Jonathan Nash LLB (Hons)
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Daylight and Sunlight (UK) Limited
20 - 22 Wenlock Road, London, N1 7GU
T 0845 052 1146 W daylightandsunlight.co.uk

Daylight and Sunlight (UK) Limited, a Limited Company. Registered in England and Wales number 6956811
Registered office: 2nd Floor, 145 – 157 St. John Street, London, EC1V 4PY
VAT number 978498532.



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1. Executive Summary

1.1 Scope of Service

- 1.1.1 We have been instructed by GA&A Design to consider the potential impact upon the amenity of the surrounding buildings, which may arise from the proposed development at Rear of Duval House, Hamondsworth, West Drayton, UB7 0BT.

1.2 BRE Assessment Criteria

- 1.2.1 To ensure that this assessment has been appropriately considered, daylight and sunlight assessments have been undertaken in accordance with the Building Research Establishment Report 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' 2011 (the "BRE guide") and also on British Standard 8206 – 2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting', to which the BRE report refers.
- 1.2.2 The standards and tests applied within this assessment are briefly described in Appendix A.

1.3 Daylight and Sunlight

- 1.3.1 Regarding the surrounding buildings, the proposed development comfortably meets all of the BRE criteria for daylight and sunlight.
- 1.3.2 There are no reasonable grounds to challenge the proposed development with regards to daylight and sunlight amenity.

1.4 Generally

- 1.4.1 When considering the numerical results, it is important to approach and interpret the BRE guidelines flexibly along with the following material mitigating factors:

*The BRE guidelines recognises that buildings located uncommonly close to the site boundary, as is the case here, may be considered as "bad" neighbours, taking more than their fair share of light. Accordingly, a greater reduction in daylight or sunlight may be unavoidable and so the local authority may wish to apply different target values.

*Kitchens and bedrooms are given less weighting than that of a living room.

*It is reasonable to expect future occupiers of proposed developments to utilise the natural light and arrange their rooms accordingly.



2. Introduction

2.1 Scope of Service

2.1.1 We have been instructed by GA&A Design to consider the potential impact upon the amenity of the surrounding buildings, which may arise from the proposed development at Rear of Duval House, Hamondsworth, West Drayton, UB7 0BT.

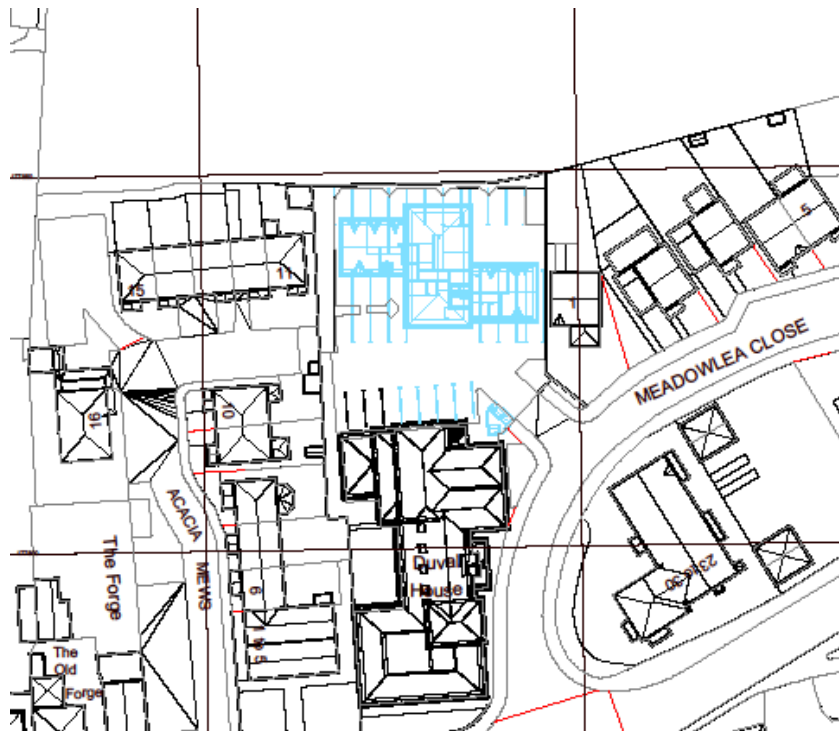
2.2 Assessment

2.2.1 To ensure that this assessment has been appropriately considered, daylight and sunlight assessments have been undertaken in accordance with the Building Research Establishment Report 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' 2011 (the "BRE guide") and with the British Standard 8206 – 2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting', to which the BRE report refers.

