



**SUPPLEMENTARY
DAYLIGHT &
SUNLIGHT
REPORT No.2**

relating to the

**PROPOSED
DEVELOPMENT**

at

**19-37 HIGHGATE ROAD
LONDON NW5**

STATUS: Final

**FEBRUARY 2023
Ref: 2096/H rev-**

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1.0 EXECUTIVE SUMMARY STATEMENT

- 1.1 This Daylight & Sunlight Supplementary Report No. 2 provides an update to the contents of the previous Schroeders Begg Daylight & Sunlight Supplementary Report (dated July 2022 ref. 2096/H rev -), in view of the relatively minor changes within the latest scheme proposal.
- 1.2 Given such changes to fenestration, room layouts and the like, the focus of this report relates to an update on the provision daylight and sunlight within the proposal for the future occupants. As per the previous review, this has been undertaken in reference to the revised 'Site Layout Planning for Daylight and Sunlight – a guide to good practice ('BRE Guide') 3rd edition, 2022.
- 1.3 The results of our analysis presented within this report confirm that for the habitable rooms reviewed within the proposal (scheme amendments applicable), these all meet the new minimal targets for daylight (BRE Guide target criteria in terms of daylight SDA for the respective proposed room uses) and that sunlight exposure to dwellings within this multi-unit development proposal, is considered reasonable and suitable given the site context and orientation.
- 1.4 Thus, we conclude that suitable daylight and sunlight is continued to be provisioned for within this latest proposal.
- 1.5 As a background note, in consideration of this latest proposal to daylight and sunlight to neighbouring properties, we confirm that given such limited changes to the overall massing volume / arrangement in comparison with the previous scheme reported upon within the Schroeders Begg Daylight and Sunlight Report dated March 2022 (ref. 2096/H rev04), there would be negligible change to that already reported upon and therefore, it is not meaningful to provide updated neighbouring analysis in this respect.

2.0 SELF-TEST REVIEW

Introduction

- 2.1 We have undertaken an update to the self-test review of the provision of daylight and sunlight within the proposal for the latest scheme amendments (given such changes to fenestration, room layouts and the like), in reference to the new BRE Guide 3rd edition (2022).
- 2.2 The results of the review are presented as follows;

Daylight Provision within the proposal

- 2.3 The new BRE Guide 3rd edition (2022) sets completely new methodology for the self-test review of daylight within the proposal, the main section applicable within the BRE Guide being '*Appendix C: Interior daylight recommendations*'. We summarise the criteria and analysis output as follows;
- 2.4 The new methodology can follow either the 'Illuminance method' which involves using climatic data for the location of the site to calculate the illuminance from daylight (within the room on the assessment grid / working plane at hourly intervals for a typical year) OR the 'Daylight Factor method' which utilises a CIE standard overcast sky and expresses the ratio as a percentage of a point on the working plane within the room, divided by the illuminance on an unobstructed horizontal surface outdoors.
- 2.5 The BRE Guide highlights the specific recommendations for daylight provision in UK dwellings derived from a UK National Annex which gives specific minimum illuminance recommendations for habitable rooms in dwellings in the United Kingdom. The minimum recommendations are stated in para. C16 of the BRE Guide as;

'C16: The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK.'

