

Daylight and Sunlight Report

Internal Daylight Assessment

84 Basingstoke Road

Reading

RG2 0EL

07th July 2026

Report By Daylight Surveys LTD



1. Introduction

- 1.1 This report has been prepared to assess the internal daylight performance of the proposed development at **84 Basingstoke Road, Reading, RG2 0EL**.
 - 1.2 The proposal seeks planning permission for the conversion of the existing building into two self-contained residential flats. This assessment has been undertaken specifically in relation to the proposed ground floor bedroom within Flat 1, which is served by a lightwell.
 - 1.3 As part of the assessment process, an internal daylight assessment has been undertaken to evaluate the daylight performance of the proposed ground floor bedroom within Flat 1 in accordance with the recommendations contained within BS EN 17037: Daylight in Buildings.
 - 1.4 The assessment has been carried out with reference to the guidance contained within BS EN 17037: Daylight in Buildings, which provides recommendations for achieving appropriate levels of daylight within residential accommodation.
 - 1.5 The site falls within the administrative area of **Reading Borough Council**.
 - 1.6 The assessment has been undertaken in response to concerns raised by the Local Planning Authority regarding the adequacy of daylight provision to the proposed ground floor bedroom within Flat 1. Accordingly, the room has been assessed using the Spatial Daylight Autonomy (sDA) methodology in accordance with BS EN 17037.
 - 1.7 The assessment has been undertaken to determine whether the proposed bedroom receives appropriate levels of natural daylight to provide an acceptable internal living environment for future occupants.
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2. Methodology

2.1 Model Setup

- 2.1.1** A three-dimensional computer model of the proposed development at **84 Basingstoke Road, Reading, RG2 0EL** was created to facilitate the daylight assessment. The model incorporated the proposed room layout, window position, lightwell geometry and surrounding built form necessary to accurately evaluate daylight availability within the proposed bedroom.
 - 2.1.2** The assessment was undertaken using MBS Daylight for AutoCAD, developed by MBS Survey Software Ltd. This industry-standard daylight and sunlight analysis software is widely used by planning consultants, architects and daylight specialists throughout the United Kingdom.
 - 2.1.3** The analysis focused solely on the proposed ground floor bedroom within Flat 1.
 - 2.1.4** An internal analysis grid was applied across the useable floor area of the assessed room in accordance with BS EN 17037 guidance. Standard industry assumptions were adopted for glazing characteristics and surface reflectance values to ensure a realistic representation of daylight conditions.
 - 2.1.5** Typical material reflectance values were assigned to internal surfaces, including ceilings, walls and floors, to reflect likely residential finishes. These assumptions are consistent with accepted daylight modelling practice and enable the accurate simulation of the distribution and reflection of natural light throughout the assessed accommodation.
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2.2 Simulation Parameters

2.2.1 The daylight simulations were undertaken using annual climate-based daylight modelling techniques in accordance with BS EN 17037 recommendations.

2.2.2 The assessment methodology incorporated the following modelling parameters:

- Climate-based daylight modelling using standard UK weather data;
 - Analysis grid positioned at a working plane height of approximately 0.85 metres above finished floor level;
 - Grid spacing of approximately 0.3 metres, refined where appropriate depending on room size and spatial configuration; and
 - Annual occupied hours applied in accordance with the climate-based daylight modelling methodology implemented within MBS Daylight software.
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3. BSI Standard (BS EN 17037) Guidance

- 3.1** BS EN 17037 provides recommendations for achieving appropriate levels of daylight provision within buildings using climate-based daylight modelling methodologies.
- 3.2** The standard establishes a framework for assessing daylight quality within internal spaces and is intended to promote healthy, comfortable and visually appropriate living environments for building occupants.
- 3.3** The guidance recognises that access to natural daylight is an important component of residential amenity and can positively influence occupant wellbeing, visual comfort and overall quality of life.
- 3.4** In addition to BS EN 17037, the BRE Guidelines contained within Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice are widely recognised and commonly adopted by Local Planning Authorities as an appropriate methodology for assessing daylight and sunlight impacts associated with development proposals.
- 3.5** The BRE guidance provides objective assessment criteria against which planning policies relating to daylight and sunlight can be considered. However, the guidance is not intended to operate as a rigid or mandatory standard and should instead be applied flexibly having regard to the specific circumstances of each development proposal.
- 3.6** The Introduction to the BRE document states:

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document 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 because natural light is only one of many factors in site layout design."
- 3.7** The degree of flexibility advocated within the Guidelines should be considered in the context of the specific circumstances of each individual case.
- 3.8** Following the overarching guidance principles set out within BS EN 17037 and the BRE Guidelines, the internal daylight performance of the proposed accommodation has been assessed using climate-based daylight modelling metrics.

- 3.9** The primary assessment metric adopted for this analysis is Spatial Daylight Autonomy (sDA), which provides a climate-based assessment of internal daylight availability and enables the daylight performance of the proposed residential accommodation to be evaluated in accordance with the recommendations contained within BS EN 17037.

3.10 Spatial Daylight Autonomy (sDA)

- 3.10.1** Spatial Daylight Autonomy (sDA) is a climate-based daylight metric used to assess the availability of natural daylight within an internal space over the course of a typical year.
- 3.10.2** For the purposes of this assessment, the following target illuminance levels have been adopted:
- Bedroom – 100 lux
- 3.10.3** In accordance with the adopted assessment methodology, a minimum of 50% of the assessed floor area should achieve the target illuminance level for the room to be considered compliant with the recommended daylight performance criteria.
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4. Scheme Assessment – Proposed Development at

84 Basingstoke Road

- 4.1** The proposed ground floor bedroom within Flat 1 has been assessed against the BS EN 17037 criteria for Spatial Daylight Autonomy (sDA). The assessment has been undertaken in response to concerns raised by the Local Planning Authority regarding the adequacy of daylight provision to this room.
- 4.2** Reference should be made to the drawings contained within Appendix 2, which illustrate the room layout and identify the internal Lux levels achieved across the assessed bedroom.
- 4.3** For ease of reference, and to provide a clearer visual representation of daylight distribution, the gradation of Lux levels shown on the drawings has been categorised into a series of zones as follows:
- **Red** – Areas receiving greater than **150 Lux**
 - **Green to Orange** – Areas receiving between **100 Lux** and **150 Lux**
 - **Dark Blue to Light Blue** – Areas receiving between **50 Lux** and **100 Lux**
 - **Grey** – Areas receiving below **50 Lux**.
- 4.4** The numerical outputs of the assessment are provided within the Internal Spatial Daylight Autonomy Analysis Tables contained within Appendix 3.

4.5 Spatial Daylight Autonomy (sDA) Results

- 4.5.1** The assessment demonstrates that the proposed ground floor bedroom within Flat 1 achieves compliance with the daylight performance recommendations contained within BS EN 17037.
- 4.5.2** The proposed bedroom achieves 55% of the assessed floor area receiving the required illuminance level of 100 lux, thereby exceeding the minimum recommendation that 50% of the assessed floor area should achieve the target illuminance level.
- 4.5.3** Although the bedroom is served by a lightwell, the climate-based daylight modelling confirms that sufficient natural daylight is available to provide an acceptable internal environment.

- 4.5.4** The proposed bedroom therefore satisfies the recommendations contained within BS EN 17037 and provides an acceptable standard of internal daylight for future occupants.
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5. Conclusion

