13 Beechwood Avenue
Ruislip HA4 6EG

Daylight/Sunlight Report

19 August 2021

Matthew Craske
For and on behalf of Daylight Sunlight Consulting Ltd

Contents

1. Introduction

1.1 Daylight Sunlight Consulting Ltd has been instructed to provide daylight and sunlight advice with regard to the proposed extension of 13 Beechwood Avenue, Ruislip HA4 6EG.

1.2 We have assessed the effects that the proposed development has on the 11 Beechwood Avenue, as concerns were raised from the neighbours.

1.3 We have been provided with the existing and proposed drawings from Simon Hands and Associates, drawing reference 2021096 01 rev D and attended site to properly understand the relationship between the development site and adjacent properties.

2. Executive Summary

2.1 The assessments to 11 Beechwood Avenue have demonstrated that a good level of daylight and sunlight will be retained in the proposed condition, in accordance with the BRE guidelines.

2.2 There will be no noticeable reduction in daylight or sunlight, and in our opinion, no loss in outlook or visual intrusion.

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 (2011).

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, care homes, student accommodation, hostels, educational classrooms, places of worship and hospital properties. Uses such as hotels and 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 We have undertaken the more comprehensive daylight assessments identified in the BRE guidelines, these being the Vertical Sky Component (VSC) test and Daylight Distribution (DD) test. A more detailed summary of these tests is set out below.

VERTICAL SKY COMPONENT

3.7 The Vertical Sky Component (VSC) test assesses the amount of daylight obtained at the centre point of the external plane of a window. The guidelines state the following: -

"*If this VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component 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*."

3.8 We therefore work on the basis of seeking to achieve 27% VSC in the proposed condition, as it is considered adequate, but where this value is not achieved, reductions of 0.8 times the former value (the same as saying a 20% reduction when compared against the existing condition) is not considered noticeable and therefore not a material effect.

3.9 As the VSC test only assesses daylight reaching the external plane of the window, this shows only the potential for light rather than actual. This is because much depends upon the size of the window, its relationship to the room, the size of the room, and whether there are other windows lighting the same room. Therefore, it is prudent to

assess the daylight distribution assessment at the same time, reviewing both sets of results before forming an opinion on the overall effect.

DAYLIGHT DISTRIBUTION

3.10 The BRE guidelines suggest that daylight distribution assessments can be undertaken where room layouts are known, but we believe it is better to run tests to all of the affected buildings being run for the VSC test, making assumptions on the room configurations if nothing can be found through research. The daylight distribution test establishes the amount of the sky light entering a room at a working plane height of 850mm above floor level, plotting the 'no sky line' area in both the existing (green contour line) and the proposed (red contour line). There is no test of adequacy in just the proposed condition, rather the reduction in light between the existing and proposed is assessed, and where light is reduced to less than 0.8 times its former value (the same as saying a 20% reduction), this will be noticeable to occupants.

Sunlight to existing buildings

3.11 The assessment of sunlight for properties adjacent to a development site are set out in Part 3.2 of the BRE guidelines. As with the daylight assessment, the evaluation of what constitutes a sensitive receptor is essentially where occupants have a reasonable expectation of sunlight. We consider this to be residential accommodation, care homes, student accommodation, hostels, educational classrooms and hospital properties.

3.12 As the opportunity to obtain sunlight is dependent on orientation, it is considered only appropriate to test existing windows that face 90° of due south, as occupants with windows facing due north will not have a reasonable expectation of sunlight.

3.13 The calculation is taken at the centre of each window and is measured in terms of the percentage of Annual Probable Sunlight Hours (APSH). The guidelines suggest the following targets: -

"If this window reference point can receive more than one quarter of APSH, including at least 5% of APSH in the winter months between 21st September and 21st March, then the room should still receive enough sunlight…Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months (21 September to 21 March), then the occupants of the existing building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH..."

3.14 To summarize the above, a good level of sunlight to a window is 25% APSH, of which 5% should be in winter months in the proposed condition. Where sunlight levels fall below the suggested level, a comparison with the existing and proposed is undertaken. A noticeable amount of sunlight will occur if:

- the reduction is less than 0.8 times its former value (the same as a 20% reduction), for both or one of the annual and winter APSH levels; and
- has a reduction in sunlight received over the whole year greater than 4% APSH

4. Affected adjoining properties

4.1 Having attended site and reviewed the site and neighbouring property, 11 Beechwood Avenue, we have undertaken technical assessments, the results of which are set out in more detail below.

