

3 Curzon Road, London N10 2RB

Daylight/Sunlight Report

21 November 2022

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For and on behalf of Daylight Sunlight Consulting Ltd

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1. Introduction

- 1.1 Daylight Sunlight Consulting Ltd has been instructed to provide daylight and sunlight advice with regard to the redevelopment of 3 Curzon Road, London N10 2RB. We have assessed the effects that the proposed development has on the adjacent sensitive receptors, as well as considering the light within the proposed development for future occupants.
- 1.2 We have been provided with the existing and proposed drawings from TGN Architects Ltd, drawing reference 2203 and attended site to properly understand the relationship between the development site and adjacent properties.
- 1.3 Where possible, we have reviewed the on-line planning portal to try and ascertain the internal configurations of the adjacent properties and room uses.

2. Executive Summary

- 2.1 The design has ensured the neighbouring properties will maintain acceptable levels of daylight and sunlight in the proposed condition.
- 2.2 The future occupants within the proposed scheme will obtain acceptable levels of daylight and sunlight, and in most cases obtain levels in excess of the BRE guidelines.

3. Principles for assessing daylight and sunlight

3.1 The main document for testing and evaluating daylight and sunlight effects is the Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: A guide to good practice (2022).

3.2 It is important to understand that the BRE document is only a guideline, and this is highlighted in the introduction: -

"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 developer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of the many factors in site layout design."

3.3 The guidelines go on to highlight that,

"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."

Daylight to existing buildings

3.4 The testing methodology and suggested target criteria for the assessment of daylight to existing buildings around a development site are set out in Part 2.2 of the BRE guidelines.

3.5 The evaluation of what constitutes a sensitive receptor is essentially where occupants have a reasonable expectation of light. We consider this to be residential uses, care homes, student accommodation, hostels, educational classrooms, worship areas and key rooms within a hospital. Uses such as hotels and most

commercial properties are not considered to be of importance for natural lighting. For residential properties, only habitable rooms need to be tested, with bathrooms, toilets, store rooms, circulation areas and garages not requiring assessment.

- 3.6 As the proposed works are relatively modest, a desktop review of the effects has been undertaken, with more detailed commentary in the next chapter of this report.

Daylight to new developments

- 3.7 The assessment of daylight within new properties is set out in Part 2.1 of the BRE guidelines, as well as Appendix C, whereby the 2022 BRE guidelines has now been brought into line with British Standard EN 17037:2018.

- 3.8 The 2022 BRE guidelines sets out the methodology for the illuminance method or daylight factor method, and either test and their target levels for adherence can be used. For this report the illuminance method has been utilised, with the suggested minimum target levels and tests summarised below, being based on a detailed 3D technical assessment model:

- 3.8.1 Illuminance Method – this measures the daylight within a room using climatic data for the location of the site, calculating the illuminance (in lux) from daylight. Adherence to the test is achieved when the following lux target levels are obtained to at least 50% of the room's space, and when 50% of the hours in the day are met:

Bedroom 100 lux

Living room 150 lux

Kitchen 200 lux

- 3.9 For both the Illuminance method and Daylight Factor methods, where there are rooms with shared uses, the highest target value should apply. However, as highlighted in the BRE guidelines, for a combined living/dining/kitchen area, if the

kitchen is not treated as habitable space, which has been applied in this instance, just the living/dining area can be evaluated, although the kitchen space is included in the assessment grid area.

3.10 An assessment grid at 0.85m above finished floor level is created for each room, excluding a band of 0.3m from the walls. Professional judgement has been applied when creating the assessment grid in cases where there are irregular shaped spaces, rooms with corridors, annexed areas and/or fixed floor to ceiling cupboards. Where annexed areas occur, the full room layout and surfaces, including corridors are still included within the calculation model.

3.11 The surface reflectances for the assessment utilise the following values:

Interior Walls	- 0.7
Ceilings	- 0.8
Floors	- 0.4
Exterior walls and obstructions	- 0.2
Exterior ground	- 0.2

3.12 The glazing transmittance values have been utilised, with a framing factor of 0.7, as well as a maintenance factor of 0.92 applied to the double-glazing unit with a diffuse transmittance value of 0.68.

