



River Cottage,
Church Street,
Wargrave
RG10 8EP

Daylight and Sunlight Assessment

September
2025



25-15786

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Revision	Initial	Rev A
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1. Executive Summary

This report demonstrates the impact of the proposed development at River Cottage, Church Street, Wargrave RG10 8EP **on the neighbouring buildings.**

One window at Gaunt House shows a minor reduction in daylight and sunlight; however, the internal room it serves remains unaffected in terms of overall daylight and continues to receive adequate sunlight via a second, compliant window.

These outcomes demonstrate that the proposed development is entirely in line with the established urban environment, and the overall effect is well within acceptable limits. Therefore, the impacts identified are negligible and will not undermine the amenity of the neighbouring properties or the public realm. Given these positive results, the proposed development is appropriate for planning approval.

2. Introduction

This report has been prepared to support the planning application for the proposed development at River Cottage, Church Street, Wargrave RG10 8EP.

The report assesses the daylight and sunlight effect of the proposed development on the neighbouring buildings. The assessment is undertaken in accordance with "BRE 209 Digest: Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice".

The proposed drawings (in dwg format) of the project were provided by the architects on 28th August 2025 has been used in preparing this report. The elevations and plans for the neighbouring buildings were modelled using the drawings obtained from the planning portal and Google maps and street view.

No.	Document Name	Format	Received Date
1	140 River Cottage - Existing 3D	dwg	28-08-2025
2	140 River Cottage - Proposed 3D	dwg	28-08-2025
3	11 Location Plan	dwg	28-08-2025
4	140 River Cottage - Proposed FF	dwg	28-08-2025
5	140 River Cottage - Proposed GF	dwg	28-08-2025
6	River Cottage - Drawing Package	pdf	28-08-2025

Table 1 Document list used for assessment

The study has been undertaken by constructing a 3D AutoCAD model of the existing site, the proposed site and the surrounding buildings. This model analyses the daylight, sunlight and overshadowing impact of the new development on the affected buildings. All images used in this report are technical 3D models created using 2D AutoCAD Drawings (floor plans, sections and elevations) and is not 3D visualisation images.

3. Guidance

Where the proposed development has the potential to negatively impact the existing levels of daylight or sunlight on neighbouring properties, a daylight and sunlight assessment must accompany the planning application.

The daylight and sunlight assessment includes the necessary information to meet the criteria outlined in Building Research Establishment report **BRE 209: Site layout planning for daylight and sunlight (Third Edition 2022)**.

It is important to note that the BRE report stresses that the document is provided for guidance purposes only and it is not intended to be interpreted as a strict and rigid set of rules. It also recommends that it may be appropriate to adopt a flexible approach and alternative target values in dealing with “special circumstances” 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”. This is amplified by the following extracts from the introduction (p1, para. 6) and Section 2.2:

“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 designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design”. (p1, para. 1.6)

“In special circumstances the Developer or Planning Authority may wish to use different target values”. (p1, para. 1.6)

“Note that numerical values given here are purely advisory. Different criteria may be used, based upon the requirements for daylight in an area viewed against other site layout constraints. Another important issue is whether the existing building is itself a good neighbour, standing a reasonable distance from the boundary and taking no more than its fair share of light”. (p7 para. 2.2.3)

The examples given in the report can be applied to any part of the country: suburban, urban and rural areas. The inflexible application of the target values given in the report may make reaching the BRE criteria difficult in a tight, urban environment where there is unlikely to be the same expectation of daylight and sunlight amenity as in a suburban or rural environment.

4. Assessment methodology

General

When assessing any potential effects on the surrounding properties, the BRE guidelines suggest that only those windows that have a reasonable expectation of daylight or sunlight need be assessed. In particular the BRE guidelines at paragraph 2.2.2 state:

"The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic buildings where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices."

Further to the above statement, it is considered that the vast majority of commercial properties do not have a reasonable expectation of daylight or sunlight. This is because they are generally designed to rely on electric lighting rather than natural daylight or sunlight.

This report assesses the potential impact of the proposed development in relation to daylight, sunlight and overshadowing on the neighbouring properties. Specifically, it takes into consideration the possible effect and influence that the new development would have on the property and on the amenity area.

The MBS analysis software utilised for the compilation of this report has been accredited by CIBSE and acknowledged by the BRE as a suitable software tool for undertaking daylight, sunlight and overshadowing assessments in accordance with the BRE Good Practice guidelines. The specific IES software modules utilised for this assessment are the following:

- Vertical Sky Components (VSC) and Annual Probable Sunlight Hours/Winter Probable sunlight Hours (APSH/WPSH) can be simulated using MBS.
- No Sky Line (NSL) can be simulated using MBS to test rooms behind windows that are seen to be affected.
- Overshadowing: The amenity is assessed for sunlight access on the 21st of March as per the BRE guidelines.

If a property is considered to have a reasonable expectation of daylight or sunlight the following methodology to assess the impacts has been used.