11 Beechwood Avenue

4.2 This is located to the west of the proposed extension and is a two-storey residential property. The ground floor rear elevation has a bay window adjacent to the proposed extension, which is considered to serve a dining room area/living room area. There is an existing rear extension to 13 Beechwood Avenue that already has some effect on 11 Beechwood Avenue, as shown below.

4.3 As the properties in the immediate vicinity were built around the same time, we obtained a layout plan for one of the neighbouring properties from the planning portal, utilising the existing layout plan to plot the room and window position.

4.4 The Vertical Sky Component (VSC) results show that of the 3 windows tested, 2 adhere to the BRE guidelines, obtaining VSC levels of 27% or higher in the proposed

condition. The remaining window W1, is the side pane of the bay window and achieves a ratio reduction of 0.79, which is just below the ratio reduction target of 0.8. It should also be noted that the BRE guidelines state that when assessing the VSC, "*For a bay window, the centre windows facing directly outwards can be taken as the main window*". The central bay window, referenced window W2, exceeds the suggested 27% VSC level by obtaining a value of 34.20% in the proposed condition.

4.5 The daylight distribution results show that the dining room adheres to the BRE guidelines, by obtaining ratio reductions of 0.8 or higher. The dining rooms instead obtains a ratio reduction of 1.0, which is no change at all from the existing condition.

4.6 The Annual Probable Sunlight Hours (APSH) tests are not required for windows W2 and W3, as they face 90 degrees of due north. Window W1 has been tested, with the results showing no change in the sunlight conditions between the existing and proposed configurations, and therefore adhere to the BRE guidelines.

4.7 Whilst the proposed extension adheres to the BRE guidelines, ensuring there will be no noticeable reduction in daylight or sunlight, a review of the proposed extension with a projection of 3.6m from the rear building line was undertaken, rather than the proposed 4.0m. The 3.6m extension showed no difference in the daylight and sunlight levels to that of the 4.0m extension, so by having the slightly longer extension, there is no detrimental effect to the light to 11 Beechwood Avenue.

4.8 Concern was also raised regarding the potential for the proposed extension to be visually intrusive, causing a loss of outlook. Whilst there are no tests set out in the BRE guidelines for these matters, we have considered the matter for the proposed extension. The ground floor window to the rear of 11 Beechwood Avenue is a bay window, and thus affords a far more panoramic view from inside the room. There is already an extension to 13 Beechwood Avenue, which the occupants of No.11 already experience. In addition, and as can be seen from the photograph attached on page 9, there is an extensive amount of foliage from planting on the boundary.

The proposed extension is only marginally increasing the existing extension height, so will not cause additional intrusion on the outlook, and with the removal of the planting/foliage, there will be a greater degree of outlook for the occupants within 11 Beechwood Avenue. Notwithstanding the changes to the immediate boundary condition, the occupants of 11 Beechwood Avenue have an extensive outlook into their own rear garden which will remain unfettered.

4.9 We therefore conclude that not only will the occupants of 11 Beechwood Avenue obtain high levels of daylight with the proposed extension in place, there will be no noticeable reduction in daylight or sunlight. In our opinion there will be no loss of outlook or visual intrusion with the proposed extension, being no different to the existing condition, whereby the occupants will maintain a good panoramic view from their dining room.