Sunlight to new developments

3.13 The assessment of sunlight for new developments is set out in Part 3.1 of the BRE guidelines, stating: -

"In housing, 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 less important in bedrooms and in kitchens, where people prefer it in the morning rather than the afternoon."

- 3.14 The opportunity to design for sunlight to residential properties is very dependent on orientation and site layout. As highlighted in the introduction of the BRE guidelines, the advice is not mandatory and should not be seen as an instrument of planning policy. This is particularly relevant for sunlight design, as a building's location, height and orientation should be guided more by town planning considerations and aesthetics. The adherence rates for more denser residential design are going to be lower than for more suburban houses.
- 3.15 For interiors, access to sunlight utilises the British Standard EN 17037 assessment methodology, with the target criteria of 1.5 hours of direct sunlight on the assessment date of 21 March. For dwellings, it is recommended that at least one habitable room, preferably the main living room, should meet the criterion.
- 3.16 A detailed 3D technical assessment CAD model has been created, inputting the rooms, walls, window reveals and external obstructions to replicate the potential built out scheme. The bespoke computer software assesses each window, taking the inside centre of the window, and where multiple windows light a room, the cumulative sunlight availability is added together, ensuring there is no double counting of the same sunlight hours.

4. Affected adjoining properties

- 4.1 Having attended site and reviewed the sensitive receptors we have undertaken a review of the neighbouring properties, as well as assessment the light for the future occupants within the proposed scheme. The summary of each outcome is set out below, together with a short explanation of the properties in question.
- 4.2 Having constructed the 3D CAD model of the proposed scheme and applied the appropriate surface finishes, the internal light assessments have been run using MBS Software with the illuminance results shown at Appendix 1 of this report and sunlight exposure results at Appendix 2.
- 4.3 The technical assessment has used the following information to build the 3D CAD model: -
- TGN Architects – Existing and proposed drawings
 - Site survey photographs
 - Local authority planning portal information and estate agent's details

1 Curzon Road

- 4.4 This property is located to the south of the proposed works and contains residential uses. It is only the north/east facing elevation immediately adjacent to the proposed works that need to be considered, and from reviewing the windows, only three windows serve habitable rooms.
- 4.5 Two windows on the east facing elevation serve bedrooms, one on the ground floor and one on the first floor. The effects from the proposed works are negligible, as they are at an oblique angle, with a high level of daylight and sunlight will be maintained from the east. The other north facing window serves a first floor kitchen,

which is located at a level whereby there will be sufficient light from over the proposed works.

- 4.6 Therefore, it is not anticipated that the proposed works will have a noticeable effect on the occupants within 1 Curzon Road, and no further assessments are required.

5 Curzon Road

- 4.7 This property is located to the north of the proposed works and contains residential uses. It is only the rear facing elevation that needs to be considered, as there will be no effect on the front elevation.
- 4.8 It is clear that there are two rooms, one on the ground floor and one on the first floor that have dual aspect windows. In each case one window faces south towards the proposed works, whilst the other window faces into the rear garden, which will ensure the occupants will maintain high levels of daylight and sunlight, in excess of the BRE guidelines.
- 4.9 The ground, first and second floor windows immediately adjacent to the proposed works will only have an oblique view, maintaining an unfettered opportunity to maintain daylight and sunlight into the rear garden. Only the ground floor window to 5 Curzon Road will have any effect, but it should be noted that the existing boundary condition had a tall fence adjacent, with overgrown evergreen foliage. Therefore, the existing condition already had a limiting effect on the daylight and sunlight.
- 4.10 Therefore, it is considered that the daylight and sunlight levels to 5 Curzon Road will be acceptable to those rooms immediately adjacent to the proposed works, with the dual aspect rooms clearly maintaining high levels of daylight and sunlight, in excess of the BRE guidelines.

