REPORT

45 PILGRIMS LANE
HAMPSTEAD
LONDON NW3

DAYLIGHT & SUNLIGHT

BVP
BROOKE VINCENT + PARTNERS

RICS

Doc Ref: 8288/Report/45 Pilgrims Lane Daylight & Sunlight/fr

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BVP
BROOKE VINCENT + PARTNERS

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Crawford Partnership
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London N10 3TH

Our Ref: JC/FR/8288

Date: 14th June 2007

Dear Sirs

45 Pilgrims Lane, London NW3

Daylight & Sunlight

We are instructed to report upon the daylight and sunlight aspects of this Planning Application, in relation to the neighbouring residential properties fronting Willow Lane and Pilgrims Lane.

Our report is based upon the scheme drawings prepared by Crawford Partnership, site inspection and measurement, plus daylight/sunlight studies of relevant buildings.

1.0 SUMMARY

1.1 This report has been drafted by reference to the Building Research Establishment (BRE) publication, *"Site layout planning for daylight and sunlight. A guide to good practice"*, and the requirements of the London Borough of Camden's Unitary Development Plan (UDP).

1.2 Consideration is given to the residential properties in Willow Lane and Pilgrims Lane.

1.3 Neighbouring property facing the development in Pilgrims Lane and numbered 8 and 13 and above in Willow Lane will retain acceptable levels of daylight and there will be no adverse effect.

1.4 A number of windows to Nos. 10, 11 and 12 Willow Lane and 43 Pilgrims Lane fall below the suggested 27% VSC recommended by the BRE guidance or are less than 0.8 times its former VSC value. These windows require further analysis to establish the Average Daylight Factor (ADF) and alternative sources of daylight which we are certain exist in several cases.

1.5 The windows reviewed for daylighting in Willow Lane, on the opposite side of Pilgrims Lane and in the rear elevation of 43 Pilgrims Lane, do not face within 90° of south. They can no have no expectation of sunlight availability and there is nothing for this report to consider.

1.6 The windows in the rear extension of 43 Pilgrims Lane will have reduced sunlight hours but, in our view, sunlight is not of significant importance to these rooms which do not appear to be primary living accommodation.

Yours faithfully

John Carter FRICS
for BROOKE VINCENT + PARTNERS

email: john.carter@brooke-vincent.co.uk

2.0 INTRODUCTION

2.1 This report is based upon the application drawings of Crawford Partnership.

2.2 The London Borough of Camden's Unitary Development Plan (UDP) confirms the need to retain adequate daylight and sunlight to residential buildings and makes specific reference to the good practice guide detailed below.

2.3 We confirm all calculations and considerations within this report are based upon the Building Research Establishment (BRE) publication *"Site Layout Planning for Daylight and Sunlight. A guide to good practice."* This Guide does not contain mandatory requirements, but in the Introduction provides a full explanation of its purpose:

"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."

"It aims 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."

"In special circumstances the developer or planning authority may wish to use different target levels. For example, in an historic city centre, a high degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."

2.4 Reference is made in the BRE report to various methods of assessing the effect a development will have on diffused daylight.

2.5 The simplest methods are not appropriate in an urban environment, where the built form is invariably complex. Vertical Sky Component (VSC) is the calculation most readily adopted, as the principles of calculation can be established by relating the location of any particular window to the existing and proposed, built environment.

2.6 The BRE Guide states *"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffused daylighting of the existing building may be adversely affected.*

This will be the case if the Vertical Sky Component measured at the centre of an existing main window is less than 27% and less than 0.8 times its former value".

3.0 DAYLIGHT

3.1 Generally

3.1.1 Daylight is not specific to a particular direction, as it is received from the dome of the sky. It is therefore necessary to consider all neighbouring residential property facing the reference site.

3.1.2 We define below the properties that neighbour the site and define the location of the windows we have further considered by calculating VSC. For each window the location number is followed by the floor level.

3.1.3 The Waldram diagrams we refer to in Appendix 2 are produced by our specialist software and are based on the 3D computer aided design model seen in Appendix 1. This recreates the existing and proposed buildings within their urban environment. The Waldram diagrams define a two-dimensional view of the development site and adjoining property, seen from each neighbouring window.

3.1.4 You will notice the outline of these buildings follows what are known as "droop lines" which are based upon a mathematical formula, devised by Percy Waldram early in the 20th century, to measure the visible parts of a three-dimensional sky in two-dimensional format. Thus, green defines the existing neighbouring buildings, magenta the property to be demolished and blue the proposed. The areas that remain white are the visible, measured, sky.

3.2 Willow Lane

3.2.1 To the north east of the site is the rear face of a terrace of buildings fronting Willow Lane. We refer you to the window location plan and model in Appendix 1 and the daylight studies in Appendix 2. The results are detailed below for ease of reference.

Window	Existing VSC	Proposed VSC	Ratio of Proposed/Existing
Willow Lane			
W1_-1	27.0	25.1	0.93
W1_0	31.8	29.8	0.94
W2_-1	26.8	24.9	0.93
W2_0	31.5	29.0	0.92
W3_-1	25.7	22.8	0.88
W3_0	30.6	26.5	0.87
W4_-1	25.0	21.7	0.87
W4_0	30.1	25.1	0.83
W5_-1	24.4	18.2	0.78
W5_0	29.1	22.8	0.75

Willow Lane cont'd			
W6_-1	25.0	15.3	0.61
W6_0	28.7	18.8	0.66
W7_-1	19.2	13.2	0.69
W7_0	26.4	18.7	0.71
W8_-1	19.9	12.3	0.62
W8_0	28.8	18.1	0.63
W9_-1	18.5	12.6	0.68
W9_0	30.8	23.2	0.75
W10_-1	21.6	15.1	0.70
W11_-1	22.9	20.5	0.89
W12_-1	23.4	20.2	0.86
W12_0	33.7	28.3	0.84
W13_-1	27.9	26.1	0.94
W14_-1	28.9	26.7	0.93

3.2.2 The properties in Willow Lane run diagonally across the rear of the site and those numbered 15 and above have windows in their rear elevation that will continue to receive unobstructed daylight as they face onto properties well to the rear of the proposed building. These properties will not be considered further.