2.2.2 The standards and tests applied within this assessment are briefly described in Appendix A.

2.2.3 The existing buildings adjacent to the site are shown on the Site Location Plan below.

Site Location Plan



2.2.4 The existing buildings adjacent to the site considered for this report are listed in the following table. Some of these buildings may not require a comprehensive assessment with the reasons for these findings given later in this report under section 3: Results and Consideration.



Adjacent Building Summary Table		
Name/Address of Building	Assumed Use of Building	Position in Relation to the Proposed Extension
1 and 2 Meadowlea Close	Residential	East
10, 11 and 12 Acacia Mews	Residential	West
Duval house	Residential	South

2.3 Limitations

- 2.3.1 Our assessment is based on the proposed extension drawings by GA&A Design.
- 2.3.2 Topographical survey information was not provided with relation to the existing buildings on site along with elevations of surrounding buildings. Where buildings were not surveyed, the locations and heights were derived from the aforementioned drawings, site photographs and oblique aerial photography.
- 2.3.3 We refer you to the drawings which accompany this report for a list of the third-party information relied upon which our 3D computer model and resultant analyses are based.
- 2.3.4 Evergreen trees, hedges and shrubs have been represented in our 3D model where appropriate, but deciduous trees have not.



3. BRE Criteria and Mitigating Factors

3.1 BRE Daylight Criteria

- 3.1.1 The BRE guide target value for the Vertical Sky Component Assessment (VSC) is 27%. However, where the values are lower than this in the existing situation, the BRE allows a reduction of 20%, *subject to mitigating factors*.
- 3.1.2 For Daylight Distribution, namely, sky visibility at table level, the BRE allows a reduction of 20%, *subject to mitigating factors*.
- 3.1.3 These criteria are, however, purely numerical guidelines. They can be misinterpreted as a hard and fast rule, which is of course an unsustainable argument at planning. A loss of greater than 20% implies that the loss may be noticeable by its occupants, but noticeable does not mean, significant or adverse, it just means that it needs to be considered in the broader context. Namely, is the development acceptable in respect of all of the surrounding circumstances? This leads us on to the mitigating factors.

3.2 Mitigating Factors

- 3.2.1 As with all development sites, it would be helpful at this stage to outline the mitigating factors.
- 3.2.2 Mitigating factors are to be considered in conjunction with the numerical data, particularly with regards to the specific surrounding circumstances, to arrive at a more balanced view.
- 3.2.3 By balanced, it is meant that the two often conflicting material considerations at planning, (to have amenity protected (neighbours) and to utilise adjacent land in a reasonable manner (developer), need to be considered fairly.
- 3.2.4 The BRE guidelines states at the beginning and throughout that it is “to be interpreted flexibly”; “not intended to constrain but help the designer”; and “not to be used as an instrument of planning policy”.
- 3.2.5 The simplest way of approaching all of the above is to keep in mind one basic question – “is it [the development] fair/balanced/acceptable in consideration of all the surrounding circumstances”.

Mitigating Factor #1

- 3.2.6 The main mitigating factor is, that where buildings located uncommonly close to the site boundary, they may be considered as “bad” neighbours, taking more than their fair share of light. Accordingly, a greater reduction in daylight or sunlight may be unavoidable and so the local authority may wish to apply different target values.