5. Summary and conclusions

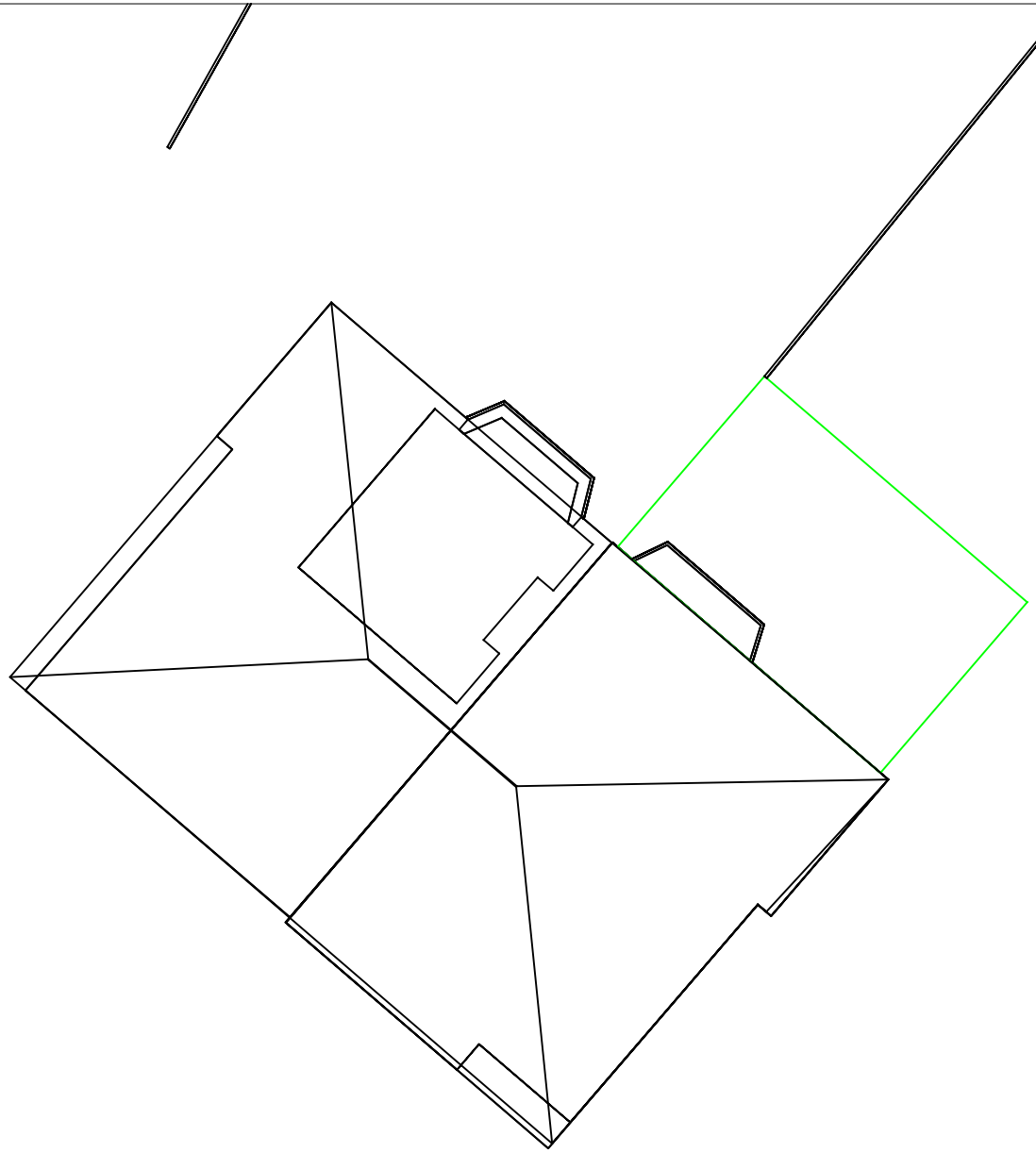
5.1 The assessments to 11 Beechwood Avenue have demonstrated that a good level of daylight and sunlight will be retained in the proposed condition, in accordance with the BRE guidelines.

5.2 There will be no noticeable reduction in daylight or sunlight, and in our opinion, no loss in outlook or visual intrusion. Therefore the proposed extension is acceptable, meeting the expectations set out in the BRE guidelines.

Appendix 1

Plan and 3D views of the development site

Plan View



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.

EXISTING

PROPOSED

REV:	NOTES:	DRWN:	DATE:

DAYLIGHT SUNLIGHT CONSULTING

Bourbon Court
Nightingales Corner
Little Chalfont
Buckinghamshire
HP7 9QS
Tel: 07943 182 548
www.dsconsult.co.uk