- 2.6 We have followed the aforementioned target criteria although in instances of any applicable fully open-plan arrangements for 'kitchen/living/dining rooms', we have taken the target lux for the predominant room use which being primarily 'living / dining room', we have allowed a target of 150 lux (which differs to the default methodology within the BRE Guide but is recognised within the BRE Guide that this is a reasonable approach if the kitchens are not treated as habitable spaces / an area within their own right, as it may avoid small separate kitchens in a design).
- 2.7 In terms of daylight analysis, we confirm below the inputting data utilised as;
Glass transmission: 0.68 for clear double-glazing with a low emissivity coating.
Net area of glazing: we have utilised the surround opening less framework – framework allowance of 15%.
Room surface reflectance: 0.8 ceilings (white), 0.7 walls (white), 0.4 floor (light floor)
External surface reflectance: 0.2 surrounding buildings / massing, 0.2 ground
- 2.8 For the assessment grid, this has been taken over the whole of the room, subject as per the methodology to the omission of any corridor or annexed entrance to a room or similar and also as per the BRE Guide, less 300mm to the perimeter of the room.
- 2.9 We have utilised the 'Illuminance method' for review and the output of analysis is presented within **Table 1 – Self-test – Daylight SDA** (Spatial Daylight Autonomy) and visually presented within plot No. **1003**, all within **Appendix 1**.
- 2.10 From **Table 1**, the analysis results of all habitable rooms at ground, 1st and 2nd floor (lowest 3 No. floors), confirms that all 57 No. habitable rooms, readily meet the illuminance target for daylighting thus representing an improvement of the position reported upon within the March 2022 report. Therefore, it can be considered suitable daylighting is provided to these proposed habitable rooms (review to floors above those analysed are fully anticipated to also meet target daylighting and it is not considered necessary to analysis such rooms given the results confirmed for the lowest 3 No. floors).

Proposal Self-test – Sunlight

- 2.11 We have followed the methodology within the new BRE Guide 3rd edition (2022) with the main section applicable within the BRE Guide being section ‘3. Sunlighting – 3.1 New Development.’
- 2.12 The former review of Annual Probable Sunlight Hours (APSH) and winter hours is no longer applicable for self-test review and the new methodology recommendations are primarily stated in para. 3.1.10 of the BRE Guide as;
- ‘3.1.10: For interiors, access to sunlight can be quantified. BS EN 17037 recommends that a space should receive a minimum of 1.5 hours of direct sunlight on a selected date between 1 February and 21 March with cloudless conditions. It is suggested that 21 March (equinox) be used. The medium level of recommendation is three hours and the high level of recommendation four hours. For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion...’*
- 2.13 However, for multi-unit developments, the following reference within the BRE Guide is also relevant;
- ‘3.1.16: Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings with a main living room that meets the above recommendations’*
- (Background note on 3.1.16 – the ‘above recommendation’ being in reference to ...‘For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion’. The target is to ‘maximise’ the number of dwellings achieving the target within a multi-unit development but for such a development, it is recognised that not every dwelling is ordinarily able to achieve the sunlight target).*
- 2.14 In terms of inputting data, we have selected the 21st March (equinox) review date as suggested by the BRE Guide.
- 2.15 The output of analysis is presented within **Table 2 – Self-test – Sunlight Exposure** within **Appendix 2**.
- 2.16 From **Table 2**, the analysis results of all habitable rooms at ground, 1st and 2nd floor (lowest 3 No. floors), confirms that 91% (21 No. out of 23 No. dwellings at ground, 1st & 2nd floor), would have at least one habitable room with the ability to receive 1.5 hours or more of sunlight at 21st March, thus meeting the new BRE Guide target (and to highlight, the majority of instances, are as preferred to living rooms).

- 2.17 In respect of the 2 No. isolated dwellings not meeting target, given that each would have a bedroom that has the ability to receive 1.3 hours of sunlight at 21st March (equinox), we consider this still reasonable close to the new target of 1.5 hours.
- 2.18 We conclude that for sunlight provision, this represents a good level of achieving target especially given the site orientation, the front elevation which faces onto Highgate Road is north-east facing thus some inherent restriction to sunlight and so the fact that the scheme is still achieving good provision in respect of the new BRE Guide target is even more encouraging in this multi-unit development.

APPENDICES

1. SELF-TEST REVIEW OF DAYLIGHT

Table 1 – Self-test – Daylight SDA (Spatial Daylight Autonomy)
Drawing No. 1003 – Visual plot for Daylight SDA