3.2.3 We have undertaken an analysis of the rear facing windows to Nos. 8-14 inclusive. Item 2.6 of this report, by reference to BRE guidance, confirms that there will be no adverse effect when the proposed VSC remains at or above 27%. Good daylight will therefore be retained by the ground floor windows and above to Nos. 9 and 14, and the ground floor window numbered W4_0 to No. 13.

In cases where the VSC is below 27%, BRE guidance confirms that there will be no adverse effect when the ratio of proposed and existing VSC is at least 0.8 times its former value. Using this measurement, acceptable daylight will therefore be retained by all of the remaining windows within Nos. 13 and 14 Pilgrims Lane and also Nos. 8 and 9.

3.2.4 Our analysis of the windows to Nos. 10, 11, 12 and 13 Willow Lane indicates that purely on the measurement of the proposed VSC and the ratio of proposed to existing, windows at the lower levels do not achieve either a 27% VSC or a ratio of 0.8 and above although W5_0 is so close to 0.8 that it must be considered borderline. It is therefore our recommendation that an alternative calculation should be adopted to establish the Average Daylight Factor (ADF) of these windows, as set out in Appendix C of the BRE guidance. To accurately establish these figures necessitates the inspection and measurement of the rooms lit by these windows. Among other things, we would expect this exercise to reveal that the windows numbered W7_0, W7_-1 and W10_-1 all receive light from an alternative source and will remain well lit.

3.3 Pilgrims Lane

3.3.1 To the south west of the site are windows in the front elevation of properties on the opposite side of Pilgrims Lane, numbered 60-66 inclusive. On the north west side of the site and immediately abutting it is No. 43 Pilgrims Lane, which has windows contained within its rear elevation and rear extension facing towards the proposed development. We have reviewed a large number of windows, all as defined on the window location plan and model in Appendix 1 and as further detailed on the daylight studies in Appendix 2. The results are detailed below.

Window	Existing VSC	Proposed VSC	Ratio of Proposed/Existing
Pilgrims Lane			
Nos. 60-66			
W1_-1	27.2	25.6	0.94
W1_0	31.6	29.7	0.94
W2_-1	25.9	24.2	0.93
W2_0	30.0	28.0	0.93
W3_-1	25.6	24.2	0.94
W3_1	29.6	27.9	0.94
W4_-1	26.1	25.2	0.97
W4_0	30.2	29.3	0.97
No.43			
W5_2	13.9	10.9	0.79
W5_3	17.7	13.0	0.74
W6_2	12.5	6.1	0.49
W6_3	18.8	9.2	0.49
W7_1	23.5	18.0	0.76

3.3.2 This exercise has shown that for the windows to ground floor level and above to the properties on the other side of Pilgrims Lane, the proposed VSC remains at or above 27% and good daylight will be retained. To the same properties at lower ground floor level, although the proposed VSC will fall below the 27% figure, the ratio of proposed to existing VSCs exceeds 0.8. None of the windows on the opposite side of Pilgrims Lane will suffer an adverse effect.

3.3.3 The windows in the rear elevation and rear extension of 43 Pilgrims Lane will have a proposed VSC of less than 27% and the ratio between the proposed and existing will be less than 0.8 times its former value although W5_2 must be considered borderline. Again, we consider that it will be necessary for us to gain access to this property to calculate ADF figures and in undertaking this exercise we would expect that it would be revealed that a number of the rooms served by windows in this part of the building are bathrooms or have alternative sources of light, either from windows in other elevations or rooflights receiving light from the high sky dome.

The ground floor extension of this property contains a number of rooflights again receiving light from the high sky dome but none within the boundary wall itself. The layout of this extension would suggest that it must be receiving a source of light from an alternative and unestablished direction.

3.4 **Daylight Summary**

3.4.1 Neighbouring property facing the development in Pilgrims Lane and numbered 8 and 13 and above in Willow Lane will retain acceptable levels of daylight and there will be no adverse effect.

3.4.2 A number of windows to Nos. 10, 11 and 12 Willow Lane and 43 Pilgrims Lane fall below the suggested 27% VSC recommended by the BRE guidance or are less than 0.8 times its former VSC value. These windows require further analysis to establish the ADF and alternative sources of daylight which we are certain exist in several cases.

4.0 SUNLIGHT

4.1 Generally

4.1.1 The BRE *Guide to Good Practice* confirms:

(i) Sunlight is only relevant to neighbouring residential windows which have a view of the proposed development and face within 90° of south.

(ii) If any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of a main living room window, in a vertical section perpendicular to the window, then the sunlighting in the existing dwelling may be adversely affected.

(iii) Similarly, the sunlighting of the existing dwelling may be adversely affected if the centre of the window receives less than 25% of the annual probable sunlight hours, of which 5% of the annual total should be received between 21st September and 21st March (winter) and less than 0.8 times its former sunlight hours during either period.

4.2 Willow Lane

4.2.1 None of the windows to the Willow Lane properties face within 90° of south. They can have no expectation of sunlight availability and there is nothing for this report to consider.

4.3 Pilgrims Lane

4.3.1 None of the windows to Nos. 60-66 Pilgrims Lane on the opposite side of the road face within 90° of south. They can have no expectation of sunlight availability and there is nothing for this report to consider.

4.4 43 Pilgrims Lane

4.4.1 The windows in the main rear elevation of this property do not face within 90° of south. Again, they can have no expectation of sunlight availability and there is nothing for this report to consider.

4.4.2 The windows to this property contained within the rear extension facing south east will be obstructed by the new building such that they receive sunlight that is less than 25% of the annual probable sunlight hours and less than 0.8 times its former value. These rooms are of secondary importance within the house, appear to be substantially bathrooms, lavatories, kitchens or bedrooms and the BRE guidance advises that they need not be checked. We are therefore of the opinion that the loss of sunlight is acceptable in these circumstances.