CLIENT:
Mr V Thiagarajan

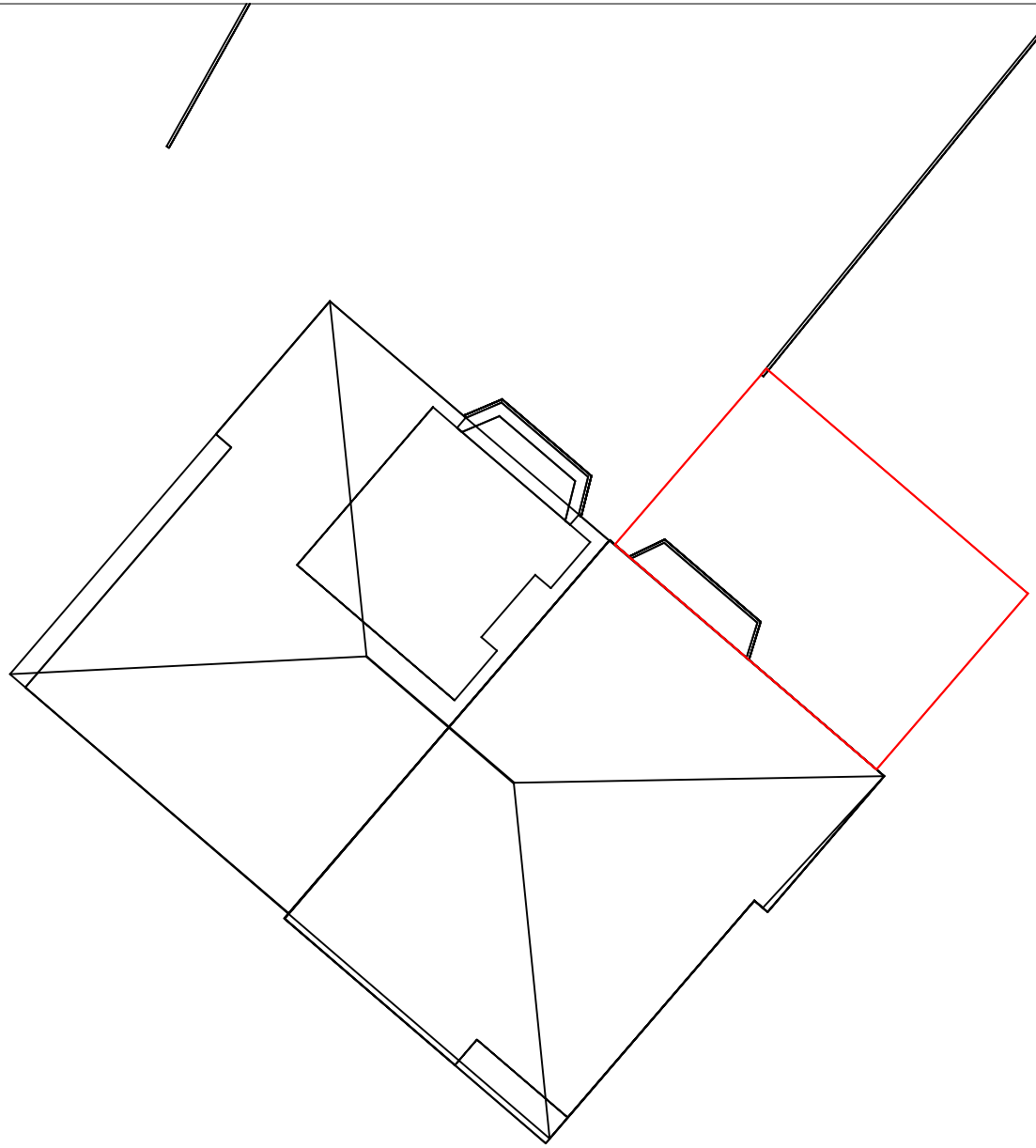
PROJECT:
13 Beechwood Avenue
Ruislip
HA46EG

DRAWING TITLE:
Existing Plan View

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Aug 21	CHECKED:	