2. SELF-TEST REVIEW OF SUNLIGHT

Table 2 – Self-test – Sunlight Exposure

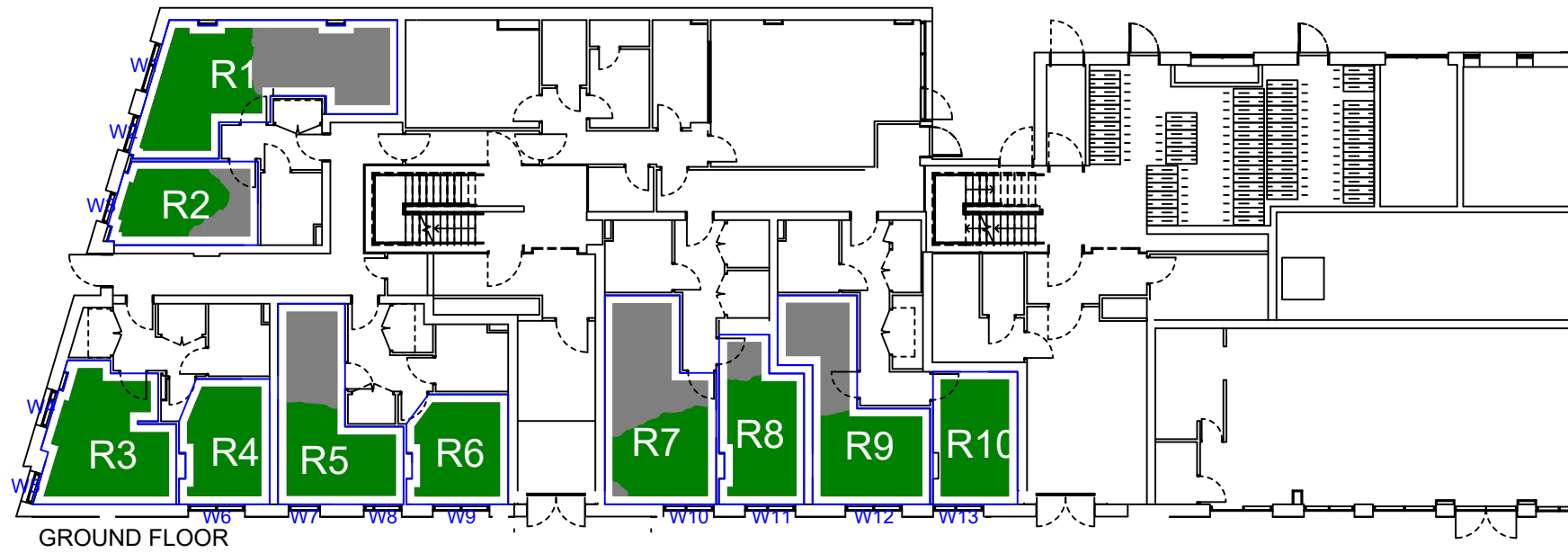
Appendix 1 - Self-test review of Daylight

Table 1 – Self-test – Daylight SDA (Spatial Daylight Autonomy)