BRE 209: "Site layout planning for daylight and sunlight"

This section provides a brief description of the calculating methods for the daylight, sunlight and overshadowing to gardens and open spaces criteria presented in BRE Digest 209.

Daylight

The BRE guidelines "Site layout planning for daylight and sunlight" set out methods for assessing the daylight within section 2.

Vertical Sky Component (VSC)

The VSC method measures the amount of light available on the outside plane at the centre of a window, as a ratio (expressed as a percentage) of the amount of total unobstructed sky visible following the introduction of visible barriers such as buildings. The BRE guidelines at paragraphs 2.2.6 and 2.2.7 state:

"Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window." and "If the VSC, with the new development in place, is both less than 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight."

In the assessment, the reduction between existing and proposed situations is expressed as a percentage, where a change in daylight levels above 20% equates to a figure of less than 0.8 times its former value. Assessment points that do not meet the above criteria require further consideration to show the level of impact likely to be incurred.

No Sky Line (NSL)

The No Sky Line method of assessment is a test to indicate the distribution of daylight in a room, taking into account external obstructions and divide those areas of the working plane that can receive direct skylight and those that cannot.

The BRE guidelines suggest that the daylight distribution test is carried out to existing surrounding properties when the internal room arrangements are known. To assess the impact of any reduction the BRE guidelines at paragraph 2.2.9 state:

"If, following construction of a new development, the no sky line moves so that the area of the existing room, which does receive direct skylight, is reduced to less than 0.8 times its former value this will be noticeable to the occupants, and more of the room will appear poorly lit."

Sunlight

The BRE guidelines "Site layout planning for daylight and sunlight" recommend that access to sunlight is assessed with a development proposal. Potential impacts on available sunlight were assessed using the BRE's Annual Probable Sunlight Hours (APSH) method. This method involves the forecasting of sunlight availability throughout the year and in the winter months, for the main window of each habitable room that faces within 90° of due south. The buildings surrounding the site that do not contain windows that face within 90° of due south has been excluded from the sunlight assessment.

The sunlight criteria given within the BRE guidelines have been used as a basis to assess the potential impacts of the development:

"A window may be adversely affected if a point at the centre of the window receives in the year less than 25% of the Annual Probable Sunlight Hours (APSH) including at least 5% of the APSH during the winter months (21st October to 21st March)".

Assessment points that do not meet the above criteria require further consideration to show the level of impact likely to be incurred. To provide a concise and comprehensive indicative analysis, the closest surfaces within the surrounding properties were analysed for both daylight and sunlight.

Property selection criteria for Assessment

In accordance with the BRE Guidelines (Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice, 3rd Edition, 2022), properties are selected for detailed daylight and sunlight assessment only if there is a realistic potential for material impact from the proposed development.

Initial screening is carried out using the following established methods:

- **25-Degree Vertical Angle Test:** If a line drawn from the centre of a ground-floor window to the highest part of the proposed development does not exceed a 25-degree angle from the horizontal, it is generally considered that the development is unlikely to cause a noticeable loss of daylight.
- **45-Degree Plan Angle Test:** For extensions or projections, a 45-degree angle measured in plan from the centre of the nearest window is used to assess whether the new massing could obstruct daylight or sunlight.
- **Separation Distance:** Although not specifically required in the BRE Guidelines, a separation of more than 12 metres is commonly used in practice to identify buildings unlikely to be affected. This distance accounts for the rapid decrease in overshadowing risk with increasing distance.

Properties that pass one or more of these preliminary tests are generally considered not sensitive to the development in daylight/sunlight terms and are therefore excluded from further quantitative analysis, in line with BRE's guidance on proportionality.