4.5 Sunlight Summary

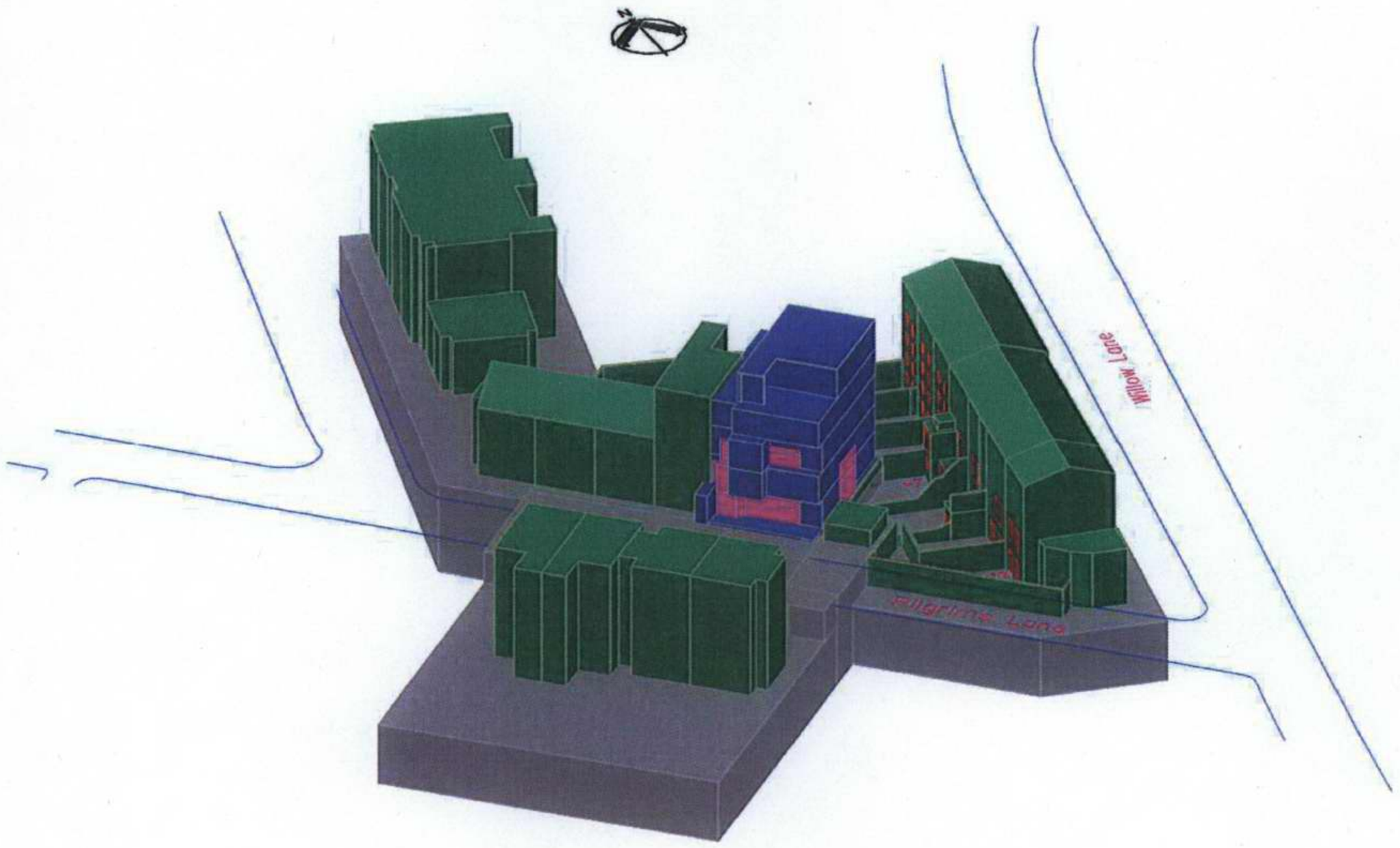
4.5.1 The windows reviewed for daylighting in Willow Lane, on the opposite side of Pilgrims Lane and in the rear elevation of 43 Pilgrims Lane do not face within 90° of south. They can no have no expectation of sunlight availability and there is nothing for this report to consider.

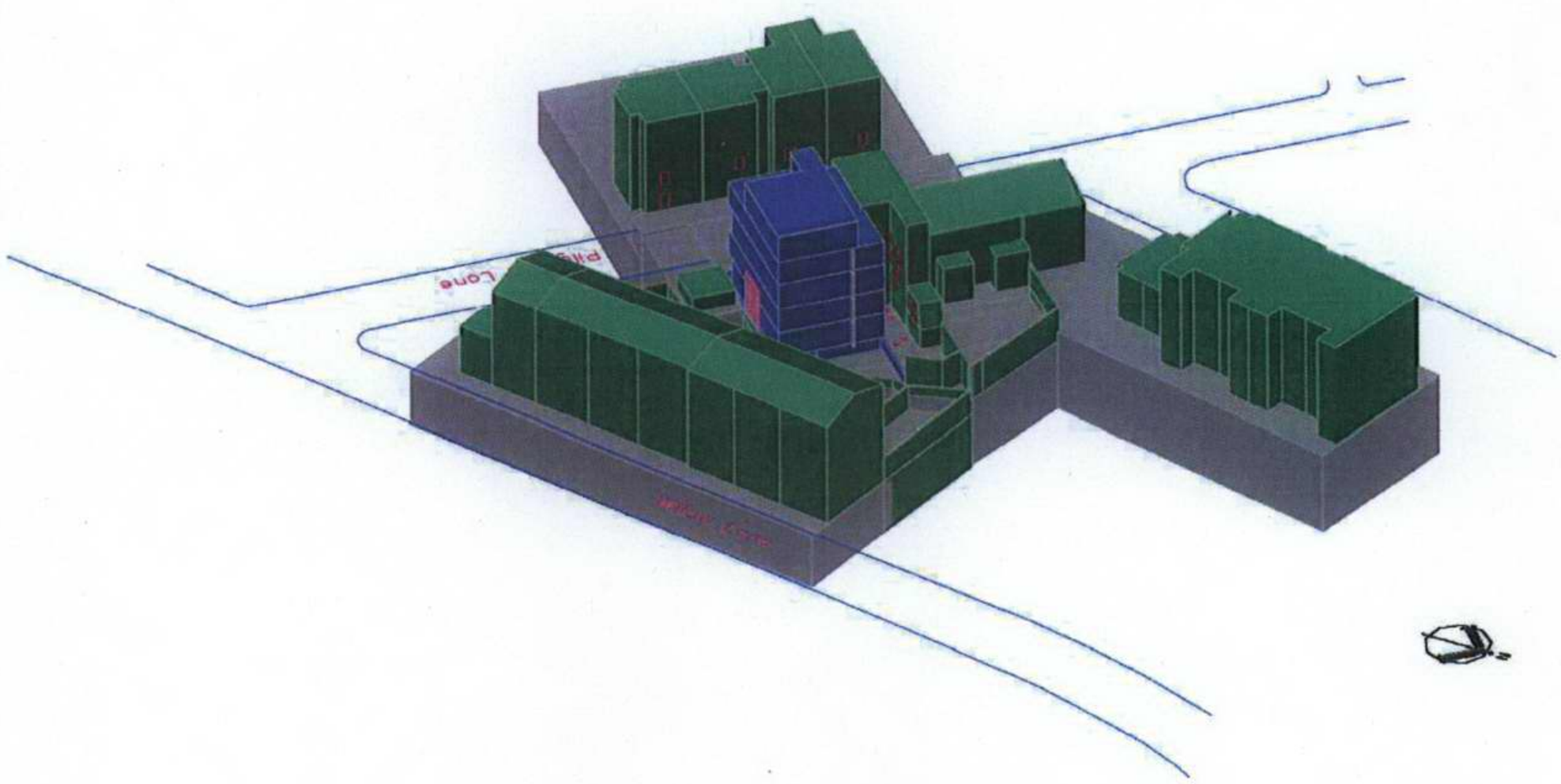
4.5.2 The windows in the rear extension of 43 Pilgrims Lane will have reduced sunlight hours but, in our view, sunlight is not of significant importance to these rooms which do not appear to be primary living accommodation.

