Sunlight
Assessments UK

Sunlight & Daylight Assessment

Internal Scheme Performance

Project address: 42 The Drive, Northwood HA6 1HP, UK

Designer/Architects The Douglas Stephen Partnership
Technical analysis by: Milica Mijajlović

15 May 2025

Contents

1. Introduction

1.1 Sunlight Assessments UK have been instructed to assess the daylight and sunlight of the proposed extension on Basement of 42 The Drive, Northwood HA6 1HP, UK.

1.2 The report relates to the proposed Scheme and provides detailed technical support regarding the potential internal Scheme Performance of the daylight and sunlight.

1.3 The Local Authority will be informed of this by the BRE document entitled 'Site layout planning for daylight and sunlight: a guide to good practice' (BR209 2022). This document is the principal guidance in this area and sets out the methodology for measuring light and recommends what it considers to be permitted or unobtrusive levels of change.

1.4 The BRE guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located, and the daylight and sunlight will be one of several planning considerations which the local authority will weigh.

Sources of Information

1.5 In the process of compiling this report, the following sources of information have been used:

Ordnance Survey Data

OS Map

Proposed drawings in Appendix 1

2. Methodology

2.1 This Daylight and Sunlight Assessments report focuses on the internal scheme performance, of which there are several different metrics to assess:

Interior Daylighting (Spatial Daylight Autonomy SDA)

2.2 The BRE guide recommends that interior daylighting is checked using the daylight provision test set out in BS EN 17037. The test measures both the amount of daylight, as well as the distribution of daylight within a room. The test is applied to habitable rooms within domestic properties. A kitchen is generally deemed to be a habitable room if it is large enough to accommodate a dining area. If the kitchen is small, or if the property has a separate dining area, then the accepted practice is to treat the kitchen as a non-habitable room. The assessment is carried out using a grid of points on a horizontal reference plane in each room. In accordance with the BRE recommendations, we have set the reference plane at 850mm above the floor and have excluded assessment points from a 0.3m wide band around the perimeter of each room.

2.3 The UK National Annex to BS EN 17037 gives UK-specific minimum illuminance recommendations which we have set as the targets for this project. The target comprises of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens to be exceeded over at least 50% of the reference plane. Where a room has a shared use, the highest target should apply. However, the guide states that 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.

2.4 The data in Appendix 2 sets out the percentage of the reference plane that meets the relevant lux target for the given room use the median illuminance (lux) achieved for each room is also presented. Where the median illuminance exceeds the lux target, this means the lux target has been achieved over at least 50% of the assessment grid. The daylight provision test may be carried out using either the daylight factor method or the interior illuminance method. For this assessment, we have adopted the daylight factor method. Using the conversion table set out in the BRE guide, we have expressed the results in terms of lux.

2.5 Since the assessment is based on a computer simulation, it is necessary to set various surface reflectance values. By example, a 0.6 reflectance means that 60% of the light hitting the surface will be reflected. Maximum reflectance for white painted surfaces in the calculations should not exceed 0.8 indoors, and 0.7 outdoors, maximum reflectance for light wood floors should not exceed 0.4. For the purpose of this assessment, we have assumed the following reflectance.

Surface	Reflectance
Interior walls	0.7
Window reveals	0.7
Ceilings	0.7
Floors	0.4
Exterior walls and obstructions	0.2
Exterior ground	0.2
Exterior glazing	0.64

Exposure to Sunlight

2.6 The BRE guide 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.

2.7 The BRE 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,
- preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March.

2.8 Scheme Performance tests in this report:

Interior Daylighting

Spatial Daylight Autonomy (SDA)

within all habitable rooms of a proposed development.

Exposure to Sunlight

Sunlight Exposure (SE) for the same rooms tested for daylight access.

3. Standard Survey Limitations

3.1 Although we have undertaken as detailed an inspection as possible, we are required by our professional indemnity insurers to notify you that our report is based upon the Standard Terms and Conditions. Our understanding of the proposed development is informed in the drawings in Appendix 1 and information supplied by The Douglas Stephen Partnership.

