



DAYLIGHT & SUNLIGHT REVIEW

relating to the

**PROVISION OF DAYLIGHT
& SUNLIGHT WITHIN THE
PROPOSED CONVERSION
TO FORM 2 No.
DWELLINGS (SELF-TEST
ANALYSIS)**

at

**COMMERCIAL UNIT 1
ALTITUDE POINT
HAMPDEN ROAD
HORNSEY
LONDON
N8 0EH**

Prepared by: Schroeders Begg (UK) LLP
Vox Studios, Unit 411,
1-45 Durham Street, London SE11 5JH
T 020 7582 8800 • **E** info@sbegg.co.uk

**JULY 2023
Ref: 200/GD**

DAYLIGHT & SUNLIGHT SELF-TEST REVIEW

- 1.1 We have undertaken a review of the provision of daylight and sunlight within the proposed conversion of the existing vacant ground floor Commercial Unit 1, Altitude Point, Hampden Road, Hornsey, London N8 0EH to form 2 No. dwellings.
- 1.2 For this review, we have utilised the industry standard Building Research Establishment's (BRE) 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' (2022 /3rd ed) (The BRE Guide).
- 1.3 Given the proposals i.e. conversion of an existing vacant ground floor commercial unit, this input relates to consideration on whether suitable levels of daylight and sunlight are attained to the new residential habitable rooms within the proposal i.e. self-test review.

Daylight Provision – proposal self-test

- 1.4 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 examine the criteria and analysis output as follows;
- 1.5 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 assessment grid / working plane within the room, divided by the illuminance on an unobstructed horizontal surface outdoors.
- 1.6 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.'

- 1.7 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).
- 1.8 In terms of daylight analysis, we confirm the inputting data utilised as;
Glass transmission: 0.68 for clear double-glazing with a low emissivity coating, and also 0.68 for higher transmission obscure glazing.
Net area of glazing: we have utilised the surround opening less framework – framework allowance of 20%.
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.
- 1.9 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.
- 1.10 For surrounding context, we have incorporated the main buildings / structures visible from the proposed windows, predominantly the tower to the east (Magnus Heights) and the limited belt of evergreens on the opposite / south side of Hampden Road has also been taken as a solid obstruction.
- 1.11 We have worked to the scheme drawings (P301, P302 & P303 forming the application) prepared by Rahul Taheem Ltd for the provision of 2 No. dwellings at ground floor (Flat 1: a 1 bedroom flat & Flat 2: a studio dwelling).
- 1.12 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 **Drawings No.100**, all within **Appendix 1**.
- 1.13 From **Table 1**, having reviewed all proposed residential habitable rooms within the proposal, these would readily meet the illuminance target that we have considered for daylighting. Therefore, we can conclude suitable daylight would be provided to these habitable rooms.

Sunlight Provision – proposal self-test

- 1.14 We have followed the methodology within the new BRE Guide 3rd edition (2022) for sunlight review with the main section applicable within the BRE Guide being section ‘3. Sunlighting – 3.1 New Development.’
- 1.15 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...’*
- 1.16 In terms of inputting data, we have selected the 21st March (equinox) review date as suggested by the BRE Guide.
- 1.17 The output of analysis is presented within **Table 2 – Self-test Sunlight Exposure** within **Appendix 2**.
- 1.18 From **Table 2**, as for daylight we have analysed all applicable rooms for each dwelling and confirm that both proposed dwellings would have at least one habitable room with the ability to receive 1.5 hours or more of sunlight on 21st March. Indeed, for both of these proposed dwellings, this is achieved to the living room which is the preferred room for sunlight provision.
- 1.19 We conclude that suitable sunlight is provided for within this proposal / meeting BRE Guide target.