APPENDIX 1

LOCATION PLAN
AND
CAD MODEL


N
Willow Lane
Pilgrims Lane

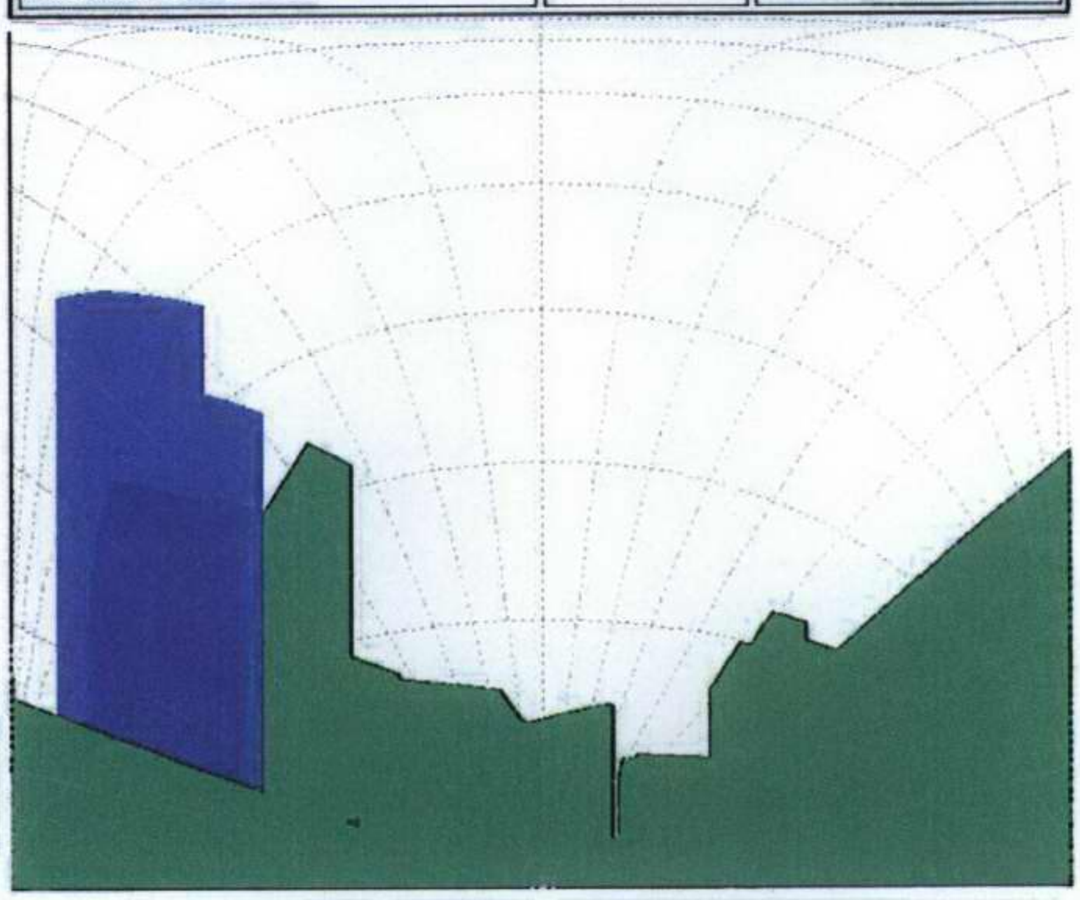

Willow Lane
Pilgrims Lane


Lane

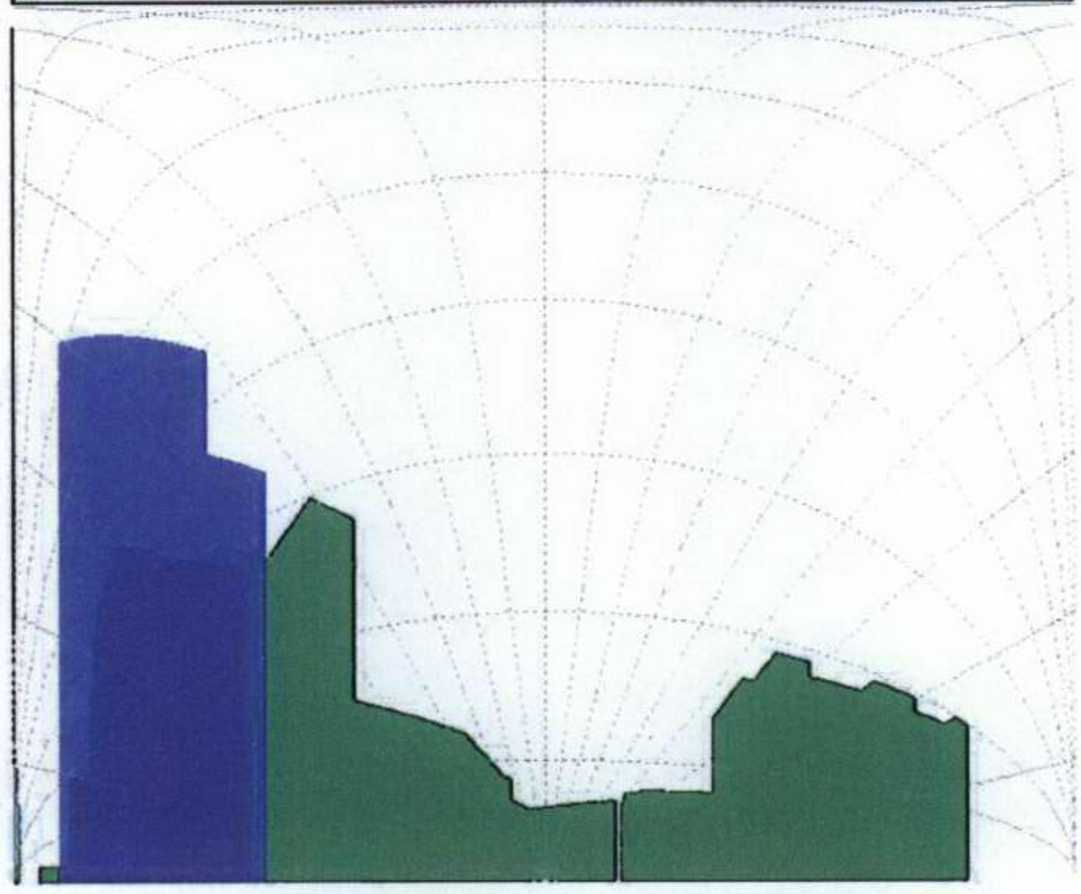
APPENDIX 2

DAYLIGHT STUDIES