- 5.1** An internal daylight assessment has been undertaken for the proposed development at 84 Basingstoke Road, Reading, RG2 0EL. The site falls within the administrative area of Reading Borough Council. The proposal seeks planning permission for the conversion of the existing building into two self-contained residential flats. This assessment specifically considers the internal daylight provision to the proposed ground floor bedroom within Flat 1, which is served by a lightwell, following concerns raised by the Local Planning Authority regarding the adequacy of natural daylight within this room.
- 5.2** The assessment has been carried out in accordance with the recommendations contained within BS EN 17037: Daylight in Buildings, using the recognised climate-based daylight modelling methodology of Spatial Daylight Autonomy (sDA). The bedroom has been assessed against the recommended target illuminance level of 100 lux.
- 5.3** The assessment demonstrates that the ground floor bedroom achieves 55% of the assessed floor area receiving at least 100 lux, thereby exceeding the minimum recommendation contained within BS EN 17037 that 50% of the assessed floor area should achieve the target illuminance level. The results therefore confirm that the bedroom provides an acceptable level of natural daylight despite its location within the lightwell.
- 5.4** Having regard to the results of the Spatial Daylight Autonomy assessment, the proposed ground floor bedroom within Flat 1 is considered to provide an acceptable standard of internal daylight for future occupants and is therefore compliant with the recommendations contained within BS EN 17037: Daylight in Buildings.
- 5.5** Overall, the assessment confirms that the internal daylight performance of the bedroom satisfies the relevant guidance and demonstrates that the accommodation will provide a satisfactory internal living environment, addressing the concerns previously raised in respect of daylight provision.
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APPENDIX 1

Site Plan and 3D Views

Drawing Nos: 001 and 002



Daylight Surveys Tel No: 07540836611

Project Title
84 Basingstoke Road
Reading
RG2 0EL

Client
Design Extension Ltd

Drawing Title
Proposed Site Plan

Project No	Drawing No	Rev
BR2026-01	001	-
Date	Drawn By	Scale @A3
07\07\2026	MS	NTS

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Do not scale this drawing.
All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Key

