30 WEST STREET HORSHAM SUSSEX RH12 1PB
ADEQUATE DAYLIGHT

INTRODUCTION

This Report has been commissioned to accompany the Prior Approval Application made under Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) - Schedule 2, Part 3, Class MA to demonstrate the scheme provides adequate natural light as required under MA.2.(f). The scheme proposals comprise the conversion of the existing building to provide 8nr self-contained units. The plans attached show the proposals including the fenestration considered for this application.

DEVELOPMENT SITE

PROFESSIONAL QUALIFICATIONS

I am a Chartered Building Surveyor working predominately in the field of rights of light including daylight and sunlight assessments. I have extensive and highly specialised knowledge, in these areas having worked in the past for both Anstey Horne & Co. for five years and Schatunowski Brooks (formerly known as Michael Brooks Associates as it was when I joined, then known as GVA Schatunowski Brooks and until recently part of Avison Young) for three years, as well as Delva Patman Associates - now known as Delva Patman Redler LLP - for four years prior to joining in Partnership Dixon Payne in 2001. All are acknowledged Experts in these fields; I now act under my own banner.

I regularly provide Expert Witness advice in respect of Planning Applications in respect of daylight and sunlight at Planning Inquiries acting for both Appellants and Planning Authorities. I was consulted by the *Building Research Establishment* prior to the revision of their guidelines in 2011 and was part of the further consultation following the publication of *BS EN 17037:2018* which resulted in the publication of BR209 2022.

PLANNING CONSIDERATIONS

MA.2.—(1) Development under Class MA is permitted subject to the following conditions.

(2) Before beginning development under Class MA, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(a) transport impacts of the development, particularly to ensure safe site access;

(b) contamination risks in relation to the building;

(c) flooding risks in relation to the building;

(d) impacts of noise from commercial premises on the intended occupiers of the development;

(e) where—

(i)the building is located in a conservation area, and

(ii)the development involves a change of use of the whole or part of the ground floor, the impact of that change of use on the character or sustainability of the conservation area;

(f) the provision of adequate natural light in all habitable rooms of the dwellinghouses;

(g) the impact on intended occupiers of the development of the introduction of residential use in an area the authority considers to be important for general or heavy industry, waste management, storage and distribution, or a mix of such uses;

(h) where the development involves the loss of services provided by—

(i)a registered nursery, or

(ii)a health centre maintained under section 2 or 3 of the National Health Service Act 2006, the impact on the local provision of the type of services lost; and

(i) where the development meets the fire risk condition, the fire safety impacts on the intended occupants of the building**]**

(3) An application for prior approval for development under Class MA may not be made before 1 August 2021.

(4) The provisions of paragraph W (prior approval) of this Part apply in relation to an application under this paragraph as if—

(a)for paragraph (e) of sub-paragraph (2) there were substituted—

"(e)where—

(i)sub-paragraph (6) requires the Environment Agency to be consulted, a site-specific flood risk assessment;

(ii)sub-paragraph (6A) requires the Health and Safety Executive to be consulted, a statement about the fire safety design principles, concepts and standards that have been applied to the development,";

(b)in the introductory words in sub-paragraph (5), for "and highways impacts of the development" there were substituted "impacts of the development, particularly to ensure safe site access";

(c)after sub-paragraph (6) there were inserted—

"(6A) Where the application relates to prior approval as to fire safety impacts, on receipt of the application, the local planning authority must consult the Health and Safety Executive.";

(d)in sub-paragraph (7) for "(5) and (6)" there were substituted "(5), (6) and (6A)";**]**

(5) Development must be completed within a period of 3 years starting with the prior approval date.

(6) Any building permitted to be used as a dwellinghouse by virtue of Class MA is to remain in use as a dwellinghouse within the meaning of Class C3 of Schedule 1 to the Use Classes Order and for no other purpose, except to the extent that the other purpose is ancillary to the use as a dwellinghouse.

ADEQUATE NATURAL DAYLIGHT

There is currently no universally accepted definition for adequate natural daylight. However, since the publication of the information paper titled "Site Layout planning for daylight and sunlight: A guide to good practice" by the Building Research Establishment in 1991, the assessment of daylight and sunlight has been generally carried out according to the criteria outlined in this publication (Appendix C). These criteria are widely recognized as the accepted basis for such assessments and are therefore adopted by most Planning Authorities. This publication was superseded by the Second Edition 2011.

Following the publication of BS EN 17037:2018, the Second Edition 2011 was further updated and BR209 (2022) was published and is now the current guidance with Appendix C still applied as the test for adequate daylight.

The BR209 *(2022)* does give numerical guidelines, but recommends that these should be interpreted flexibly. Paragraph *1.6* of the *BR209 (2022)* states in entirety *The guide is intended for building designers and their clients, consultants, and planning officials. The advice given here is not mandatory and the guide 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 since natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. Alternatively, where natural light is of special importance, less obstruction and hence more sunlight and daylight may be deemed necessary. The calculation methods in Appendices A and B are entirely flexible in this respect. Appendix F gives advice on how to develop a consistent set of target values for skylight under such circumstances.*

In respect of adequate daylight of the proposals, this has been considered using the illuminance method of analysis – SDA – as detailed in Appendix C of BR209 (2022). This method involves using climatic data for the location of the site (via the use of an appropriate, typical or average year, weather file within the software) to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year. This provides a better overview of the internal illuminance of a room because it considers differing weather/cloud cover throughout the year. The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room, for at least half of the daylight hours.