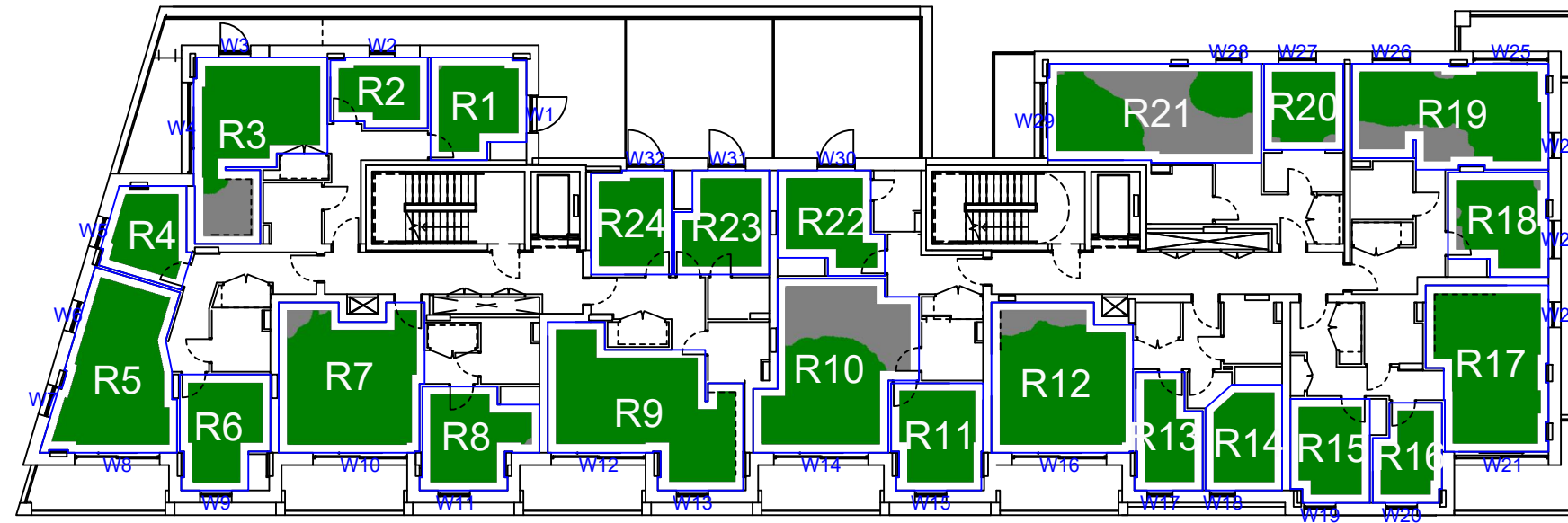
Drawing No. 1003 – Visual plot for Daylight SDA