4. The Site

4.1 The site is located at 42 The Drive, Northwood HA6 1HP, UK.

5. The Proposal

5.1 Our understanding of the proposed development is illustrated in drawings, located within Appendix 1.

5.2 The Douglas Stephen Partnership has provided floorplans and elevations.

6. Assessment Results

6.1 The proposed development has been internally assessed for SDA and SE

Interior Daylighting, Spatial Daylight Autonomy (SDA)

6.2 The results show that all rooms comply and are within the BRE (BR209 2022).

Sunlight Exposure (SE)

6.3 Requirements within BRE (BR209 2022) recommend that at least one habitable room (living room, bedroom, nursery or kitchen) in a whole dwelling should comply with the guidance.

6.4 The results show that at least one habitable room in each dwelling receives the required level of sunlight exposure and therefore complies with the BRE (BR209 2022) guidance.

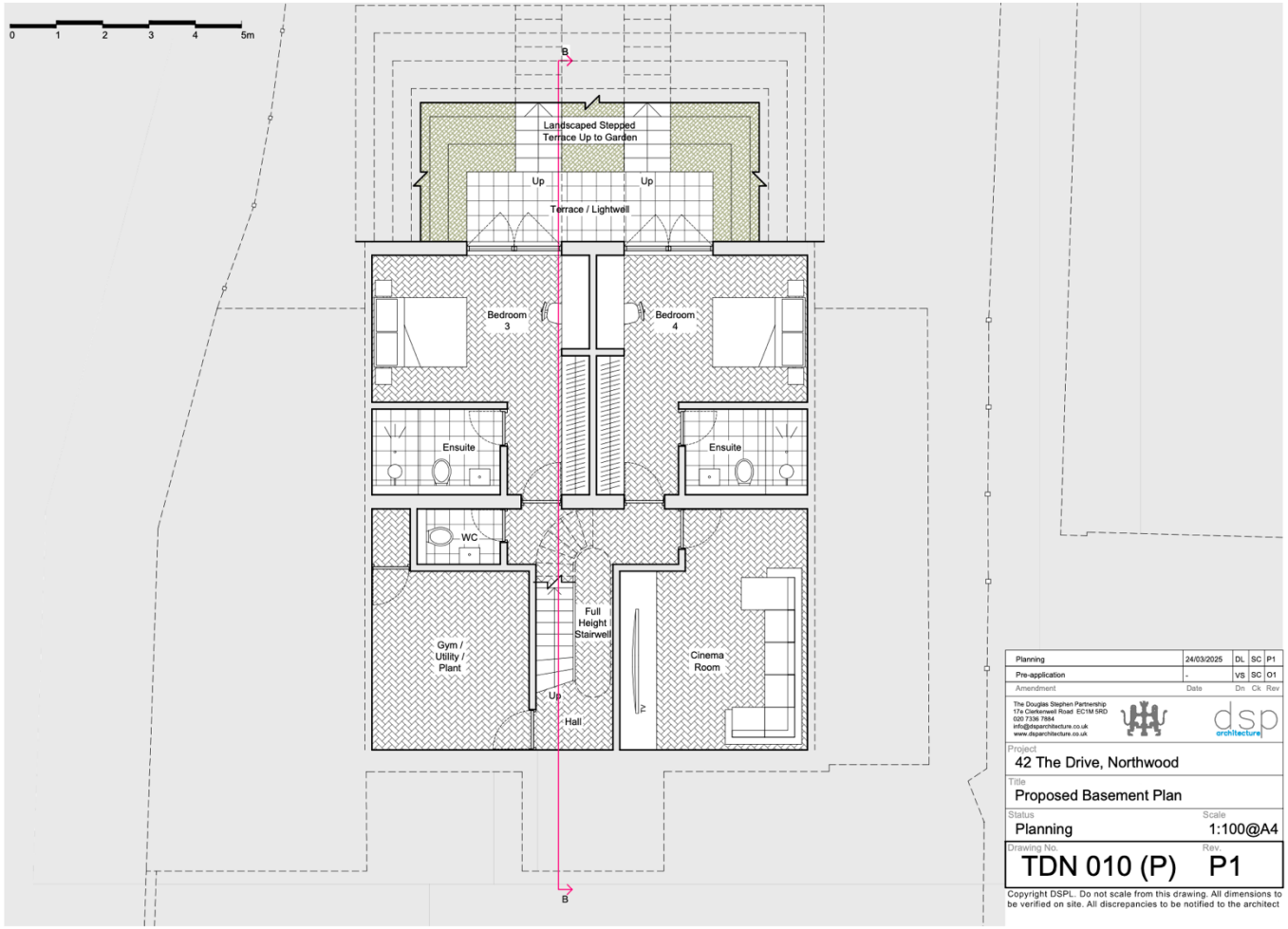
7. Conclusion