Mitigating Factor #2

- 3.2.7 Where sites are undeveloped or are infill sites, again a higher degree of obstruction may be unavoidable, leading to a higher frequency of non-compliance. So, for example, you have a gap in a line of terraced properties, or an existing street scape of 6-storey high buildings. Where a developer wishes to fill this gap, or indeed reinstate a previous building, it would certainly be acceptable in planning terms, irrespective of



the potential effect on surrounding buildings.

Mitigating Factor #3

- 3.2.8 The BRE guidelines also recognises that where buildings match the height and proportions of existing surrounding buildings a higher degree of obstruction may be unavoidable, leading to a higher frequency of non-compliance.

Mitigating Factor #4

- 3.2.9 Additionally, kitchens and bedrooms are generally given less weighting than that of a principal room such as a living room.



4. Results and Consideration

4.1 Daylight and Sunlight

Existing Baseline

- 4.1.1 The site is located to the north side of Meadowlea Close just behind Duval House, see accompanying drawing 1725/DSO/01. The site currently comprises a vacant car park area.

Proposed Development

- 4.1.2 The proposed development is a part 2-storey, 3-storey block of self-contained flats, with parking at ground floor level, see accompanying drawing 1725/DSO/01.
- 4.1.3 We have considered the surrounding residential buildings that are most likely to be affected by the proposed extension. Other properties are considered to be too far away to be affected or aligned at an oblique angle.

Duval House

- 4.1.4 Duval House, to the south of the site, is an office block but has received approval for conversion, so we are required to treat it as extant and having been built out.
- 4.1.5 Turing now to the assessment results: -
- 4.1.6 Regarding VSC, all windows assessed meet the BRE guidelines.
- 4.1.7 Regarding Daylight Distribution, all rooms assessed meet the BRE guidelines.

1 and 2 Meadowlea Close

- 4.1.8 These dwellings are situated immediately east of the site, see accompanying drawing 1725/DSO/01. They are typical 2-up 2-down family homes that face parallel to the site, with north facing gardens. The proposed development, whilst close by, would not materially impact upon these dwelling primarily because it does not project much beyond the front and rear elevations of #1 and so any potential view of it would be at a very oblique angle. Furthermore, the windows to the front, being relatively unobstructed, would face across Meadowlea Close and beyond, and to the rear, the windows would face over Meadows.
- 4.1.9 The accompanying VSC results show that the windows would remain over the higher threshold of 27% with the development in place. The above reasons are why daylight distribution assessments were not necessary, mainly because they face parallel to the proposed development, but also because it is patently obvious that there would be no impact to the internal habitable areas of these dwellings.
- 4.1.10 The same may be said for sunlight.
- 4.1.11 For overshadowing, we thought it would be useful to check the rear gardens due to their relative



juxtaposition to the site. Our results show that all amenity areas (A3 and A4) on the accompanying drawing would remain more than 50% in sunlight for at least 2 hours on 21 March, the spring equinox.

10, 11 and 12 Acacia Mews

- 4.1.12 These dwellings are situated immediately to the west of the site.
- 4.1.13 These dwellings would remain largely unaffected by the proposed development, principally for the exact same reasons as given above, save for #10 that faces between the proposed development and the rear of Duval House. Again, the VSC results show that the dwellings will still enjoy more than the higher threshold of 27% with the development in place.
- 4.1.14 For the same reasons as above, we undertook some overshadowing assessments to the rear gardens of #11 and #12. We found that these rear gardens would receive very little sunlight, if at all, on 21 March in the *existing* situation, however, the proposed development will not take any more sunlight away i.e. it would not create any additional overshadowing.

Rules of Thumb vs Detailed Assessments

- 4.1.15 We thought it would be useful to comment on and apply the 45 degree rule here.
- 4.1.16 The BRE guidelines is principally for designers and rules of thumb (25 degree approach and 45 degree approach) allows them to make quick and informed decisions about their designs.
- 4.1.17 As daylighting consultants, we normally deal with proposed developments where they may be 10s or 100s of potentially affected windows. So, rather than looking at whether each and every window meets the rules of thumb approach, we go straight to the detailed assessments; it is far more practicable and is what is expected by Local Authorities.
- 4.1.18 Of course, not every site/adjacent building requires detailed assessments, or indeed any assessments, such as buildings that are too far away to be affected or those that face the proposed development at an oblique angle, but generally speaking the closer a building is, the more consideration it should be given. It is essentially a common sense approach.