Internal Light Assessment for Future Occupants

- 4.11 As the proposed scheme contains residential uses, an assessment of the daylight and sunlight quality has been undertaken, focussing on the ground and first floor levels. The results of these assessments are shown on plan and tabled within Appendix 1 and 2 of this report.
- 4.12 The illuminance method results show that of the 7 rooms tested, 5 meet or exceed the suggested lux level for their room use to over 50% of the room's area. The two rooms falling below the suggested target are secondary bedrooms on the ground floor level, and bedroom are not uses that have a high expectation of light. The first floor level has all rooms adhering to the BRE guidelines. Therefore, it is clear that the second floor level will fully adhere to the daylight assessments, as the first floor fully complies, and the second floor level also has roof lights supplementing the light to the rooms.
- 4.13 The sunlight exposure results demonstrate that all three flats will have at least one room meeting or exceeding the 1.5 hours target assessed on the 21st March, thus ensuring the flat occupants have access to acceptable sunlight levels, complying with the BRE guidelines. In fact, the ground floor flat shows both the main bedroom and living areas greatly exceed the BRE target sunlight level, with the first floor level also showing the living areas and main bedroom exceeding the suggested targets.

5. Summary and conclusions

- 5.1 The assessments have been undertaken in line with the Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: A guide to good practice (2022).
- 5.2 The proposed works have sought to minimise the effects on the neighbouring residential occupants, ensuring they will maintain acceptable levels of daylight and sunlight in the proposed condition.
- 5.3 The assessment of the light within the proposed development has shown that acceptable levels of daylight will be obtained, with sunlight levels well in excess of the BRE guidelines recommendation to the living room areas.
- 5.4 We therefore conclude that the proposed redevelopment of 3 Curzon Road meets the expectations set out in the BRE guidelines, ensuring acceptable daylight and sunlight levels to the neighbouring residents, as well as the future occupants within the scheme.

