

Daylight and Sunlight Analysis

44 Commercial Way, Woking

Summary

Illuminance Method (IM) / Spatial Daylight Autonomy (SDA)

All rooms achieve the guidance values as set out in the BRE guide.

It is worth noting that the main Living/Dining area is served by a horizontal roof-light. As such the BRE references (Appendix C6) the BSEN17037 which suggests a more stringent test. The current proposal meets these recommendations. The north facing bedrooms and Living Dining area have high median illuminance values however any potential solar gain should be mitigated by their north facing aspect. The only exception to this is the horizontal roof-light however this is essential for allowing light into the rear parts of the main living space.

Project Name: 44 Commercial Way Woking Project No.: 23-2258-01 Report Title: SDA BS En17037 Analysis - Proposed Scheme Date of Analysis: 13/11/2023													
Floor Ref	Room Ref	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Criteria				Meets Criteria
									Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	
44 Commercial Way													
First	R1	Residential	Bedroom	13.52	9.46	716	9.46	100%	100	50%	50%	4380	YES
	R2	Residential	Bedroom	11.62	7.64	379	7.64	100%	100	50%	50%	4380	YES
	R3	Residential	LD	24.53	18.11	661	18.11	100%	300	95%	50%	4380	YES
	R4	Residential	Bedroom	12.63	8.70	102	4.72	54%	100	50%	50%	4380	YES
	R5	Residential	Bedroom	12.36	8.18	118	4.55	56%	100	50%	50%	4380	YES

Project Name: 44 Commercial Way, Woking Project No.: 23-2258-01 Report Title: Sunlight Exposure Analysis - Proposed Scheme Date: 14/11/2023							
Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
44 Commercial Way							
First	R3	Residential	LD	W4	315°N	1.6	
				W5	90° Hz	9	
						9	High
First	R4	Residential	Bedroom	W6	135°	3.4	
				W7	135°	4.8	
						4.8	High
First	R5	Residential	Bedroom	W8	135°	3.6	
				W9	135°	2.4	
						4.1	High

Statement Extract from Approved application PLAN/2023/2019 Daylighting report and assessment:

The GPDO requires an assessment of natural light to habitable rooms. Habitable rooms are defined in the GPDO as meaning:-

"..any rooms used or intended to be used for sleeping or living which are not solely used for cooking purposes, but does not include bath or toilet facilities, service rooms, corridors, laundry rooms, hallways or utility rooms".

Therefore, for the purposes of this assessment it is not necessary to assess the separate cooking only kitchens.

Settings

Materials Reflectance Used:

Internal Ceiling = 0.7

Internal Walls = 0.7

Internal Floor = 0.3

External Building = 0.2

External Baseline= 0.2

Targets

Bedroom 100 Lux / 50% of area

LD (served by horizontal aperture) 300 Lux / 95% of area

Ref: BRE209 V3 Appendix C / BSEN17037 Table A2

Window Settings

Glazing Transmittance = 0.68

Ref: BRE Appendix C26

Maintenance Factor = 0.92%

Ref: BRE Appendix C27