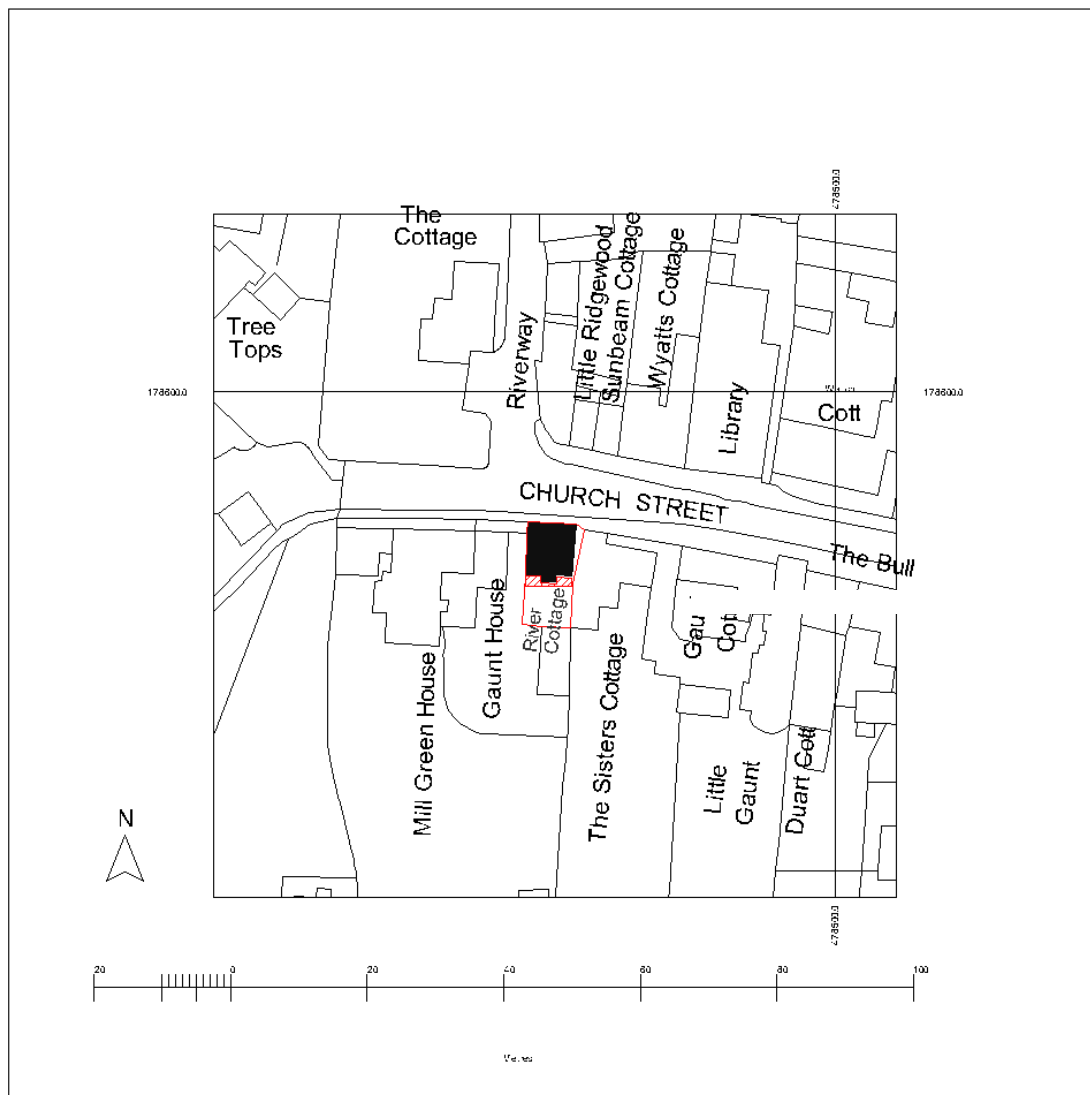
5 Criteria for assessing daylight, sunlight and overshadowing effects

The table 2 is a summary of the criteria to assess daylight, sunlight and overshadowing impacts as per the BRE 209 guidance. Based on that, Syntegra classifies the magnitude of effect according to the ratio.

Magnitude of effect	Criteria		
Beneficial	An improvement ratio > 1.3 of the baseline value		
Negligible/Pass	Daylight A VSC of 27% or above in the proposed scenario with adequate daylight distribution Or A reduction ratio <1.0 and ≥ 0.8 of the baseline value	Sunlight An APSH of 25%, of which 5% are in the winter months Or A reduction ratio <1.0 and ≥ 0.8 of the baseline value	Overshadowing 50% of any amenity areas receiving at least 2 hours of direct sunlight on 21 st March Or A reduction ratio <1.0 and ≥ 0.8 of the baseline value
Minor adverse	A reduction ratio <0.8 and ≥ 0.7 of the baseline value		
Moderate adverse	A reduction ratio <0.7 and ≥ 0.6 of the baseline value		
Major adverse	A reduction ratio <0.6 of the baseline value		