DRAWING NUMBER:	REV:
BA-01-01	-

Plan View



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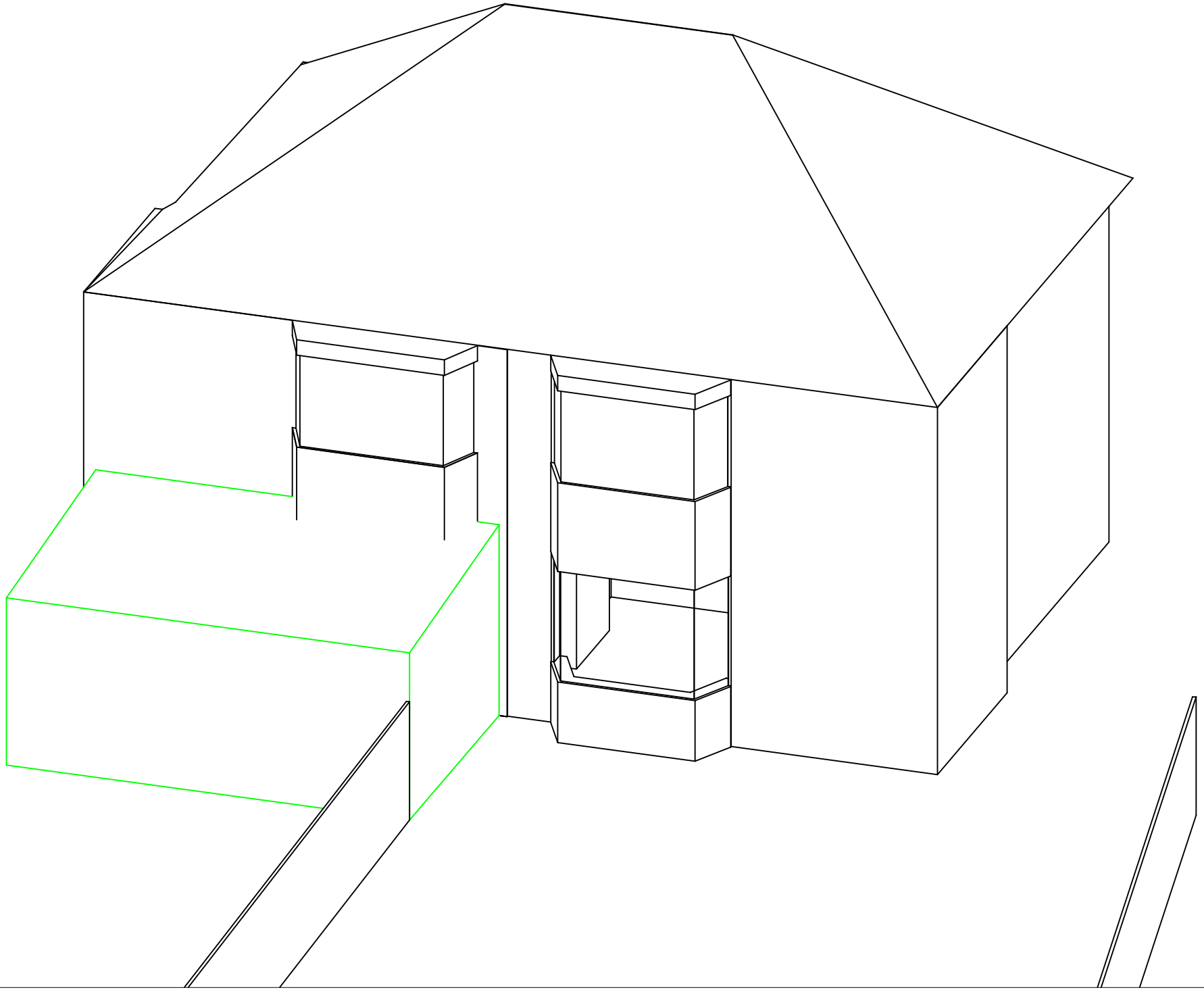
DRAWING TITLE:
Proposed Plan View

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Aug 21	CHECKED:	