Proposed Scheme

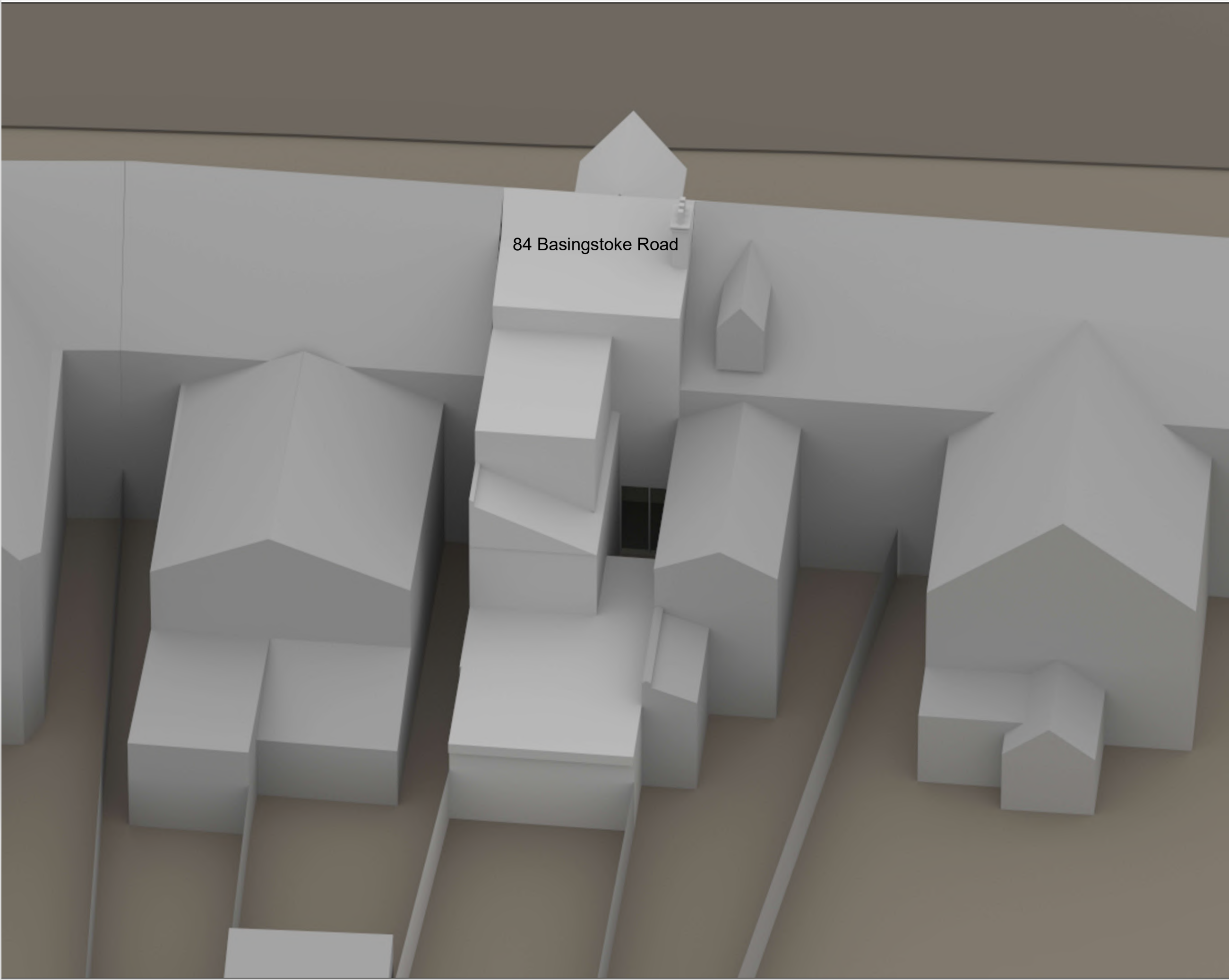
Surrounding Buildings

Source of Information

Surrounding Buildings
Design Extension
Drawing No's:
E-01 Rev A, E-02 Rev A, E-03 Rev A

Site Photo's and Google Earth

Proposed Scheme
Design Extension
Drawing No's:
P-01 Rev A, P-02 Rev A, P-03 Rev A



Daylight Surveys Tel No: 07540836611

Project Title
84 Basingstoke Road
Reading
RG2 0EL

Client
Design Extension Ltd

Drawing Title
Proposed 3D View

Project No	Drawing No	Rev
BR2026-01	002	-
Date	Drawn By	Scale @A3
07\07\2026	MS	NTS

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conjunction with any specifications, schedules and Consultants
drawings and details.

Key

Proposed Scheme

Surrounding Buildings

Source of Information

Surrounding Buildings
Design Extension
Drawing No's:
E-01 Rev A, E-02 Rev A, E-03 Rev A