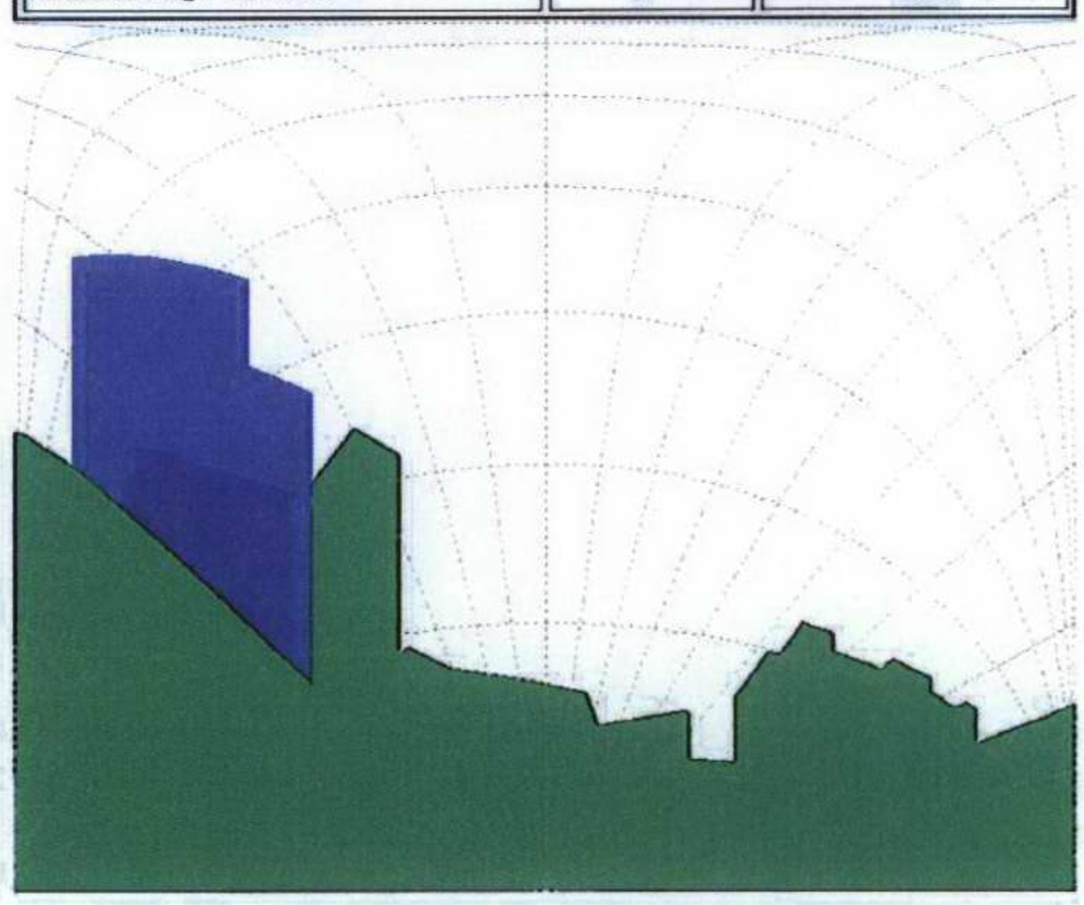
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w1_-1 - Willow Lane	**VSC:** Existing 26.95 Proposed 25.10	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a