Table 1 - Self-test - Daylight SDA

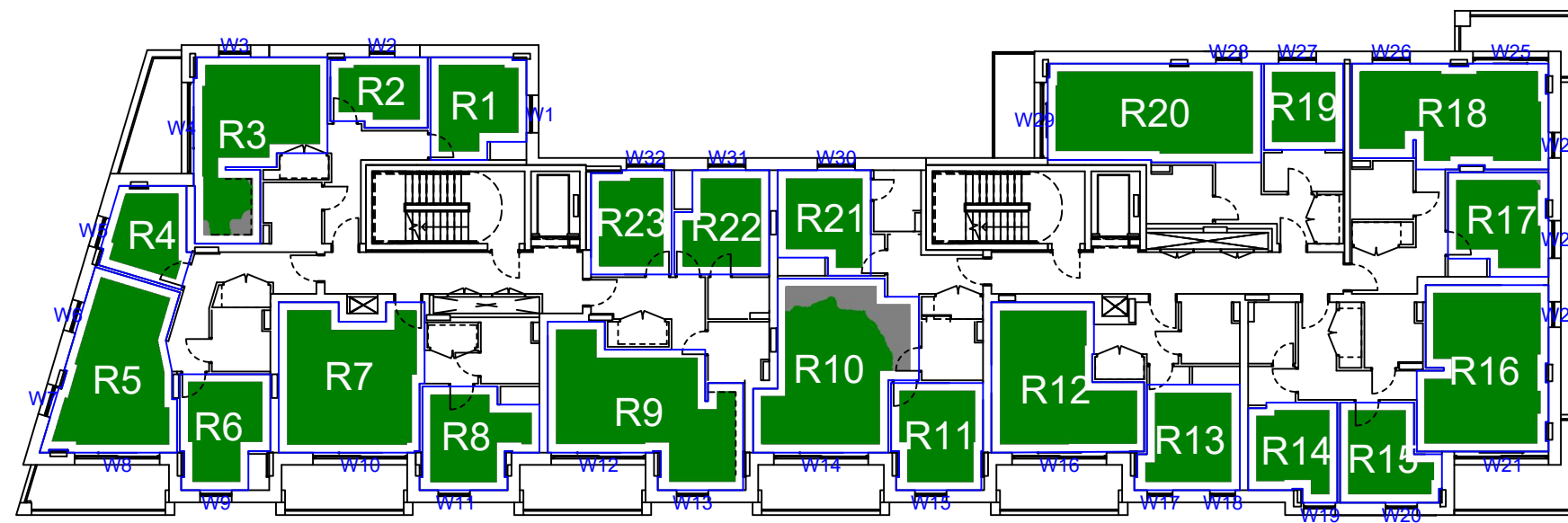
Floor Ref	Room Ref	Flat Ref:	Room Use	Room Area m2	Effective Area	Area Meeting Req Lux	% of Area Meeting Req Lux	Meets Criteria
Ground	R1	00.0.01	Living Room	33.05	24.40	12.38	51%	YES
	R2	00.0.01	Bedroom	15.22	10.68	7.59	71%	YES
	R3	00.0.02	Living Room	21.11	15.01	15.01	100%	YES
	R4	00.0.02	Bedroom	13.94	9.65	9.65	100%	YES
	R5	00.0.03	Living Room	23.15	16.49	10.46	63%	YES
	R6	00.0.03	Bedroom	13.79	9.61	9.61	100%	YES
	R7	00.0.04	Living Room	26.32	19.78	10.42	53%	YES
	R8	00.0.04	Bedroom	16.65	11.41	9.80	86%	YES
	R9	00.0.05	Living Room	24.16	16.74	10.45	62%	YES
	R10	00.0.05	Bedroom	14.45	10.13	10.13	100%	YES
First	R1	01.0.01	Bedroom	11.71	7.80	7.72	99%	YES
	R2	01.0.01	Bedroom	8.50	5.25	5.18	99%	YES
	R3	01.0.01	Living Room	24.29	17.00	13.84	81%	YES
	R4	01.0.02	Bedroom	9.48	6.09	6.09	100%	YES
	R5	01.0.02	Living Room	24.05	18.01	18.01	100%	YES
	R6	01.0.02	Bedroom	12.24	8.11	8.11	100%	YES
	R7	01.0.03	Living Room	26.58	20.14	19.42	96%	YES
	R8	01.0.03	Bedroom	13.06	8.54	8.45	99%	YES
	R9	01.0.04	Living Room	30.27	22.33	22.33	100%	YES
	R10	01.0.05	Living Room	30.03	23.07	13.98	61%	YES
	R11	01.0.05	Bedroom	12.25	8.28	8.28	100%	YES
	R12	01.0.06	Living Room	26.28	20.36	18.42	91%	YES
	R13	01.0.06	Bedroom	9.25	5.58	5.58	100%	YES
	R14	01.0.06	Bedroom	10.03	6.61	6.61	100%	YES
	R15	01.0.07	Bedroom	10.43	6.84	6.84	100%	YES
	R16	01.0.07	Bedroom	8.12	4.83	4.83	100%	YES
	R17	01.0.07	Living Room	24.17	18.20	18.20	100%	YES
	R18	01.0.08	Bedroom	12.49	8.38	7.87	94%	YES
	R19	01.0.08	Living Room	25.54	18.79	15.25	81%	YES
	R20	01.0.09	Bedroom	8.82	5.61	5.46	97%	YES
	R21	01.0.09	Living Room	26.81	20.44	10.45	51%	YES
	R22	01.0.05	Bedroom	12.25	8.03	8.03	100%	YES
	R23	01.0.04	Bedroom	11.76	7.84	7.84	100%	YES
	R24	01.0.04	Bedroom	10.69	7.07	7.07	100%	YES
Second	R1	02.0.01	Bedroom	11.71	7.80	7.80	100%	YES
	R2	02.0.01	Bedroom	8.50	5.25	5.25	100%	YES
	R3	02.0.01	Living Room	24.29	17.00	16.16	95%	YES
	R4	02.0.02	Bedroom	9.48	6.09	6.09	100%	YES
	R5	02.0.02	Living Room	24.05	18.01	18.01	100%	YES
	R6	02.0.02	Bedroom	12.24	8.11	8.11	100%	YES
	R7	02.0.03	Living Room	26.58	20.14	20.14	100%	YES
	R8	02.0.03	Bedroom	13.06	8.54	8.54	100%	YES
	R9	02.0.04	Living Room	30.27	22.33	22.33	100%	YES
	R10	02.0.05	Living Room	30.03	23.07	18.25	79%	YES
	R11	02.0.05	Bedroom	12.25	8.28	8.28	100%	YES
	R12	02.0.06	Living Room	24.23	18.04	18.04	100%	YES
	R13	02.0.06	Bedroom	13.11	8.95	8.95	100%	YES
	R14	02.0.07	Bedroom	10.47	6.73	6.73	100%	YES
	R15	02.0.07	Bedroom	11.22	7.23	7.23	100%	YES
	R16	02.0.07	Living Room	27.05	20.50	20.50	100%	YES
	R17	02.0.08	Bedroom	12.49	8.38	8.34	100%	YES
	R18	02.0.08	Living Room	25.54	18.79	18.79	100%	YES
	R19	02.0.09	Bedroom	8.82	5.61	5.61	100%	YES
	R20	02.0.09	Living Room	26.81	20.44	20.44	100%	YES
	R21	02.0.05	Bedroom	11.51	7.59	7.59	100%	YES
	R22	02.0.04	Bedroom	11.76	7.84	7.84	100%	YES
	R23	02.0.04	Bedroom	10.69	7.07	7.07	100%	YES