45 Degree Approach

- 4.1.19 This rule of thumb, as outlined in the BRE guidelines at pages 8 to 9 is intended to prevent or limit a “tunnel effect” to an adjacent property, which may arise from a proposed rear extension. It is a quick and crude method to determine whether a proposed rear extension *may* affect the daylight (and possibly the sunlight) amenity to the rear elevation of an adjacent property.
- 4.1.20 At paragraphs 2.2.15 to 2.2.17 of the BRE guidelines, with regard to the application of the 45 degree approach, it outlines that it needs to be undertaken *both* in elevation and plan; namely, in 3D. It also states that it needs to be interpreted flexibly. Not the 45 degree approach calculation part, as that is set, but making decisions regarding the potential effect of it *in isolation*. That is why it later suggests using a VSC calculation to quantify any potential loss of light i.e. more detailed assessments, which is what we outlined earlier.



- 4.1.21 Its correct application is from the lowest habitable window and then strike a line 45 degrees (in plan and in elevation) to see whether a proposed development would intersect it.
- 4.1.22 We categorically state that the proposed development would not intersect the 45 degree line (in pan and elevation) when drawn from any of the surrounding residential buildings.

5. Conclusion

5.1 Daylight and Sunlight

- 5.1.1 Regarding the surrounding buildings, the proposed development comfortably meets all of the BRE criteria for daylight and sunlight.
- 5.1.2 There are no reasonable grounds to challenge the proposed development with regards to daylight and sunlight amenity.

5.2 Generally

- 5.2.1 When considering the numerical results, it is important to approach and interpret the BRE guidelines flexibly along with the following material mitigating factors:

*The BRE guidelines recognises that buildings located uncommonly close to the site boundary, as is the case here, may be considered as “bad” neighbours, taking more than their fair share of light. Accordingly, a greater reduction in daylight or sunlight may be unavoidable and so the local authority may wish to apply different target values.

*Kitchens and bedrooms are given less weighting than that of a living room.

*It is reasonable to expect future occupiers of proposed developments to utilise the natural light and arrange their rooms accordingly.

Appendix A

BRE Assessments

BRE Assessments

Introduction

The Building Research Establishment Report “Site Layout Planning for Daylight and Sunlight – a guide to good practice 1991” (“the BRE Guidelines”) provides advice to building designers on site layout planning in order to achieve good daylight and sunlight amenity, not only to the proposed development and the open spaces between the proposed blocks, but also to the existing surrounding properties.

As part of this advice, the Building Research Establishment (BRE) have developed a series of assessments along with numerical guidelines so that the potential for good daylight and sunlight amenity can be achieved.

In general, the application of the BRE Guidelines are more appropriate for low density suburban development sites where there is a greater flexibility for site layout planning. In dense urban areas, however, development sites are usually constrained to a greater degree, often by immediately adjacent buildings etc. Accordingly, when dealing with dense urban areas the guidelines should be applied flexibly. This point is expressly recognised by the BRE Guidelines, which states in the introduction at page 1:

‘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 designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design... .. In special circumstances the developer or Planning Authority may wish to use different target values. For example, in a historic city centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.....’

Daylight

The criteria for assessing daylight to existing surrounding buildings are outlined at pages 4 to 8 of the BRE Guidelines. Generally, daylight assessments should be undertaken to habitable rooms within dwellings and to principal rooms in non-domestic buildings such as schools, hospitals and offices where the occupants have a reasonable expectation of daylight.

Whilst the BRE Guidelines contain a number of rules of thumb that inform site layout design some relate to specific situations, such as domestic developments to the rear of a property, which although useful may not be considered appropriate for general site layout design.