Table 2 Criteria for assessing daylight, sunlight and overshadowing effects

Stanfords Planning Map Data



Production Date: 07 May 2025

Top Left: 478409 178626 Bottom Right: 478509 178526

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Image 1 – Site Location

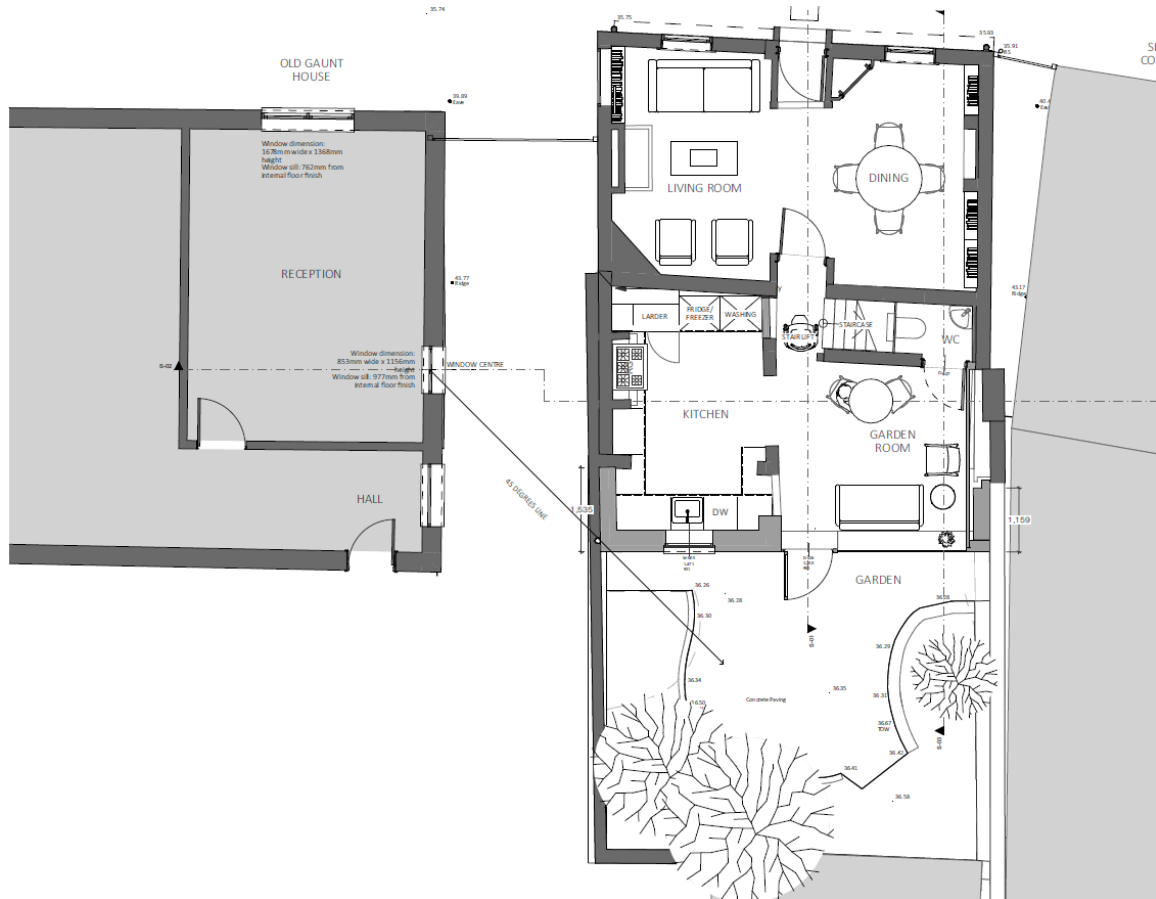


Image 2 – Plan Showing 45-Degree Rule in Relation to Old Gaunt House

In addition to the initial screening criteria outlined in the Methodology including the 25-degree vertical angle, 45-degree plan rule, and separation distance, the following property has been identified as having the potential to be impacted by the proposed development and is therefore included in this daylight and sunlight assessment:

- **Old Gaunt House** (to the west of the proposed development)

This property does not clear the 45-degree plan rule, indicating a reasonable likelihood of impact and warranting further assessment.

6 Daylight Assessment

The daylight results show and compare the external levels of daylight (VSC – Vertical Sky Components) on the neighbouring surfaces with the existing and proposed development.

A summary of results is displayed in the table below. Location of the assessed windows can be found in the appendix section of this report.

Daylight assessment (Surrounding buildings)						
Address	Floor	Assessed Window	Existing VSC>27%	Proposed VSC>27%	Ratio	Result
Gaunt House	Ground	W1	8.94	6.90	0.77	Minor adverse
		W2	38.56	38.56	1	Pass

Table 3 Daylight results (VSC)

Two ground floor windows at Gaunt House were assessed. One window (W2) retains a VSC above the recommended 27% threshold, with no change between the existing and proposed scenarios, and therefore fully complies with BRE guidance. The second window (W1) shows a minor reduction in VSC, from 8.94% to 6.90%, resulting in a VSC ratio of 0.77. This reduction is classified as a *minor adverse* impact.

Given that one of the assessed windows falls below the recommended VSC threshold, a further No Sky Line (NSL) assessment was carried out to evaluate the daylight distribution within the associated room.

No Sky Line (NSL) Assessment

The NSL assessment indicates that the internal room associated with the affected window (Room R1, identified as a reception room) maintains the same level of sky visibility pre- and post-development, with a ratio of 1.00 (98.36% in both scenarios). This confirms that, despite a minor reduction in VSC to one window, the overall daylight distribution within the room remains unaffected.

Daylight assessment (Surrounding buildings)							
Address	Floor	Room No.	Room Use	Existing	Proposed	Ratio	Result
Gaunt House	Ground	R1	Reception Room	98.36%	98.36%	1	Pass

Table 4 Daylight results (NSL)

Therefore, it can be concluded that the proposed development will not have a detrimental impact to the neighbouring daylight availability.