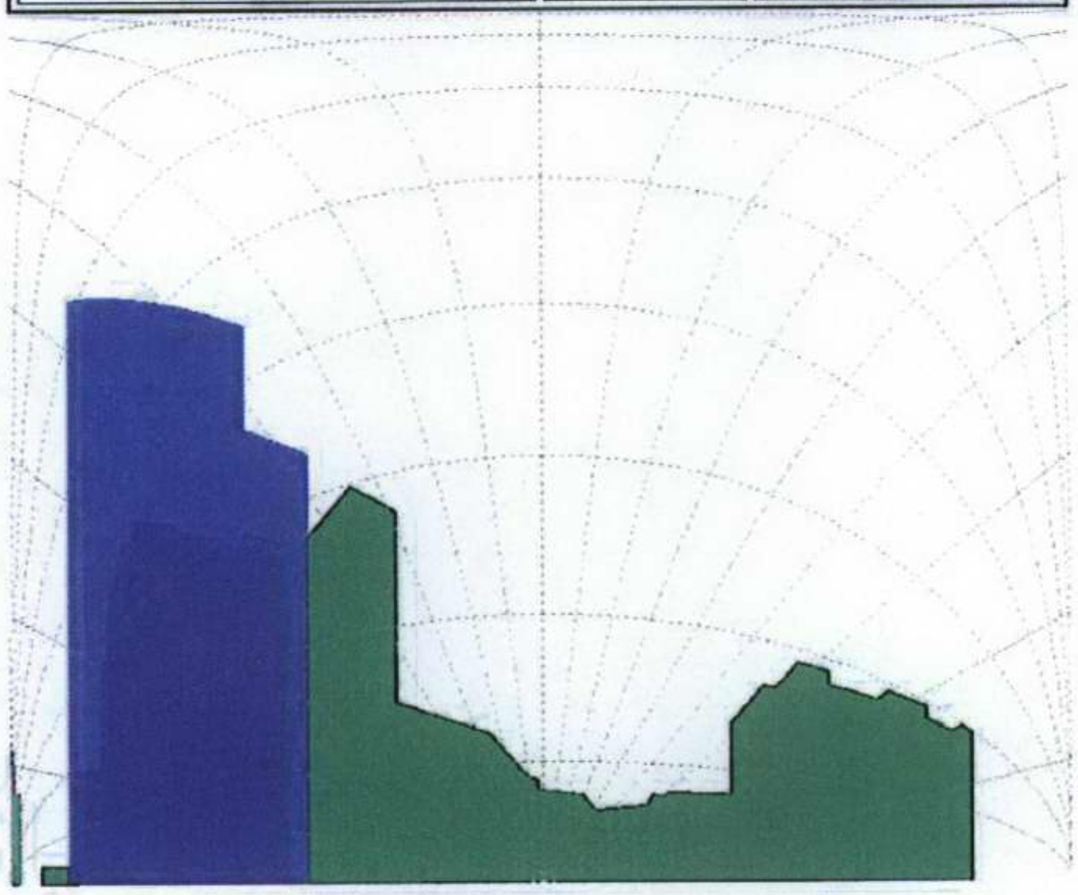
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w1_0 - Willow Lane	**VSC:** Existing 31.82 Proposed 29.84	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a



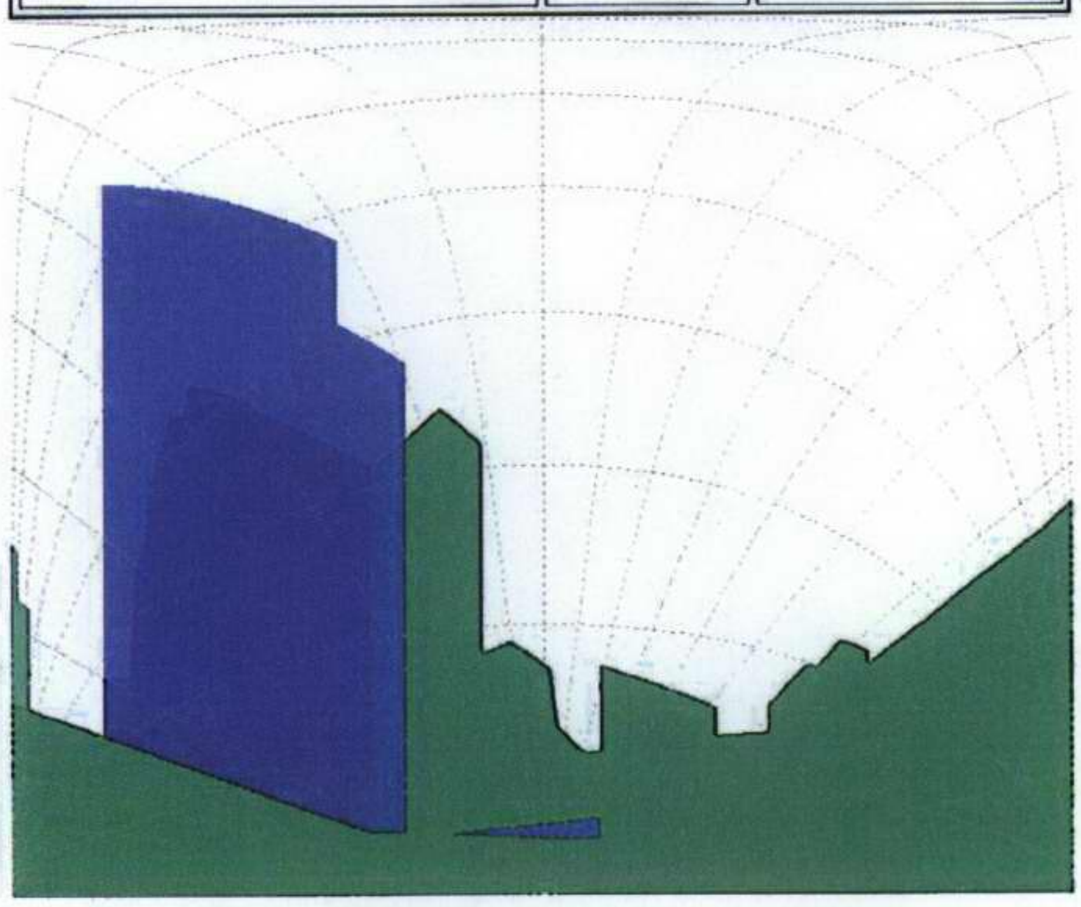
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w2_-1 - Willow Lane	**VSC:** Existing 26.78 Proposed 24.90	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a