The principal assessments used to assess daylight to existing surrounding buildings are outlined in more detail below along with a further daylight assessment, usually applied to proposed dwellings, which is admissible provided it is agreed with the local authority, or there are past precedents.

25° section line assessment

The first assessment is known as the [modified] 25° section line test. It is a simple rule of thumb that determines whether an existing building should still receive adequate daylight with the proposed development in place.

The BRE guide states at page 11:

“If any part of a new building or development, 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 this 25° assessment is generally dispensed with and the more detailed assessments outlined below are entered into at the outset.

The Vertical Sky Component (“VSC”) Assessment

The Vertical Sky Component (“VSC”) assessment represents the amount of available daylight received directly from the sky at a particular window. The reference point for this assessment is the centre of the window, on the plane of the outer window wall.

A VSC is expressed as a percentage, being a ratio of that part of illuminance on a vertical plane (a window) that is received from a Standard Overcast Sky (CIE Sky), to the illuminance received on a horizontal plane on an unobstructed hemisphere of Standard Overcast Sky. To put it another way it is simply the amount of direct sky visibility a window receives, howsoever obstructed, expressed as a percentage of the amount of direct sky a horizontal unobstructed roof-light would receive.

The maximum percentage of direct skylight a vertical window can receive from a Standard Overcast Sky is 39.62%, or 40% when rounded. The BRE have determined that where a VSC value of 27% is achieved, then enough skylight (direct daylight) should reach the window of an existing building. This value is roughly equivalent to a uniform obstruction of 25°, with reference to the above assessment. The Guidelines go on to state:

“If the vertical sky component, with the new development in place, is both less than 27% and less than 0.8 times its former value, (a 20% reduction), then the occupants of the existing building will notice the difference.”

Consequently, the daylight to an existing building, as a result of a proposed development, may be reduced by 20% before that loss becomes noticeable.

The Daylight Distribution (“DD”) Assessment

The Daylight Distribution Assessment is undertaken at working plane level from within a subject room and represents the change in skyline when viewed through a subject window. The working plane level is set at 0.85m above floor level in dwellings and 0.70m in offices, however, in practice this distinction in height is not normally made, and so the working plane is generally set at 0.85m.

If significant areas beyond the no-sky line i.e. the point beyond the line where no sky can be seen at working plane level, the room will usually appear gloomy and supplementary electric lighting will be required. The BRE Guidance states:

“If, following construction of a new development, the no-sky line moves so that the area of the existing

room which does not receive direct skylight is reduced to less than 0.8 times its former value, (a 20% reduction), then this will be noticeable to the occupants, and more of the room will be poorly lit.”

Consequently, the daylight to an existing building, as a result of a proposed development, may be reduced by 20% before that loss becomes noticeable.

The VSC and DD are the 2 principal assessments that are required to be undertaken in order to assess daylight to existing surrounding buildings.

The Average Daylight Factor (“ADF”) Assessment

A further daylight assessment, which may be undertaken, provided it is accepted by the local authority, is known as the Average Daylight Factor (ADF). Strictly speaking ADF assessments are used to determine the daylight availability to units within a proposed development, however, in more recent times the ADF assessment has been accepted by local authorities as a valid assessment for existing surrounding buildings.

An ADF assessment takes into account the amount of direct sky visibility incident on a window serving a subject room, the transmittance of the light through the glass, and the reflectance of that resultant light from the entire surface area of the room, which is then expressed as a percentage.

The ADF values recommended in the British Standard BS8206 Part 2 to which the BRE refers are: 2% for kitchens or open plan living areas (LKD), 1.5% for living rooms and 1% for bedrooms, if supplementary electric lighting is provided.

Nb. The guidelines outlined in the latest edition of BS8206 Part 2: 2008 are now applied.

Sunlight

Sunlight is valued in both residential and commercial buildings. It is seen as providing warmth and cheerfulness to a room, whilst also giving the occupants a therapeutic effect and a sense of wellbeing.

In residential properties the main requirement for sunlight is in the living room or conservatories, which should be assessed if they have a main window facing within 90° of due south. Sunlight is considered less important in kitchens and bedroom, although care should be taken not to block out too much.