GROUND FLOOR



FIRST FLOOR

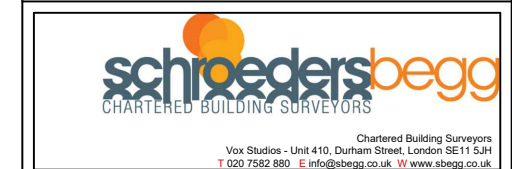


SECOND FLOOR

REV.	NOTES	DWN	DATE

Notes:

- ANALYSED ROOM AREA
- AREA MEETING TARGET
- AREA BELOW TARGET



DRAWN	-
CHECKED	-

SCALE
NTS (A3 Sheet)

19-37 Highgate Road

Self-test Daylight SDA

Job No	Rev	Drawing Number
2096H	-	1003
Date : 03.03.2023		



Appendix 2 - Self-test review of Sunlight

Table 2 – Self-test – Sunlight Exposure

Table 2 - Self-test Sunlight Exposure

Floor Ref	Room Ref	Room Attribute	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
Ground	R1	00.0.01	Living Room	W1	155°	1.6	High
				W2	155°	4.5	
Ground	R2	00.0.01	Bedroom	W3	155°	6.4	High
						6.4	
Ground	R3	00.0.02	Living Room	W4	155°	7.9	High
				W5	155°	6.2	
Ground	R4	00.0.02	Bedroom	W6	48°N	8.2	High
						2.5	
Ground	R5	00.0.03	Living Room	W7	48°N	2.5	Minimum
				W8	48°N	2.5	
Ground	R6	00.0.03	Bedroom	W9	48°N	2.5	Minimum
						2.5	
Ground	R7	00.0.04	Living Room	W10	48°N	2.5	Minimum
						2.5	
Ground	R8	00.0.04	Bedroom	W11	48°N	2.5	Minimum
						2.5	
Ground	R9	00.0.05	Living Room	W12	48°N	2.5	Minimum
						2.5	
Ground	R10	00.0.05	Bedroom	W13	48°N	2.5	Minimum
						2.5	
First	R1	01.0.01	Bedroom	W1	318°N	0.2	Below
						0.2	
First	R2	01.0.01	Bedroom	W2	228°	3.8	Medium
						3.8	
First	R3	01.0.01	Living Room	W3	228°	4.0	High
				W4	138°	2.4	
First	R4	01.0.02	Bedroom	W5	155°	6.2	High
						7.9	
First	R5	01.0.02	Living Room	W6	155°	8.0	High
				W7	155°	8.2	
First	R6	01.0.02	Bedroom	W8	48°N	0.3	High
						8.6	
First	R7	01.0.03	Living Room	W9	48°N	1.3	Below
						1.3	
First	R8	01.0.03	Bedroom	W10	48°N	0.0	Below
						0.0	
First	R9	01.0.03	Bedroom	W11	48°N	1.3	Below
						1.3	
First	R10	01.0.04	Living Room	W12	48°N	0.0	Below
				W13	48°N	1.3	
First	R23	01.0.04	Bedroom	W31	228°	1.3	Below
						4.0	
First	R24	01.0.04	Bedroom	W32	228°	4.0	Medium
						3.3	
First	R10	01.0.05	Living Room	W14	48°N	3.3	Medium
						0.0	
First	R11	01.0.05	Bedroom	W15	48°N	0.0	Below
						0.0	
First	R11	01.0.05	Bedroom	W15	48°N	1.3	Below
						1.3	
First	R22	01.0.05	Bedroom	W30	228°	4.6	High
						4.6	
First	R12	01.0.06	Living Room	W16	48°N	0.0	Below
						0.0	
First	R13	01.0.06	Bedroom	W17	48°N	1.0	Below
						1.0	
First	R14	01.0.06	Bedroom	W18	48°N	2.0	Minimum
						2.0	
First	R15	01.0.07	Bedroom	W19	48°N	2.5	Minimum
						2.5	
First	R16	01.0.07	Bedroom	W20	48°N	2.5	Minimum
						2.5	
First	R17	01.0.07	Living Room	W21	48°N	0.0	Below
				W22	318°N	1.4	
First	R18	01.0.08	Bedroom	W23	318°N	1.4	Below
						1.5	
First	R19	01.0.08	Living Room	W24	318°N	1.5	Minimum
				W25	228°	0.0	
First	R20	01.0.09	Bedroom	W26	228°	1.7	High
						4.1	
First	R21	01.0.09	Living Room	W27	228°	4.1	High
				W28	228°	4.1	
First	R21	01.0.09	Living Room	W29	138°	2.1	High
						4.6	