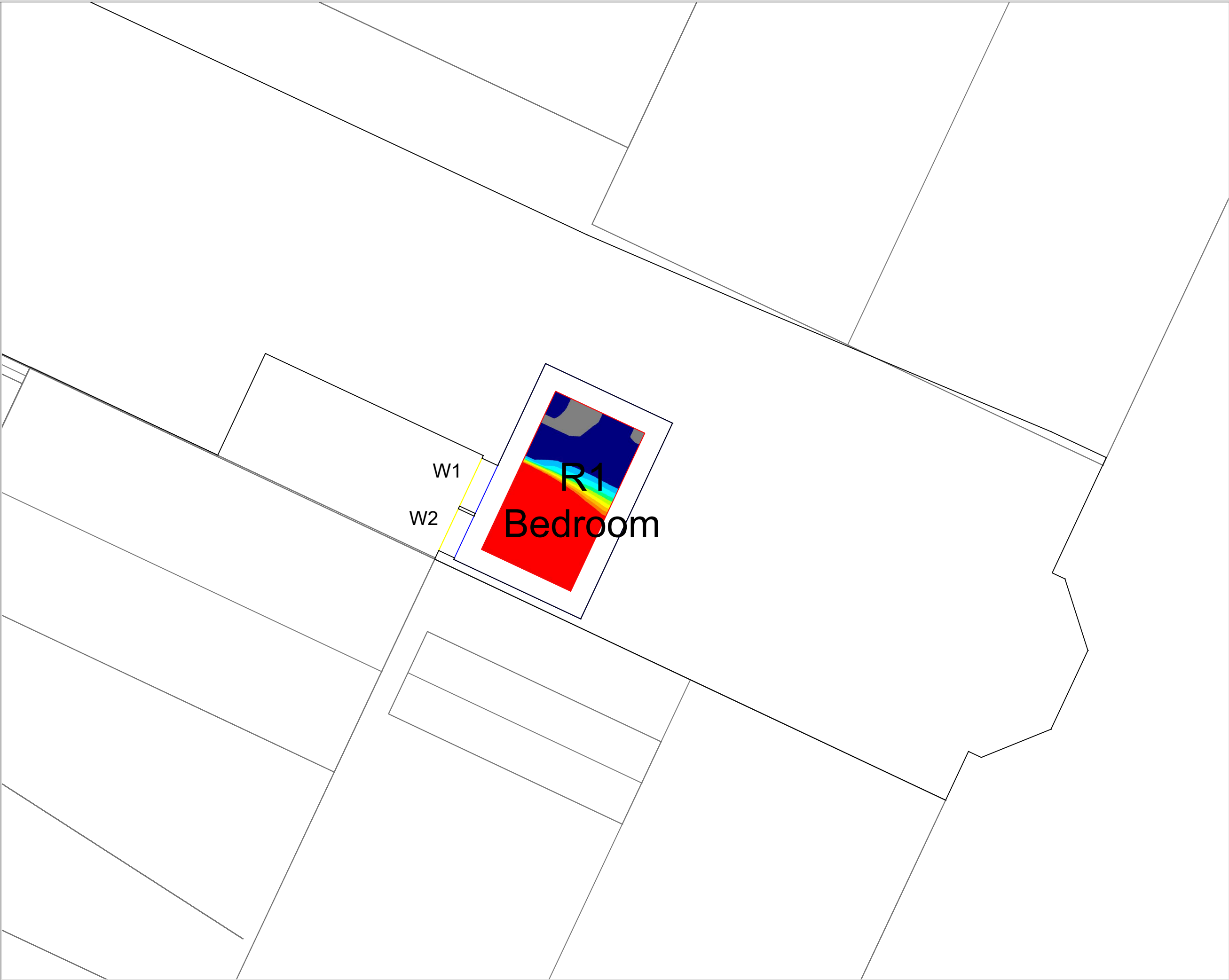
Site Photo's and Google Earth

Proposed Scheme
Design Extension
Drawing No's:
P-01 Rev A, P-02 Rev A, P-03 Rev A

APPENDIX 2

Contour Plots

Drawing Nos: 003



Daylight Surveys Tel No: 07540836611

Project Title
84 Basingstoke Road
Reading
RG2 0EL

Client
Design Extension Ltd

Drawing Title
Internal SDA Analysis
Proposed Scheme at 84 Basingstoke Road

Project No	Drawing No	Rev
BR2026-01	003	-
Date	Drawn By	Scale @A3
07\07\2026	MS	1\50

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conjunction with any specifications, schedules and Consultants
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Key

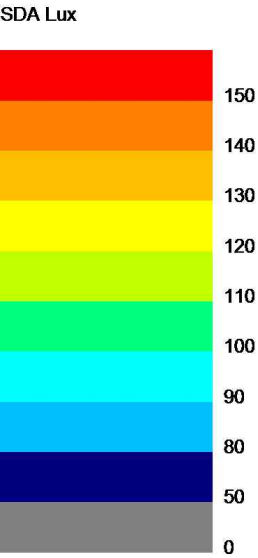
- Proposed Scheme
- Surrounding Buildings

Source of Information

Surrounding Buildings
Design Extension
Drawing No's:
E-01 Rev A, E-02 Rev A, E-03 Rev A

Site Photo's and Google Earth

Proposed Scheme
Design Extension
Drawing No's:
P-01 Rev A, P-02 Rev A, P-03 Rev A



APPENDIX 3

SDA Table

Internal SDA Table
84 Basingstoke Road

										Criteria				
Floor Ref	Room Ref	Room Attribute	Property Type	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	Meets Criteria
Proposed Scheme														
Ground	R1		Residential	Bedroom	6.29	3.57	128	1.96	55%	100	50%	50%	4380	YES