7.1 The daylight and sunlight in the internal habitable rooms of the proposed design comply with the BRE (BR209 2022) guidance.

7.2 We, therefore, conclude that the Proposed Development in relation to daylight and sunlight is BRE (BR209 2022) compliant, and we have identified no grounds for rejection of this application in terms of daylight and sunlight.

Appendix 1:

Drawings


0
1
2
3
4
5m
B
Landscaped Stepped Terrace Up to Garden
Up
Up
Terrace / Lightwell
Bedroom 3
Bedroom 4
Ensuite
Ensuite
WC
Full Height Stairwell
Up
Hall
Gym / Utility / Plant
Cinema Room
AV
B
Planning 24/03/2025 DL SC P1
Pre-application - VS SC O1
Amendment Date Dn Ck Rev
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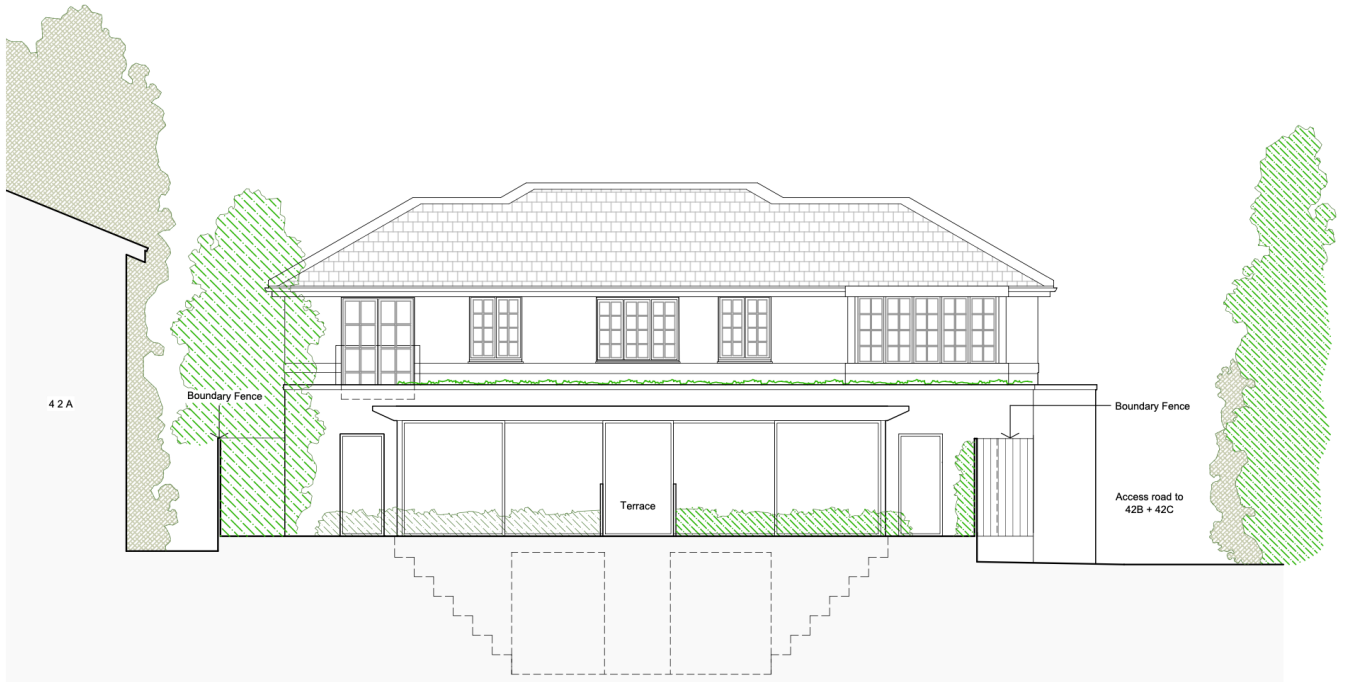
Project
42 The Drive, Northwood
Title
Proposed Basement Plan
Status
Planning
Scale
1:100@A4
Drawing No.
TDN 010 (P)
Rev.
P1
Copyright DSPL. Do not scale from this drawing. All dimensions to be verified on site. All discrepancies to be notified to the architect