In commercial or non-domestic buildings, the requirement for sunlight varies according to the use of the building. The BRE recommends that for a commercial building any space that has a particular or special requirement for sunlight should be assessed.

Annual Probable Sunlight Hours (APSH) Assessment

The APSH assessment is undertaken to the main window of residential and commercial buildings, where the window faces within 90° of due south. “Probable Sunlight Hours” may be defined as the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness.

At page 17 of the BRE guidelines the criteria for the APSH assessment are as follows: -

'If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely effected. This will be the case if a point at the centre of the window, in the plane of the inner window wall, received in the year less than one quarter (25%) of annual probable sunlight hours including at least 5% of annual probable sunlight hours between 21 September and 21 March, and less than 0.8 times its former sunlight hours during either period and has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.'

Consequently, the sunlight to a living room within an existing building, as a result of a proposed development, may be reduced by 20% in either the annual or winter periods *and* has a reduction of more than 4% of APSH before that loss becomes noticeable. Accordingly, if a room is reduced by 4% APSH or less, it is considered to meet the BRE criteria.

Overshadowing

The BRE guidance also offers advice on how to preserve sunlight to both existing and proposed open amenity spaces. Areas such as main back gardens of dwellings, parks, playing fields, playgrounds, waterways and public spaces such should be assessed. Small front gardens to dwellings and parking areas need not be assessed.

The permanent overshadowing assessment

The permanent overshadowing assessment is undertaken on 21 March, the spring equinox. This assessment shows areas of a subject amenity area where no sunlight will be available during the winter period, however, the subject area may still receive some sunlight during the summer.

The BRE states at page 20:

“for it to appear adequately sunlight throughout the year, at least half of a garden or amenity area should receive at least 2 hours of sunlight on 21 March. If, as a result of new development, an existing garden or amenity area does not meet these guidelines, and the area which can receive 2 hours of sun on 21 March is less than 0.8 times its former value (a 20% reduction), then the loss of sunlight is likely to be noticeable”.

Consequently, if an open amenity area, is more than 50% in shade for more than 2 hours in either existing or proposed situations and is reduced by more than 20% of its existing value as a result of new development, then that loss is likely to be noticeable.

The transient overshadowing assessment

A further overshadowing assessment, sometimes requested by the local authority for larger developments, is the temporary, or transient overshadowing assessment. This assessment usually comprises hourly overshadowing images of the existing and proposed situations undertaken on key dates during the year such as 21 March, the spring equinox; 21 June, the summer solstice; and 21 December, the winter solstice.

The BRE guidance offers no express numerical values for this type of assessment, consequently it is purely subjective.

Proposed Accommodation

For the proposed accommodation assessments, the ADF, DD and Room Depth Assessments (RD) are used, with ADF being the principal assessment.

Regarding the room depth assessment, provided that the depth of the subject room meets the criterion below it meets the BRE guidelines, however, this calculation does not take into reference any exterior obstructions.