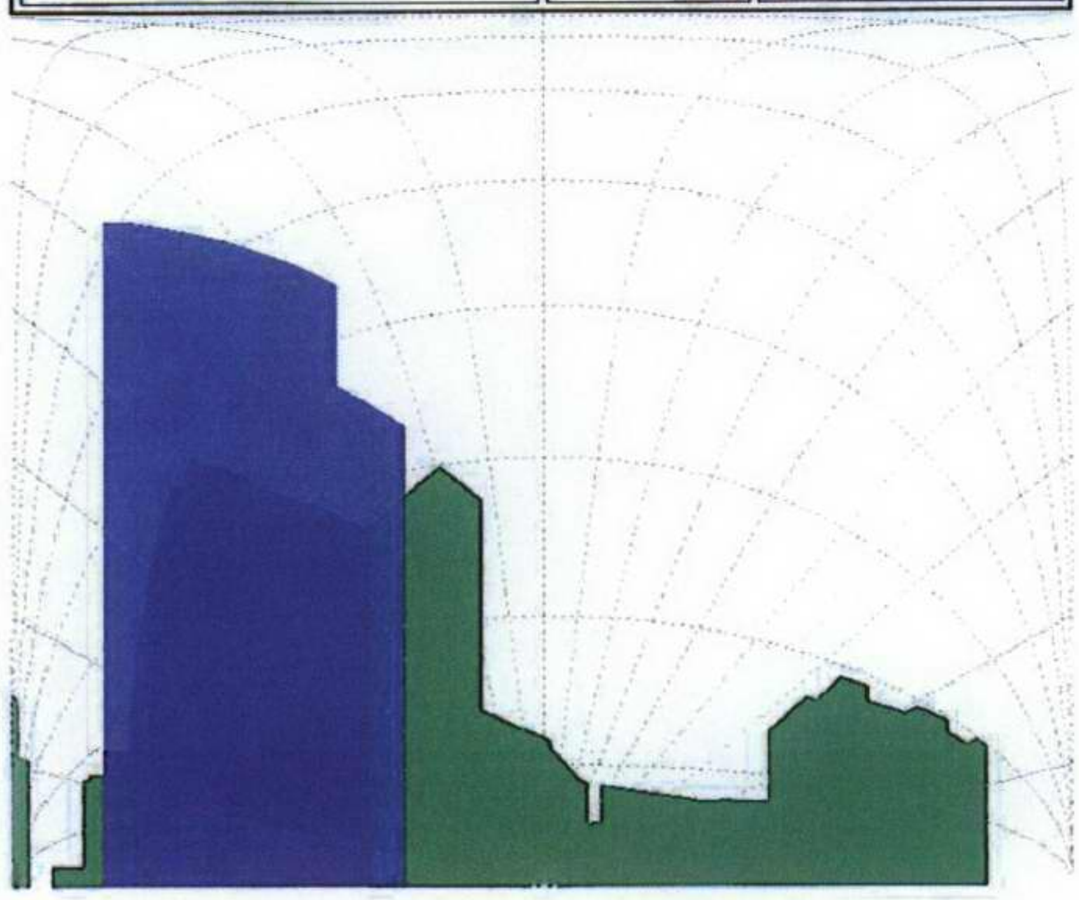
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w2_0 - Willow Lane	**VSC:** Existing 31.46 Proposed 29.02	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a



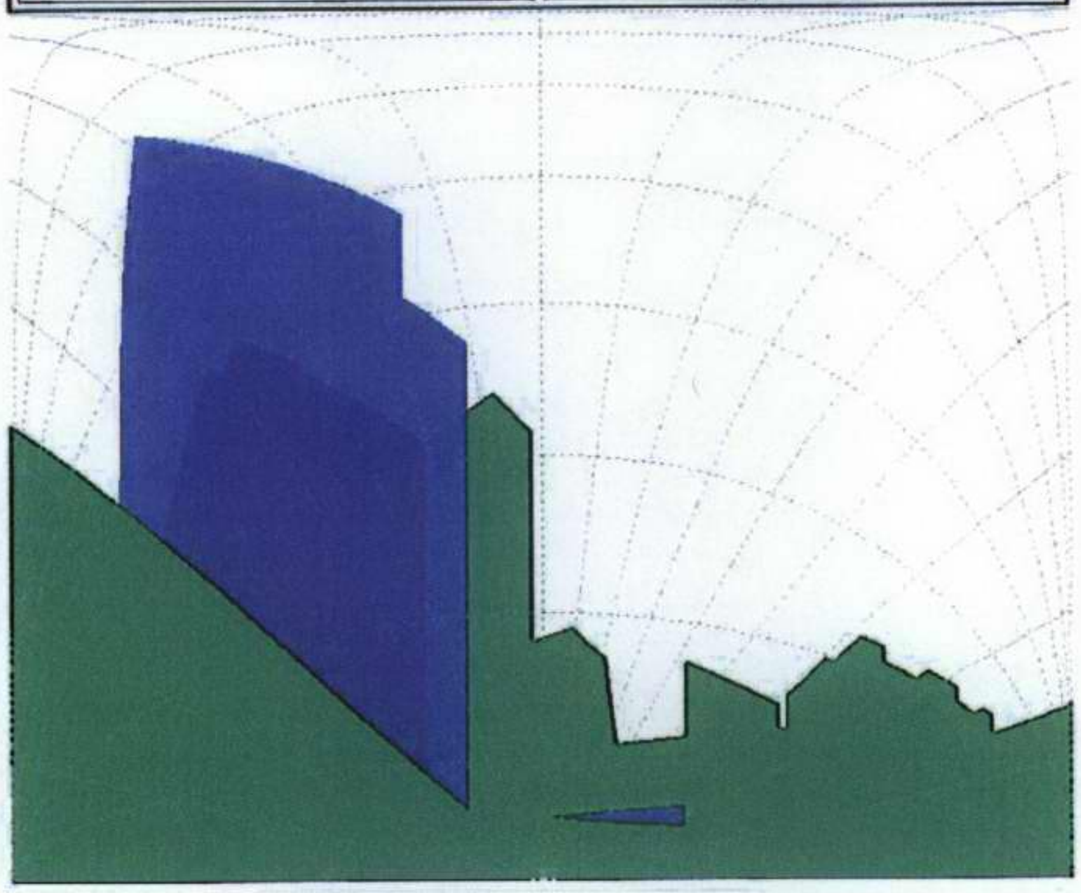
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w3_-1 - Willow Lane	**VSC:** Existing 25.71 Proposed 22.75	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a