Table 2 - Self-test Sunlight Exposure

Floor Ref	Room Ref	Room Attribute	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating	
Second	R1	02.0.01	Bedroom	W1	318°N	2.0	Minimum	
						2.0		
Second	R2	02.0.01	Bedroom	W2	228°	7.1	High	
						7.1		
Second	R3	02.0.01	Living Room	W3	228°	7.1	High	
						W4		2.7
								9.4
Second	R4	02.0.02	Bedroom	W5	155°	8.2	High	
						8.2		
Second	R5	02.0.02	Living Room	W6	155°	8.3	High	
						W7		8.4
								W8
						8.7		
Second	R6	02.0.02	Bedroom	W9	48°N	1.3	Below	
						1.3		
Second	R7	02.0.03	Living Room	W10	48°N	0.0	Below	
						0.0		
Second	R8	02.0.03	Bedroom	W11	48°N	1.3	Below	
						1.3		
Second	R9	02.0.04	Living Room	W12	48°N	0.0	Below	
						W13		1.3
								1.3
Second	R22	02.0.04	Bedroom	W31	228°	5.3	High	
						5.3		
Second	R23	02.0.04	Bedroom	W32	228°	4.5	High	
						4.5		
Second	R10	02.0.05	Living Room	W14	48°N	0.0	Below	
						0.0		
Second	R11	02.0.05	Bedroom	W15	48°N	1.3	Below	
						1.3		
Second	R21	02.0.05	Bedroom	W30	228°	5.9	High	
						5.9		
Second	R12	02.0.06	Living Room	W16	48°N	0.0	Below	
						0.0		
Second	R13	02.0.06	Bedroom	W17	48°N	1.0	Minimum	
						W18		2.0
								2.0
Second	R14	02.0.07	Bedroom	W19	48°N	2.5	Minimum	
						2.5		
Second	R15	02.0.07	Bedroom	W20	48°N	2.5	Minimum	
						2.5		
Second	R16	02.0.07	Living Room	W21	48°N	0.0	Below	
						W22		1.4
								1.4
Second	R17	02.0.08	Bedroom	W23	318°N	1.5	Minimum	
						1.5		
Second	R18	02.0.08	Living Room	W24	318°N	0.0	High	
						W25		4.7
								W26
						7.1		
Second	R19	02.0.09	Bedroom	W27	228°	6.8	High	
						6.8		
Second	R20	02.0.09	Living Room	W28	228°	6.8	High	
						W29		2.8
								7.0