DRAWING NUMBER:	REV:
BA-01-02	-

3d View



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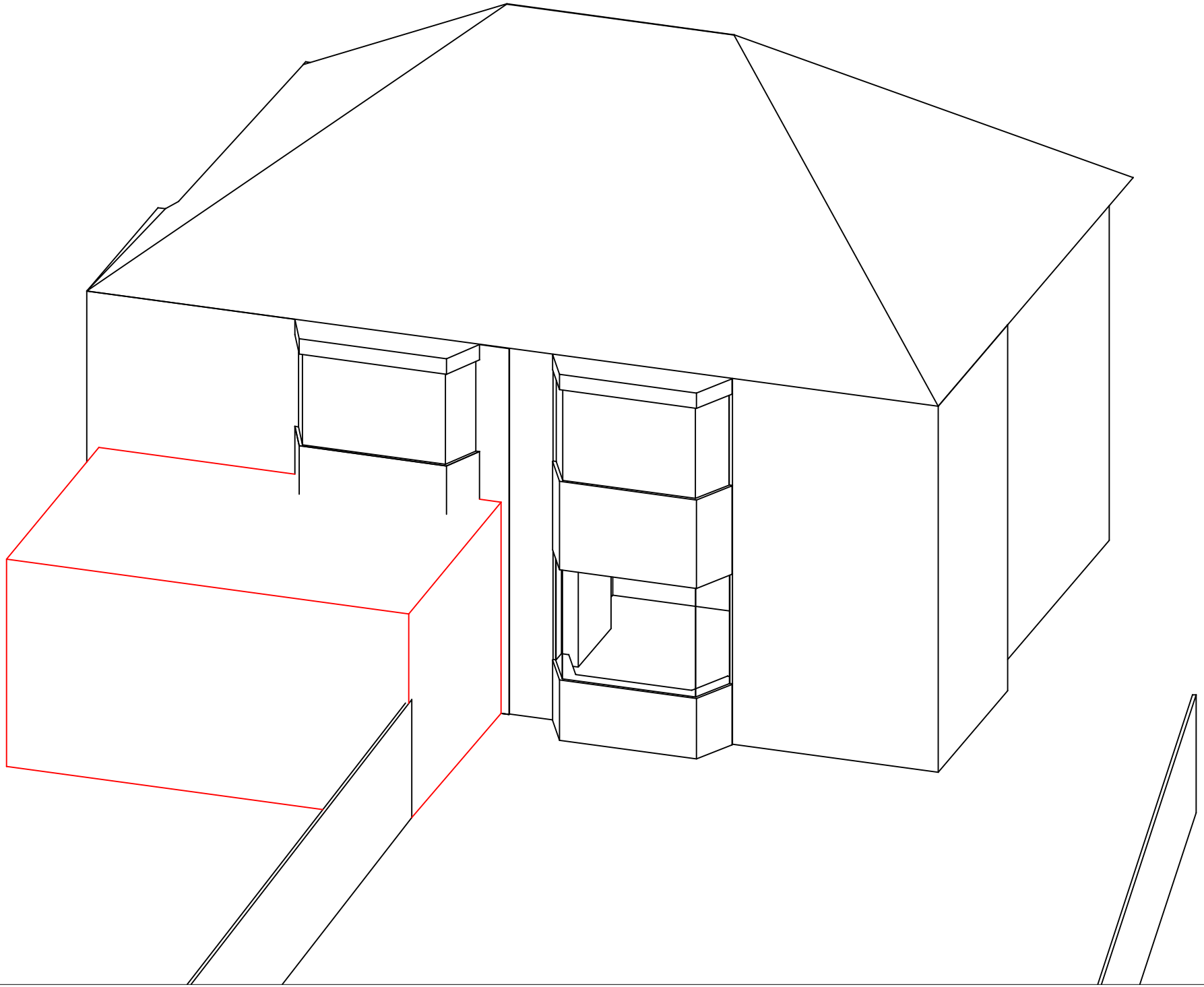
DRAWING TITLE:
Existing 3d View

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Aug 21	CHECKED:	

DRAWING NUMBER:	REV:
BA-01-03	-

3d View



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DRAWING TITLE:
Proposed 3d View

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Aug 21	CHECKED:	

DRAWING NUMBER:	REV:
BA-01-04	-

Appendix 2

Vertical Sky Component + Annual Probable Sunlight Hours Results

Project Name: 13 Beechwood Avenue
Project No.: 1
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 18/08/2021

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Annual	Pr/Ex	Winter	Pr/Ex
11 Beechwood Avenue											
	R2	Residential	Dining Room	W1	Existing	13.03	0.79	0.00	1.00	0.00	1.00
					Proposed	10.25		0.00		0.00	
				W2	Existing	35.70	0.96		*North*		*North*
					Proposed	34.20					
				W3	Existing	29.66	1.00		*North*		*North*
					Proposed	29.66					