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Pre-application	-	VS	SC	O1
Amendment	Date	Dn	Ck	Rev

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Project
42 The Drive, Northwood

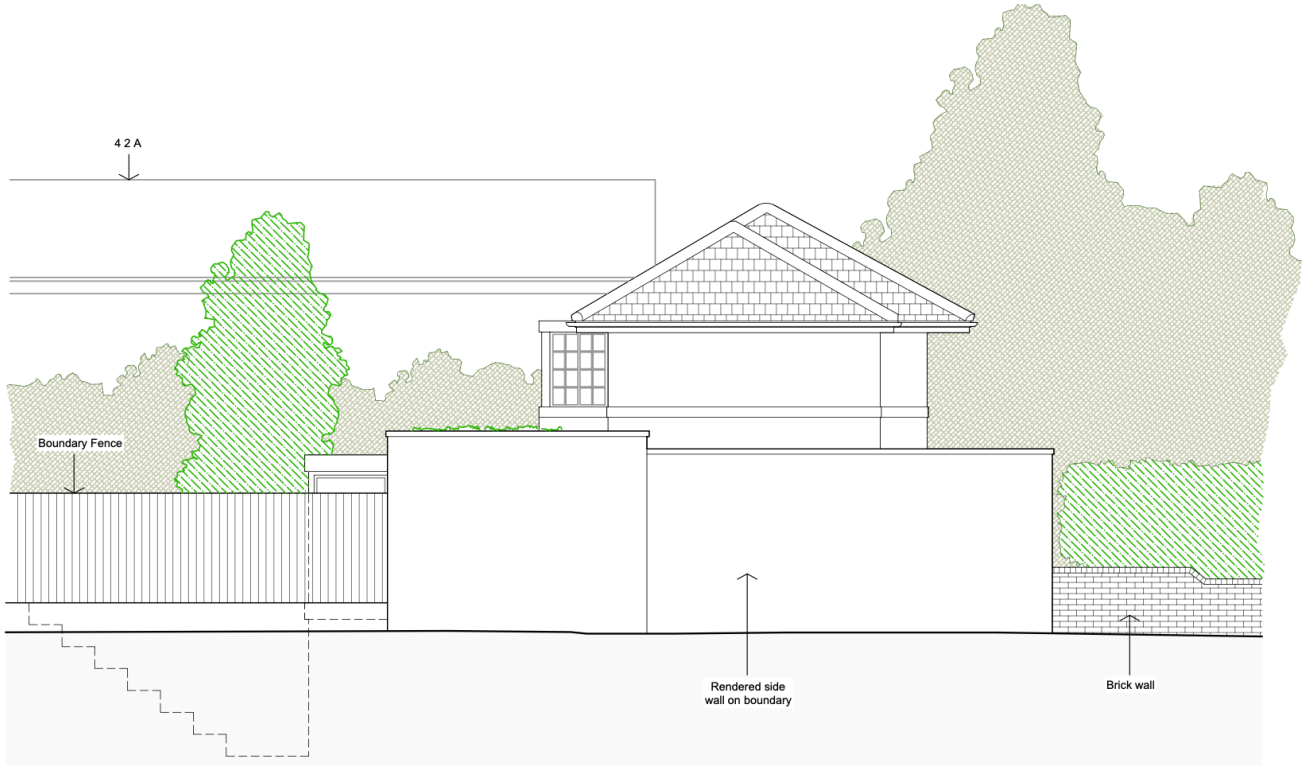
Title
Proposed West Elevation

Status
Planning

Scale
1:100@A4

Drawing No.
TDN 022 (P)