7. Sunlight Assessment (APSH/WPSH)

Where necessary (as defined in the Assessment Methodology section of this report) the Annual Probable Sunlight Hours (APSH) tests have been undertaken.

The table below indicates the likely levels of sunlight on the surfaces of the neighbouring windows with the existing and the proposed development. A summary of results is displayed in the table below. Location of the assessed windows can be found in appendix section of this report.

Sunlight assessment (Surrounding buildings)								
Property	Floor	Assessed Window	Total APSH >25%		Winter APSH >5%		Annual Ratio	Result
			Existing	Proposed	Existing	Proposed		
Gaunt House	Ground	W1	14	9	3	2	0.7	Minor adverse
		W2	N/A	N/A	N/A	N/A	North	Pass

Table 5 Sunlight results (APSH/WPSH)

NOTE: N/A - Not applicable. This is because the sunlight is directional, and the North-facing windows will only receive sunlight at the height of summer at occasional times. As such, pursuant to the BRE guide, North-facing windows are not considered to have a reasonable expectation of sunlight and do not require assessment.

While Window W1 shows a minor adverse reduction in sunlight levels, this impact is considered relevant due to its direct orientation towards the proposed development. However, it is important to note that both W1 and W2 serve the same reception room. Given that W2 remains unaffected and passes the BRE criteria, the room is expected to continue receiving a good level of sunlight.

Therefore, it is concluded that the proposed massing will not adversely affect the level of sunlight the neighbours will enjoy internally.

It should be noted that the values provided in the BRE 209 are for guidance purposes only.

8. Conclusion

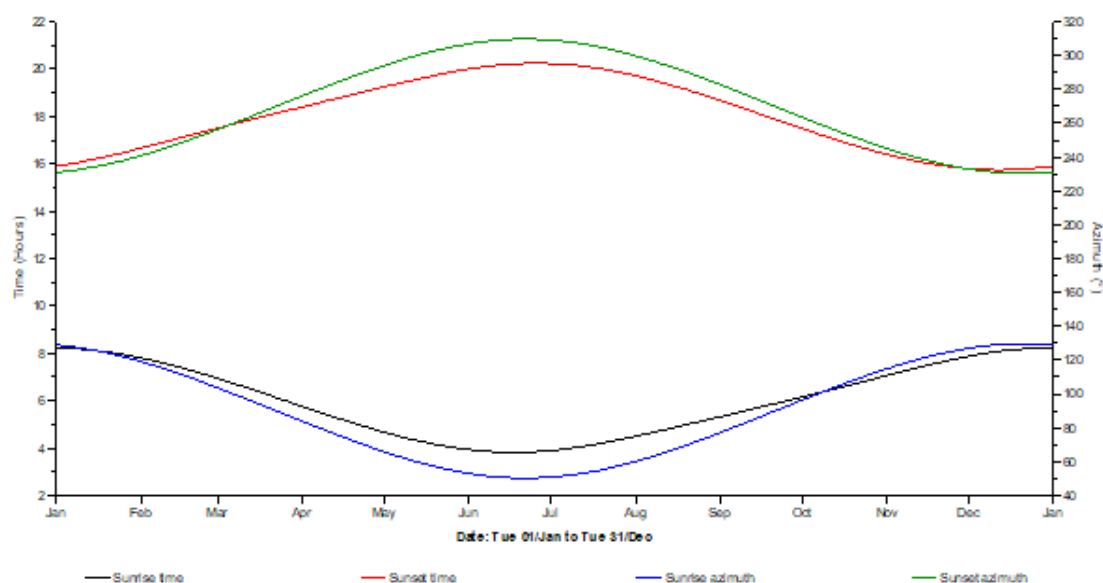
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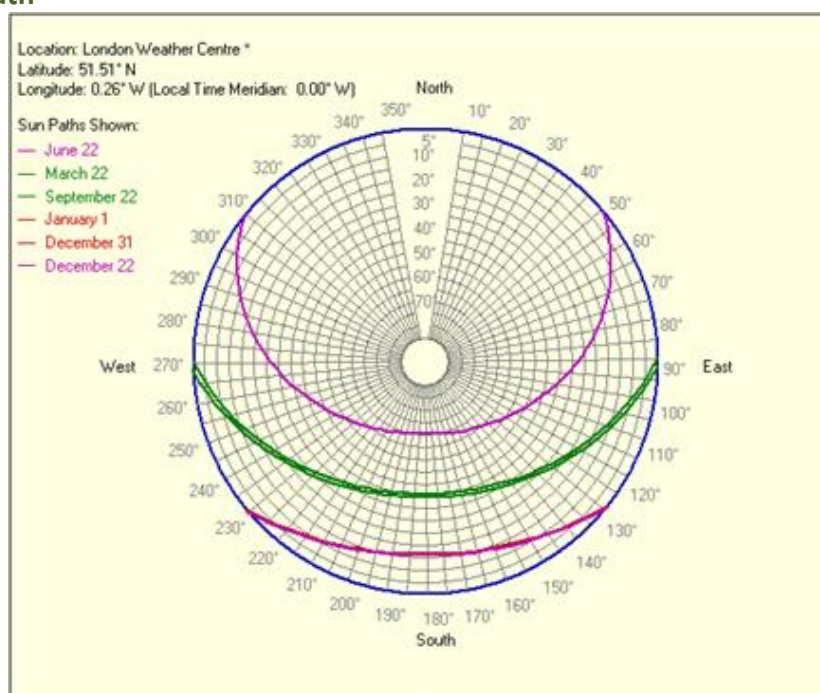
These outcomes demonstrate that the proposed development is entirely in line with the established urban environment, and the overall effect is well within acceptable limits. Therefore, the impacts identified are negligible and will not undermine the amenity of the neighbouring properties or the public realm. Given these positive results, the proposed development is appropriate for planning approval.