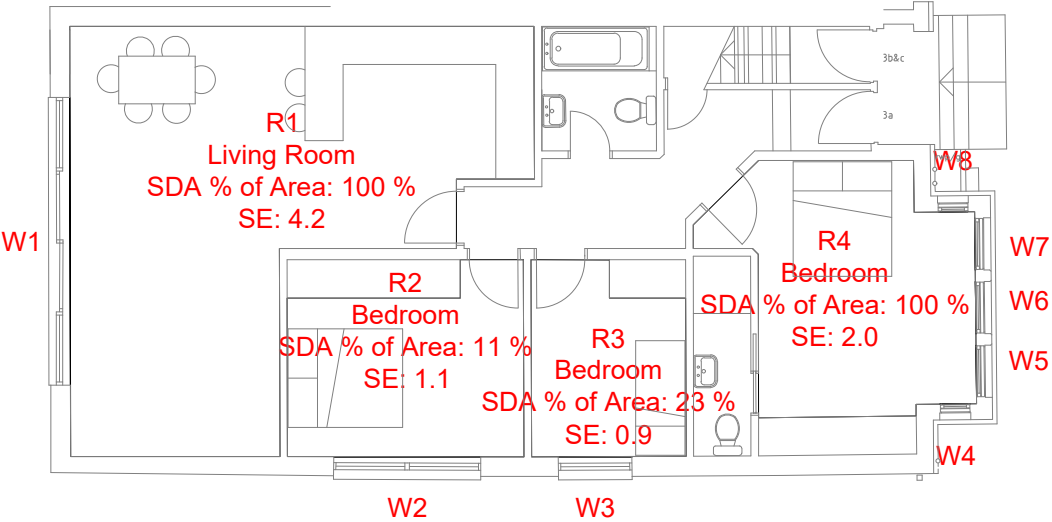
Appendix 1

Illuminance Method daylight results

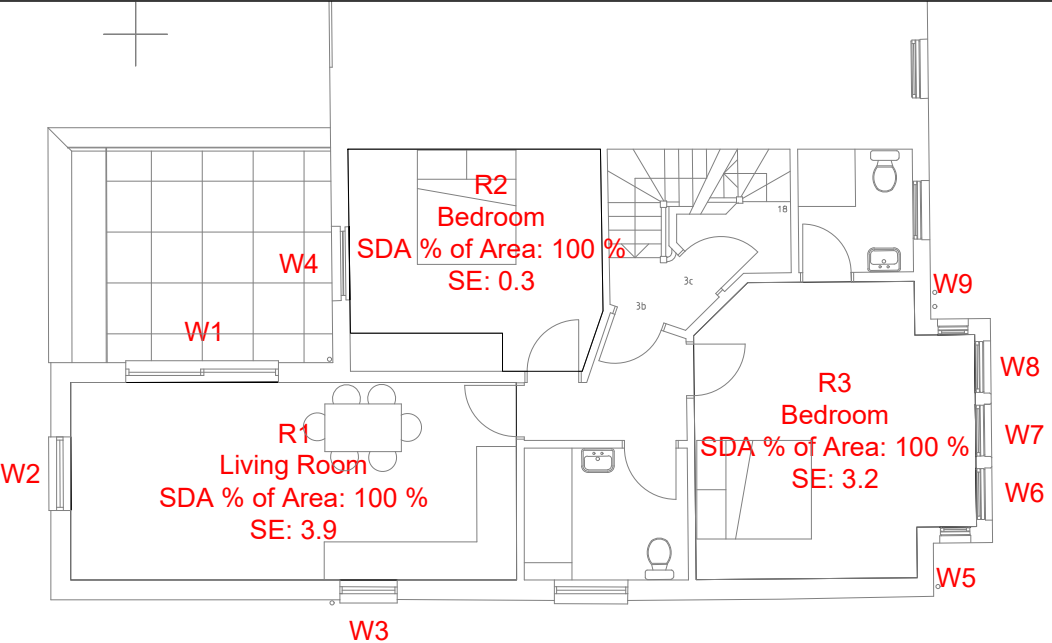
Project Name: 3 Curzon Road
 Project No.: 1
 Report Title: SDA BS En17037 Analysis - Proposed Scheme
 Date of Analysis: 19/11/2022

								Criteria			
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	Req % of Daylight Hours	Daylight Hours
Proposed											
Ground	R1	Living Room	34.89	26.81	600	26.81	100%	150	50%	50%	4380
	R2	Bedroom	9.86	6.13	32	0.70	11%	100	50%	50%	4380
	R3	Bedroom	6.79	3.84	52	0.87	23%	100	50%	50%	4380
	R4	Bedroom	13.68	9.16	578	9.16	100%	100	50%	50%	4380
First	R1	Living Room	21.74	16.04	495	16.04	100%	150	50%	50%	4380
	R2	Bedroom	12.27	2.91	494	2.91	100%	100	50%	50%	4380
	R3	Bedroom	18.68	13.72	466	13.72	100%	100	50%	50%	4380

Ground Floor



First Floor



NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where
discrepancy occurs between specification and
drawings the supervising officer must be notified.

REV	NOTES	DRAWN	DATE



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PROJECT:
3 Curzon Road London N10 2RB

DRAWING TITLE:
Illuminance Method results

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Nov 22	CHECKED:	

DRAWING NUMBER:	REV:
CR-01-01	.



Appendix 2

Sunlight Exposure results

Project Name: 3 Curzon Road
 Project No.: 1
 Report Title: Sunlight Exposure Analysis - Proposed Scheme
 Date: 19/11/2022

Floor Ref	Room Ref	Room Use	Window Ref	Proposed Sunlight Exposure (Hours)
Proposed				
Ground	R1	Living Room	W1	4.2
				4.2
Ground	R2	Bedroom	W2	1.1
				1.1
Ground	R3	Bedroom	W3	0.9
				0.9
Ground	R4	Bedroom	W4	2
			W5	0
			W6	0
			W7	0
			W8	0
				2
First	R1	Living Room	W1	0
			W2	3.3
			W3	0.6
				3.9
First	R2	Bedroom	W4	0.3
				0.3
First	R3	Bedroom	W5	3.1
			W6	0.3
			W7	0
			W8	0
			W9	0
				3.2



Contact Daylight Sunlight Consulting Ltd

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