Rev.
P1



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Pre-application	-	VS	SC	O1
Amendment	Date	Dn	Ck	Rev

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Project
42 The Drive, Northwood

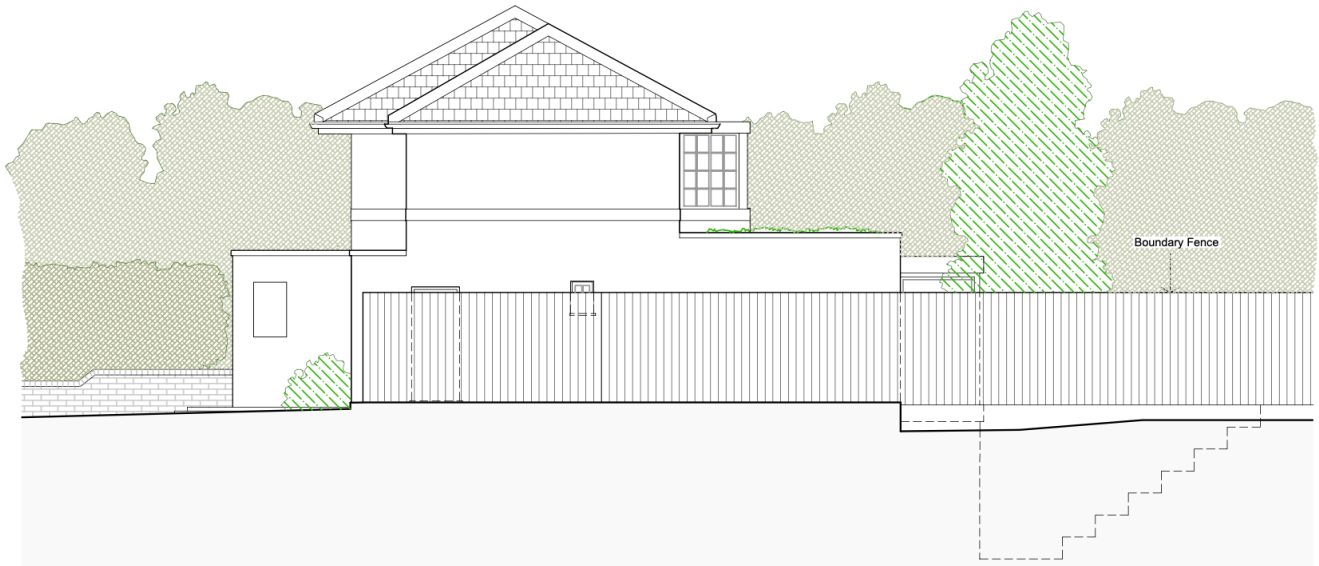
Title
Proposed South Elevation

Status
Planning

Scale
1:100@A4

Drawing No.
TDN 021 (P)

Rev.
P1



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Pre-application	-	VS	SC	O1
Amendment	Date	Dn	Ck	Rev

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Project
42 The Drive, Northwood