Specific recommendations for daylight provision in UK dwellings (Excerpt from Appendix C of BR209 (2022))

C15 A UK National Annex gives specific minimum recommendations for habitable rooms in dwellings in the United Kingdom. These are intended for ‘hard to light’ dwellings, for example in basements or with significant external obstructions or with tall trees outside, or for existing buildings being refurbished or converted into dwellings. The National Annex therefore provides the UK guidance on minimum daylight provision in all UK dwellings.

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 the 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.

C17 Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in

their rooms during the day. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design. The kitchen space would still need to be included in the assessment area (Figures C4 and C5). Alternatively, in rooms with a particular requirement for daylight, such as bed sitting rooms in homes for the elderly, higher values such as those in tables C1 and C2 may be taken.

The analysis has been undertaken with reflectance values of 0.80 for walls and ceilings and 0.40 for the floors.

BR209 (2022) states that the main requirement for sunlight is in living rooms, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens, where people prefer it in the morning rather than the afternoon.

The BR209 (2022) guide states that, in general, a dwelling will appear reasonably sunlit provided:
- at least one main window wall faces within 90 degrees of due south, and
- a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March.

The guide states that, 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.

RESULTS

Adequate Daylight Results

As stated above, Appendix C of BR209 (2022) recommends illuminance levels of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens.

Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Meets Criteria
Flat 1										
First	R1	LKD	19.94	14.92	220	8.70	58%	200	50%	YES
	R2	Bedroom	14.00	9.73	135	7.12	73%	100	50%	YES
Flat 2										
First	R1	LKD	29.28	22.68	234	14.07	62%	200	50%	YES
	R2	Bedroom	11.83	8.00	187	7.45	93%	100	50%	YES
Flat 3										
First	R1	LKD	30.86	23.78	515	23.78	100%	200	50%	YES
	R2	Bedroom	8.80	5.43	126	3.45	64%	100	50%	YES
	R3	Bedroom	12.00	8.15	179	7.68	94%	100	50%	YES
Flat 4										
First	R1	LKD	35.75	28.51	335	24.83	87%	200	50%	YES
	R2	Bedroom	8.81	5.44	114	2.87	53%	100	50%	YES
	R3	Bedroom	12.40	8.48	167	7.04	83%	100	50%	YES

Flat 5										
First	R1	Living Room	21.20	15.74	161	8.10	51%	150	50%	YES
	R2	Bedroom	11.00	7.30	139	5.31	73%	100	50%	YES
Flat 6										
First	R1	Living Room	21.35	15.83	176	9.04	57%	150	50%	YES
	R2	Bedroom	10.96	7.27	143	5.86	81%	100	50%	YES
Flat 7										
Second	R1	Living Room	19.96	14.94	189	9.69	65%	150	50%	YES
	R2	Bedroom	14.27	9.85	213	9.85	100%	100	50%	YES
Flat 8										
Second	R1	LKD	35.88	28.79	227	17.04	59%	200	50%	YES

All habitable rooms receive adequate daylight in excess of the guidance of BR209 (2022).

Sun Exposure

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
Flat 1						
First	R1	LKD	W2	206°	4.3	
					4.3	High
First	R2	Bedroom	W1	206°	5.2	
					5.2	High
Flat 2						
First	R1	LKD	W3	206°	3	
			W4	116°	2.3	
					5.3	High
First	R2	Bedroom	W5	116°	3.9	
					3.9	Medium
Flat 3						
First	R1	LKD	W3	180° Hz	5.1	
			W4	180° Hz	5.1	
			W2	26°N	0	
			W1	26°N	0	
					5.1	High
First	R2	Bedroom	W5	116°	0.9	
					0.9	
First	R3	Bedroom	W6	116°	3.3	
					3.3	Medium

Flat 4						
First	R1	LKD	W10	180° Hz	5.1	
			W9	180° Hz	5.1	
			W8	206°	5.1	
			W7	206°	4.6	
					6.2	High
First	R2	Bedroom	W11	116°	2.7	
					2.7	Minimum
First	R3	Bedroom	W12	116°	3.4	
					3.4	Medium
Flat 5						
First	R1	Living Room	W9	30°N	0	
					0	
First	R2	Bedroom	W8	30°N	0	
					0	
Flat 6						
First	R1	Living Room	W6	31°N	0	
					0	
First	R2	Bedroom	W7	31°N	0	
					0	
Flat 7						
Second	R1	LKD	W2	206°	6.6	
					6.6	High
Second	R2	Bedroom	W1	206°	6.1	
					6.1	High
Flat 8						
Second	R1	LKD	W3	206°	3.6	
			W13	116°	3.7	
					7.3	High

In summary, the analysis results indicate that 6nr Units having living rooms receive a high level of sun exposure. This accords with BR209 (2022) insofar as the scheme maximises the number of units meeting the guidance for sun exposure. The 2nr units, which do not achieve the guidance levels of sun exposure, face approximately due north.

CONCLUSION

To obtain Prior Approval under the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) - Schedule 2, Part 3, Class MA, MA.2.(f), it is necessary to ensure adequate natural light is provided in all habitable rooms. An analysis conducted in accordance with the guidance of BR209 (2022) shows that the proposals comply with this provision having regard to the analysis set down in BR209 (2022). In my Expert opinion, the provision for adequate natural light has been successfully achieved.

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