CONCLUSION

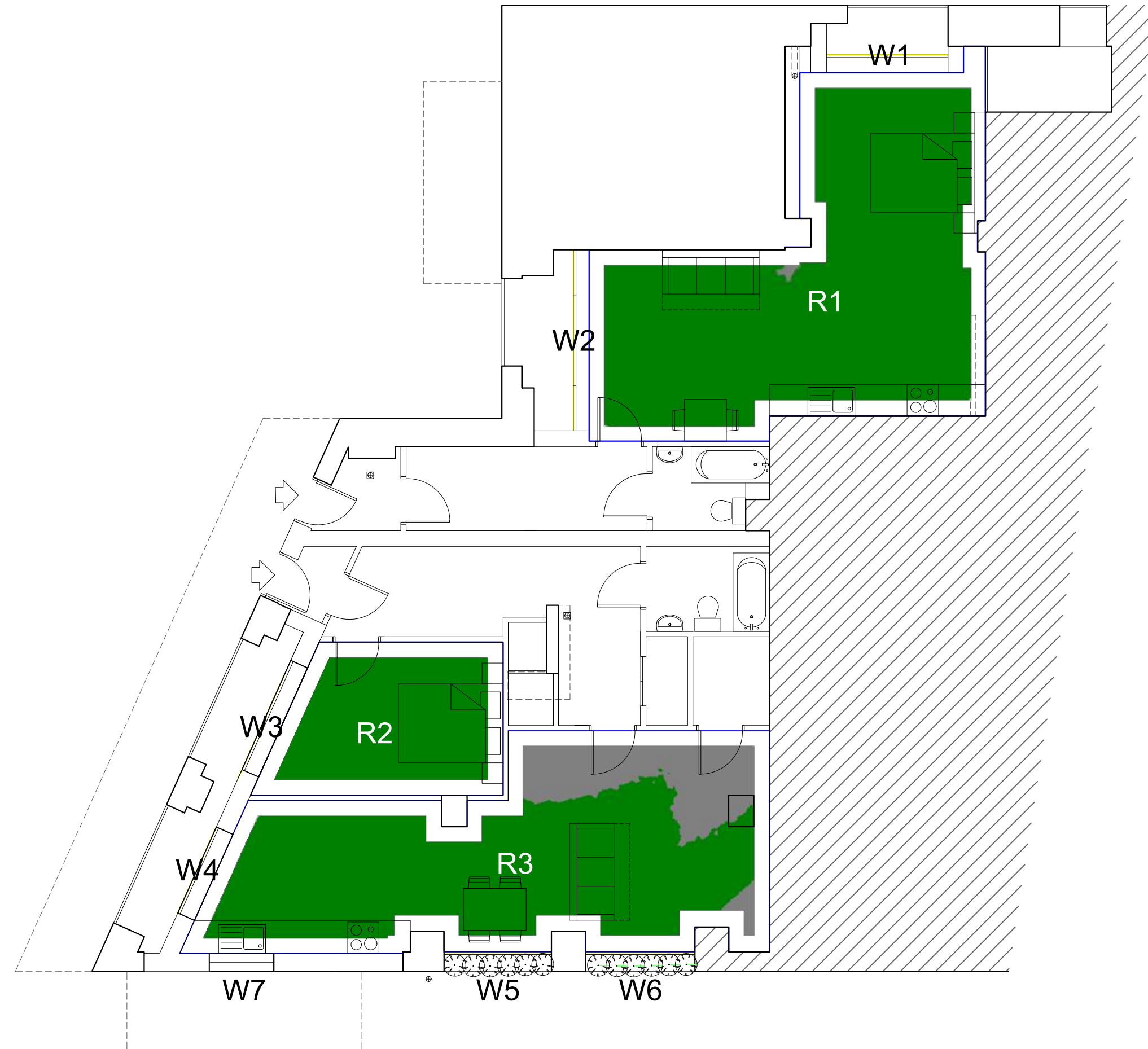
- 1.20 For the proposed conversion from commercial to residential, the habitable rooms within both dwellings, would achieve the daylighting target considered (self-test review). Equally, for sunlight to both proposed dwellings, these have a good provision of sunlight.
- 1.21 Thus, we conclude that daylight and sunlight target provision is met within both proposed dwellings and such provision should be considered as being acceptable.

APPENDIX 1: SELF-TEST REVIEW OF DAYLIGHT

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

Drawing No. 100 – Visual plot for Daylight SDA

Table 1 - Self-test - Daylight SDA Spatial Daylight Autonomy									
Floor Ref	Room Ref	Unit Ref	Room Use	Room Area m2	Effective Area	Target lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Meets Criteria
Ground	R1	Flat 2	Living Room	37.73	28.90	150	28.79	100%	YES
	R2	Flat 1	Bedroom	12.23	8.26	100	8.26	100%	YES
	R3	Flat 1	Living Room	36.41	26.73	150	21.67	81%	YES



GROUND FLOOR

REV.	NOTES	DWN	DATE

Notes:	
	AREA MEETING TARGET
	AREA BELOW TARGET



CHARTERED BUILDING SURVEYORS

Chartered Building Surveyors
Vox Studios - Unit 410, Durham Street, London SE11 5JH
T 020 7582 880 E info@sbegg.co.uk W www.sbegg.co.uk

DRAWN	-	
CHECKED	-	

SCALE	
NTS (A3 Sheet)	

Altitude Point, Hampden Rd, Hornsey

Proposed Room Reference Plan Daylight SDA		
--	--	--

Job No	Rev	Drawing Number
200/GD	-	205
Date : 28.07.2023		

APPENDIX 2: SELF-TEST REVIEW OF SUNLIGHT

Table 2 – Self-test – Sunlight Exposure

Table 2 - Self-test - Sunlight Exposure							
Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
Ground	R1	Flat 2	Living Room	W1	242°	3.5	
				W2	152°	2.2	
						5.8	High
Ground	R2	Flat 1	Bedroom	W3	176°	5.7	
						5.7	High
Ground	R3	Flat 1	Living Room	W4	176°	5.6	
				W5	62°N	0	
				W6	62°N	0	
				W7	62°N	0.4	
						6.0	High