9. Appendix

10.1 Sunrise and sunset time



10.2 Sun Path



10.3 Site plan and location

	Location
Latitude (°)	51.43 N
Longitude (°)	-0.04 W

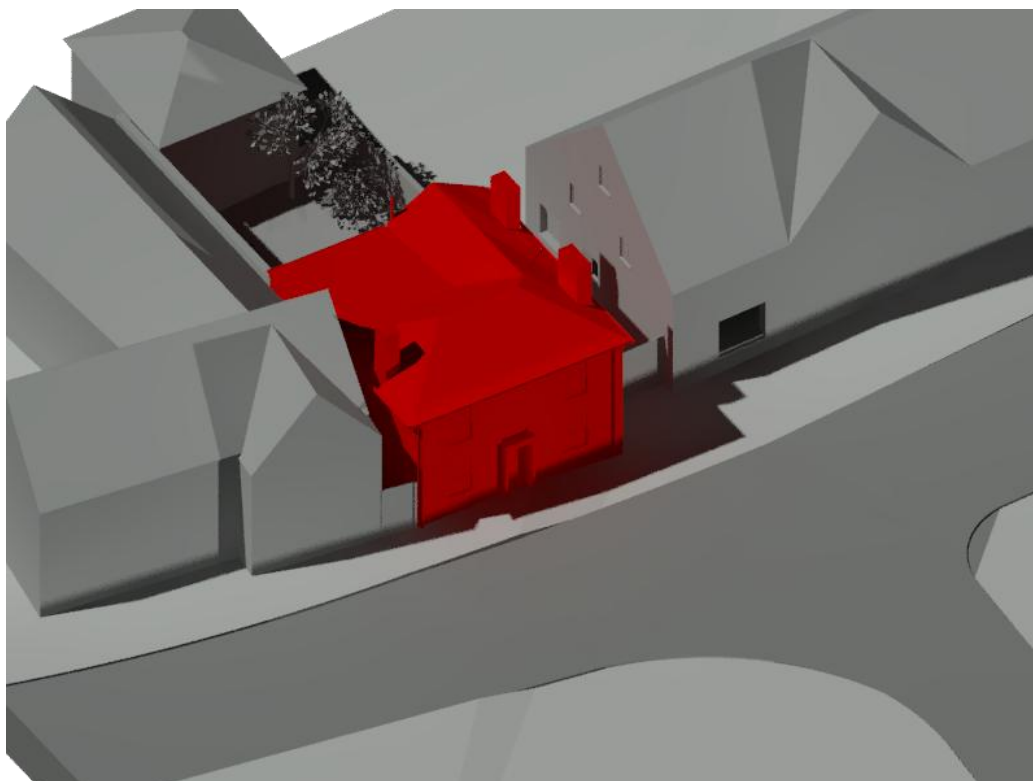