Title
Proposed North Elevation

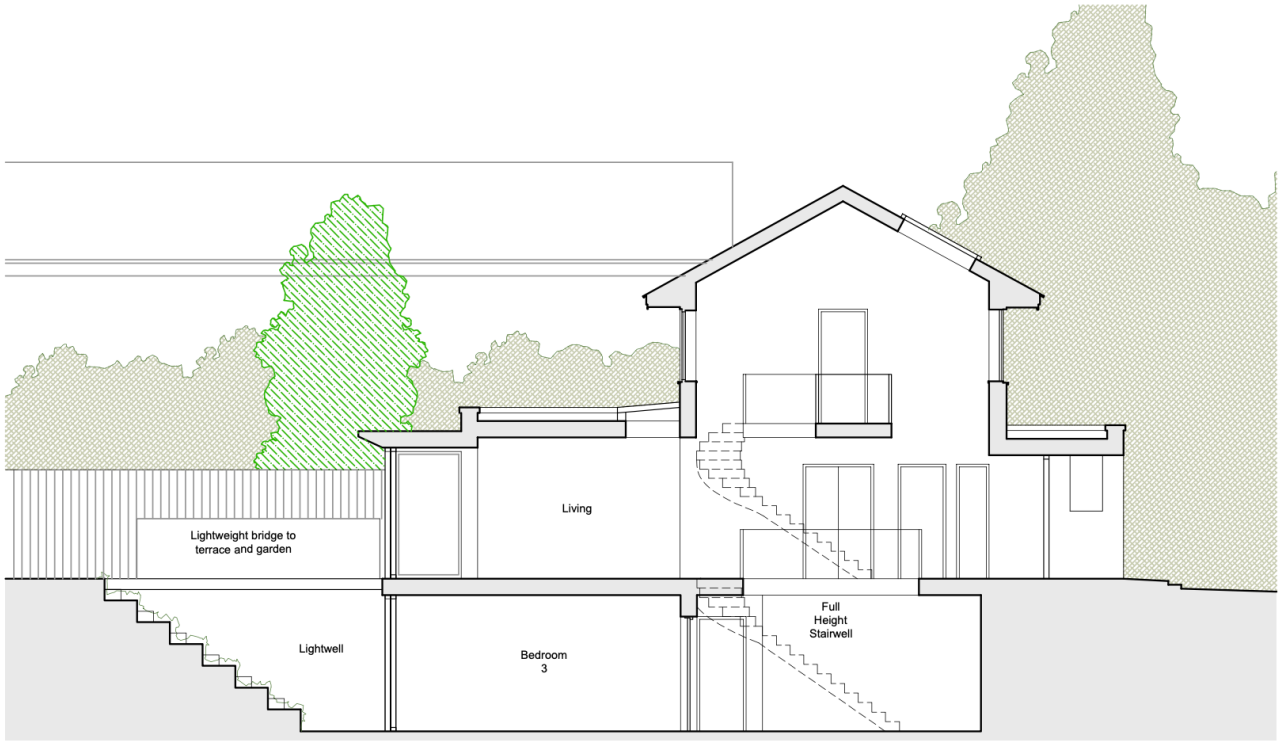
Status
Planning

Scale
1:100@A4

Drawing No.
TDN 023 (P)

Rev.
P1

0 1 2 3 4 5m



Planning	24/03/2025	DL	SC	P1
Pre-application	-	VS	SC	O1
Amendment	Date	Dn	Ck	Rev

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Project
42 The Drive, Northwood

Title
Proposed Section BB

Status
Planning

Scale
1:100@A4

Drawing No.
TDN 031 (P)

Rev.
P1

Appendix 2:

Technical Analysis

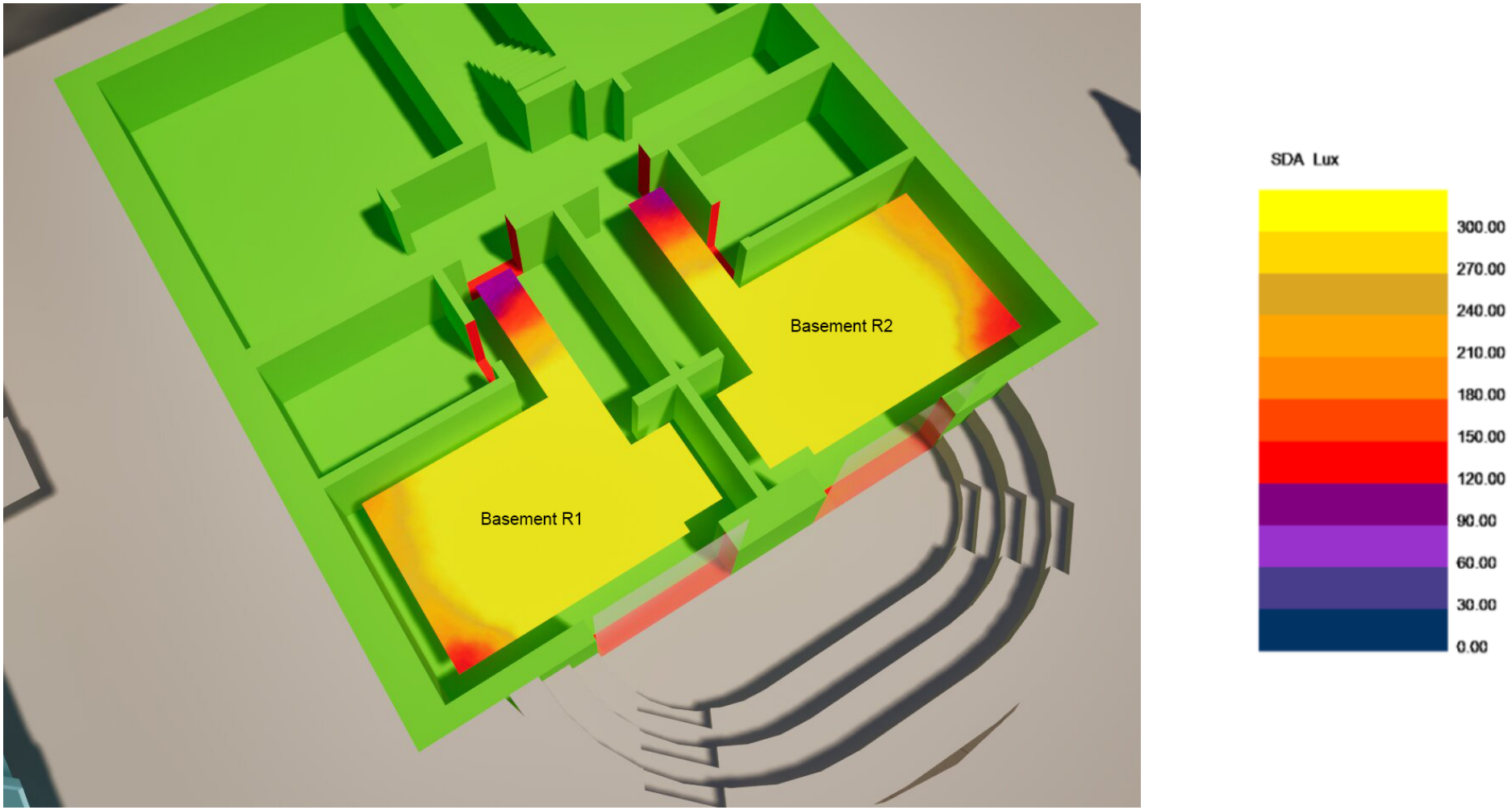
Interior Daylighting, Spatial Daylight Autonomy (SDA)

Building Ref	Floor Ref	Room Ref	Room Use	Room Area	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Space	Req % of Hours	Occupied Hours	Test
42 The Drive	Basement	R1	Bedroom	15.95	10.48	167	7.88	75%	100	50%	50%	4380	YES
42 The Drive	Basement	R2	Bedroom	16.45	10.88	157	7.51	69%	100	50%	50%	4380	YES

Sunlight Exposure (SE)

Building Ref	Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed SE (Hours)	Rating
42 The Drive	Basement	R1	Bedroom	42 The Drive_Basement_W1	296°N	1.7	
						1.7	Minimum
42 The Drive	Basement	R2	Bedroom	42 The Drive_Basement_W2	296°N	1.5	
						1.5	Minimum

Proposed internal LUX levels –Basement



End of report

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