$$L/W + L/H < 2/1-R$$

Where:-

L = Depth of subject room

W = Width of subject room

H = Head of window above floor level

R = Average reflectance value of room

Appendix B

Context Drawings

Appendix C

Daylight Results / Sunlight Results



Vertical Sky Component (VSC) Assessment/ Sunlight (APSH) Assessment

Floor Ref.	Room Ref.	Room Use.	Window Ref.	Scenario	VSC	Difference	Condtn
1 Meadowlea							
Ground	NoRoomAttached		W1	Existing	28.37	1.00	YES
				Proposed	28.35		
First	NoRoomAttached		W1	Existing	35.02	1.00	YES
				Proposed	35.00		
			W2	Existing	35.05	1.00	YES
				Proposed	35.04		
11 Acacia Mews							
Ground	NoRoomAttached		W1	Existing	25.55	0.99	YES
				Proposed	25.19		
First	NoRoomAttached		W2	Existing	28.80	0.97	YES
				Proposed	27.83		
			W1	Existing	33.34	0.96	YES
				Proposed	32.02		
			W2	Existing	34.99	0.96	YES
				Proposed	33.45		
10 Acacia Mews							
Ground	NoRoomAttached		W1	Existing	28.00	1.00	YES
				Proposed	28.00		
First	NoRoomAttached		W1	Existing	35.59	0.99	YES
				Proposed	35.37		
			W2	Existing	35.45	0.99	YES
				Proposed	35.09		
Duval House							
Ground	R1	Bedroom	W1	Existing	34.05	1.00	YES
				Proposed	33.88		
			W2	Existing	30.38	0.84	YES
				Proposed	25.43		
	R2	LKD	W3	Existing	36.54	0.81	YES
				Proposed	29.73		



Vertical Sky Component (VSC) Assessment/ Sunlight (APSH) Assessment

Floor Ref.	Room Ref.	Room Use.	Window Ref.	Scenario	VSC	Difference	Condtn
1 Meadowlea							
Ground	NoRoomAttached		W1	Existing	28.37	1.00	YES
			W4	Existing	36.50	0.83	YES
				Proposed	30.14		
	R3	LKD	W5	Existing	36.38	0.84	YES
				Proposed	30.59		
			W6	Existing	35.58	0.86	YES
				Proposed	30.76		
	R4	LKD	W7	Existing	31.93	0.88	YES
				Proposed	28.23		
			W8	Existing	19.33	1.00	YES
				Proposed	19.33		
First	R1	Bedroom	W1	Existing	37.38	1.00	YES
				Proposed	37.32		
			W2	Existing	31.48	0.94	YES
				Proposed	29.46		
	R2	LKD	W3	Existing	38.22	0.92	YES
				Proposed	35.24		
			W4	Existing	38.25	0.93	YES
				Proposed	35.47		
	R3	LKD	W5	Existing	38.22	0.93	YES
				Proposed	35.72		
			W6	Existing	34.77	0.94	YES
				Proposed	32.76		



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Vertical Sky Component (VSC) Assessment/ Sunlight (APSH) Assessment

Floor Ref.	Room Ref.	Room Use.	Window Ref.	Scenario	VSC	Difference	Condtn
1 Meadowlea							
Ground	NoRoomAttached		W1	Existing	28.37	1.00	YES
Second	R1	LKD	W1	Existing	35.95	1.00	YES
				Proposed	35.95		
			W2	Existing	34.49	1.00	YES
				Proposed	34.35		
	R2	LKD	W3	Existing	36.00	1.00	YES
				Proposed	35.85		
	R3	Bedroom	W4	Existing	35.99	1.00	YES
				Proposed	35.84		
			W5	Existing	36.00	1.00	YES
				Proposed	35.83		



Daylight Distribution (DD) Assessment

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Proposed	Meets BRE Criteria
Duval House								
Ground	R1	Bedroom	Area m2	9.64	9.51	9.51		
			% of room		99%	99%	100.00%	YES
	R2	LKD	Area m2	22.24	19.56	19.32		
			% of room		88%	87%	99.00%	YES
	R3	LKD	Area m2	24.88	24.58	24.58		
			% of room		99%	99%	100.00%	YES
	R4	LKD	Area m2	23.24	22.23	22.23		
			% of room		96%	96%	100.00%	YES
First	R1	Bedroom	Area m2	9.64	9.51	9.51		
			% of room		99%	99%	100.00%	YES
	R2	LKD	Area m2	22.24	19.81	19.81		
			% of room		89%	89%	100.00%	YES
Second	R3	LKD	Area m2	20.28	20.03	20.03		
			% of room		99%	99%	100.00%	YES
	R1	LKD	Area m2	22.37	22.25	22.25		
			% of room		99%	99%	100.00%	YES
	R2	LKD	Area m2	23.55	18.38	18.38		
			% of room		78%	78%	100.00%	YES
	R3	Bedroom	Area m2	10.32	10.10	10.10		
			% of room		98%	98%	100.00%	YES