Image 3 – Existing Site 3D

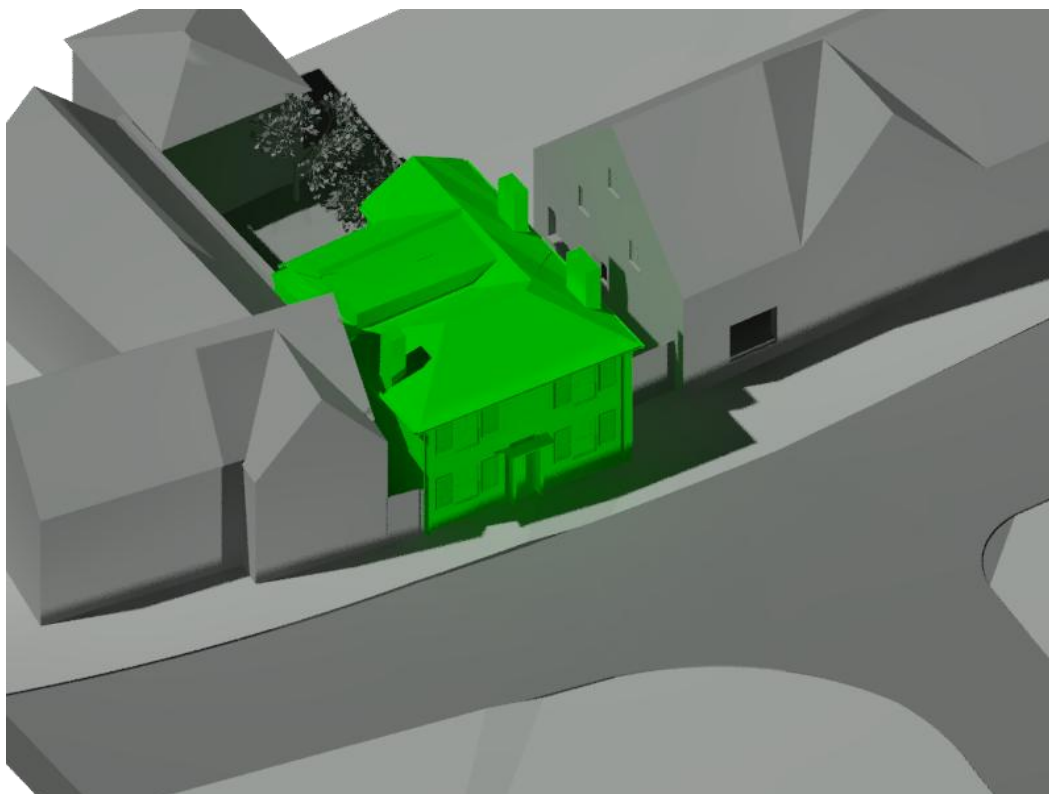


Image 4 – Proposed Site 3D

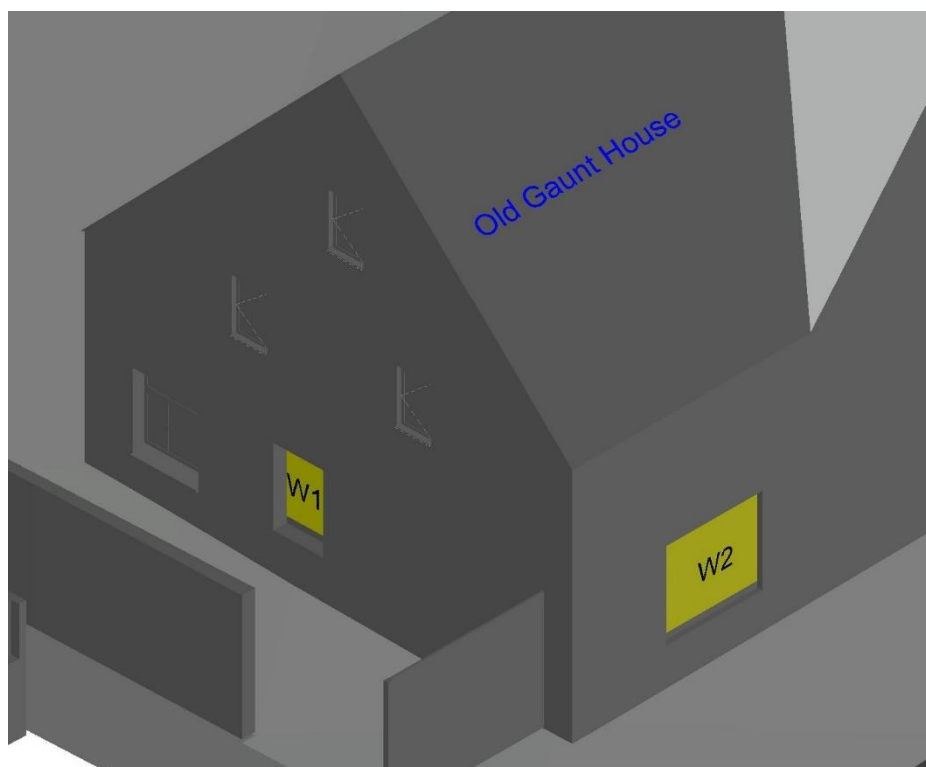


Image 5 – Window Maps for Linton House