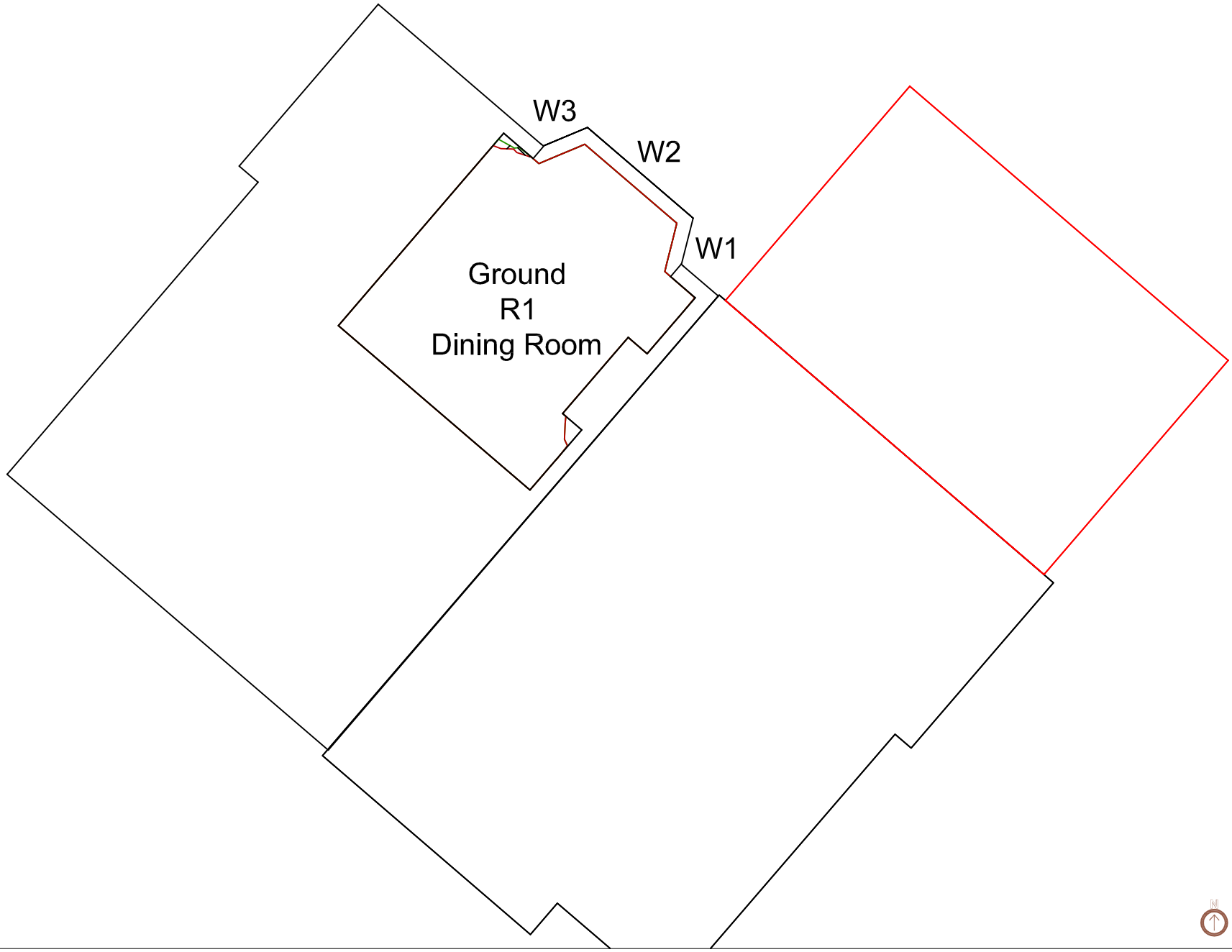
Appendix 3

Daylight Distribution Results

Project Name: 13 Beechwood Avenue
Project No.: 1
Report Title: Daylight Distribution - Neighbour Analysis
Date of Analysis: 18/08/2021

Floor Ref.	Room Ref.	Room Attribute	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex
11 Beechwood Avenue								
Ground	R1		Dining Room	Area m2	13.61	13.53	13.50	
				% of room		99%	99%	1.00

Ground Floor
11 Beechwood Avenue



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EXISTING LIGHT CONTOUR

PROPOSED LIGHT CONTOUR

LIGHT REDUCTION

REV:	NOTES:	DRWN:	DATE:

DAYLIGHT SUNLIGHT CONSULTING

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CLIENT:
Mr V Thiagarajan

PROJECT:
13 Beechwood Avenue
Ruislip
HA46EG

DRAWING TITLE:
Daylight Distribution Contours

SCALE @ A1:	DATE:	DRAWN:	MC
NTS	Aug 21	CHECKED:	

DRAWING NUMBER:	REV:
BA-01-05	-

DAYLIGHT SUNLIGHT
CONSULTING

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