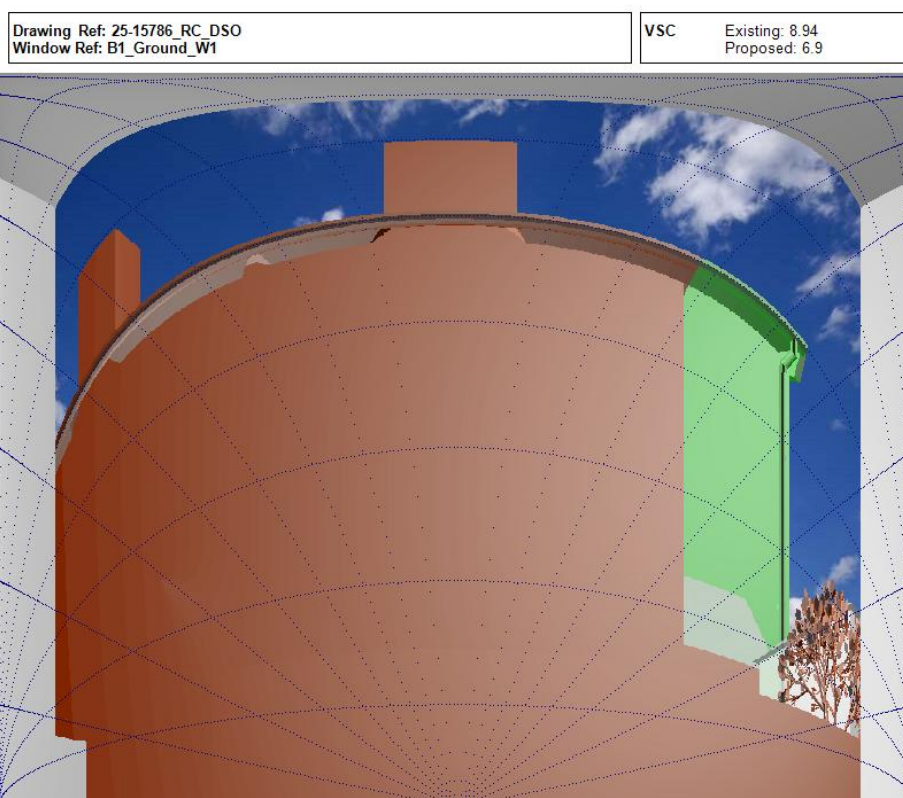


Image 6 – Waldram diagram for W1- Old Gaunt House (**Existing** vs **Proposed**)

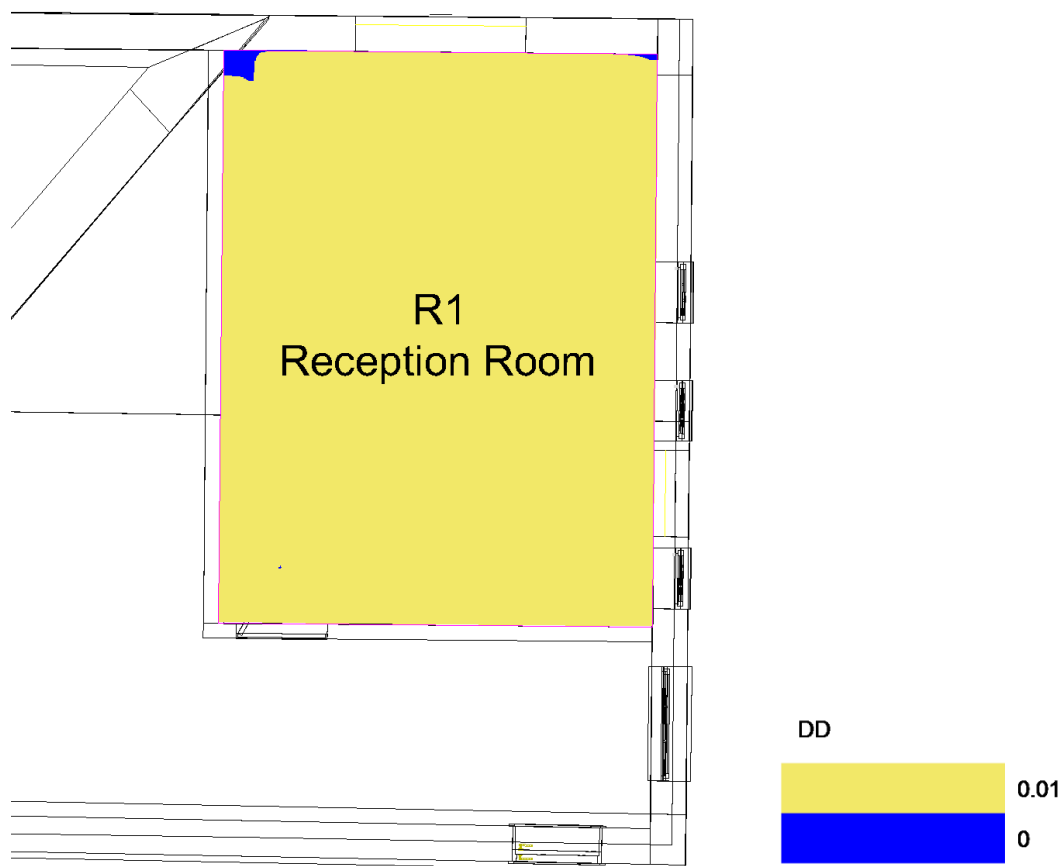


Image 7 – Old Gaunt House – NSL contour