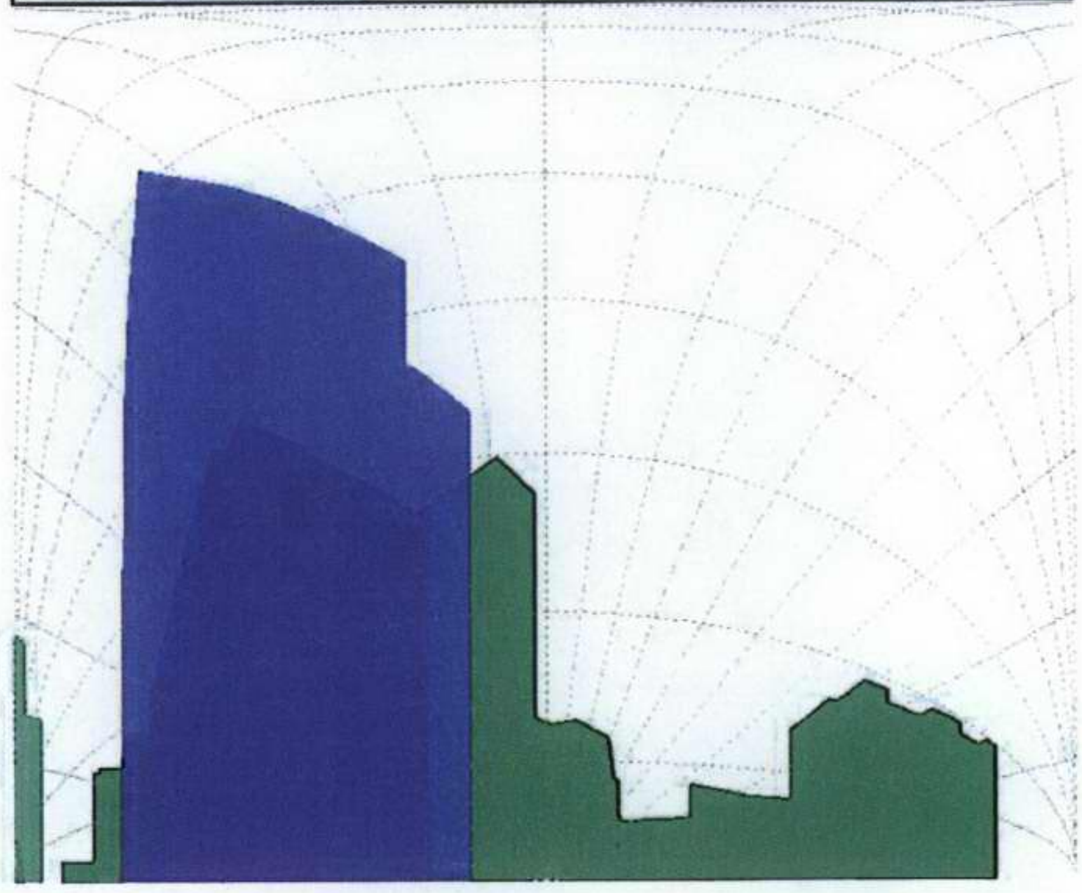
Drawing Ref: 8268_04-05-07a.dwg **Window Ref:** w3_0 - Willow Lane	**VSC:** Existing 30.61 Proposed 27.30	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a



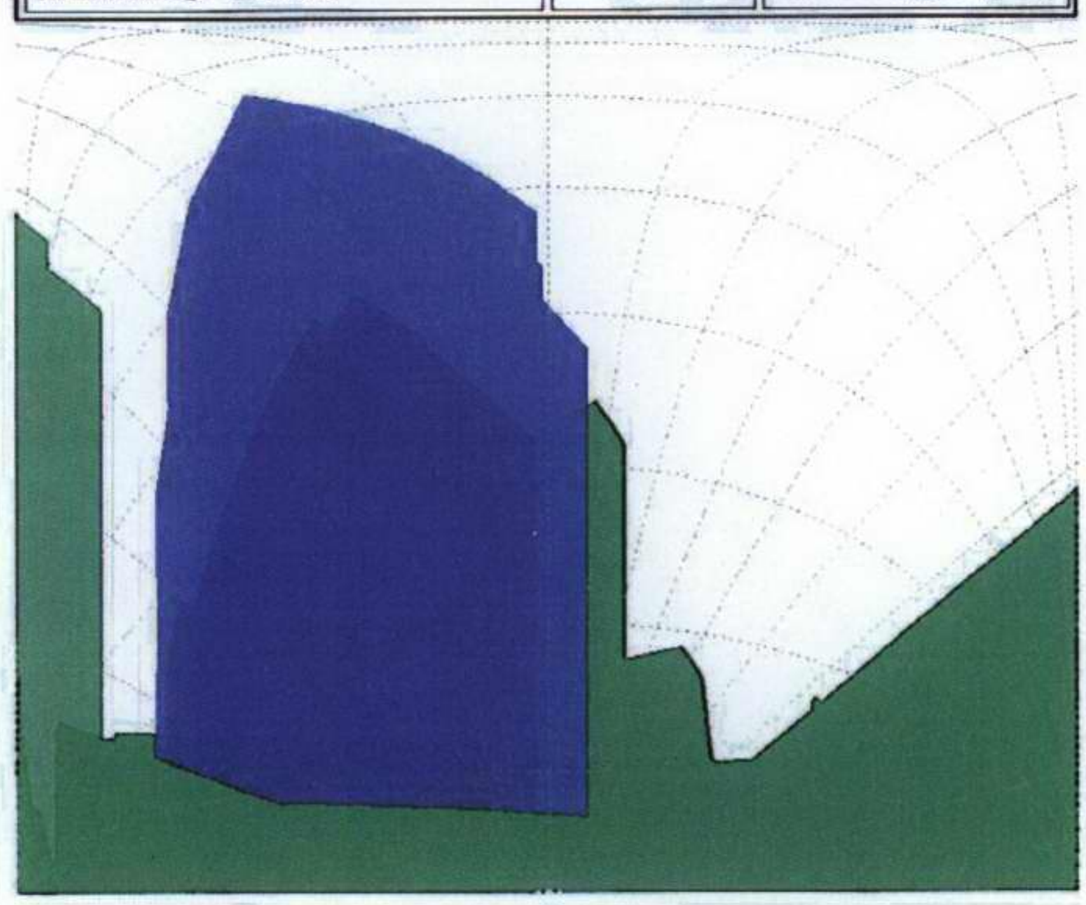
Drawing Ref: 6288_04-05-07a.dwg **Window Ref:** w4_-1 - Willow Lane	**VSC:** Existing 24.95 Proposed 21.73	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a

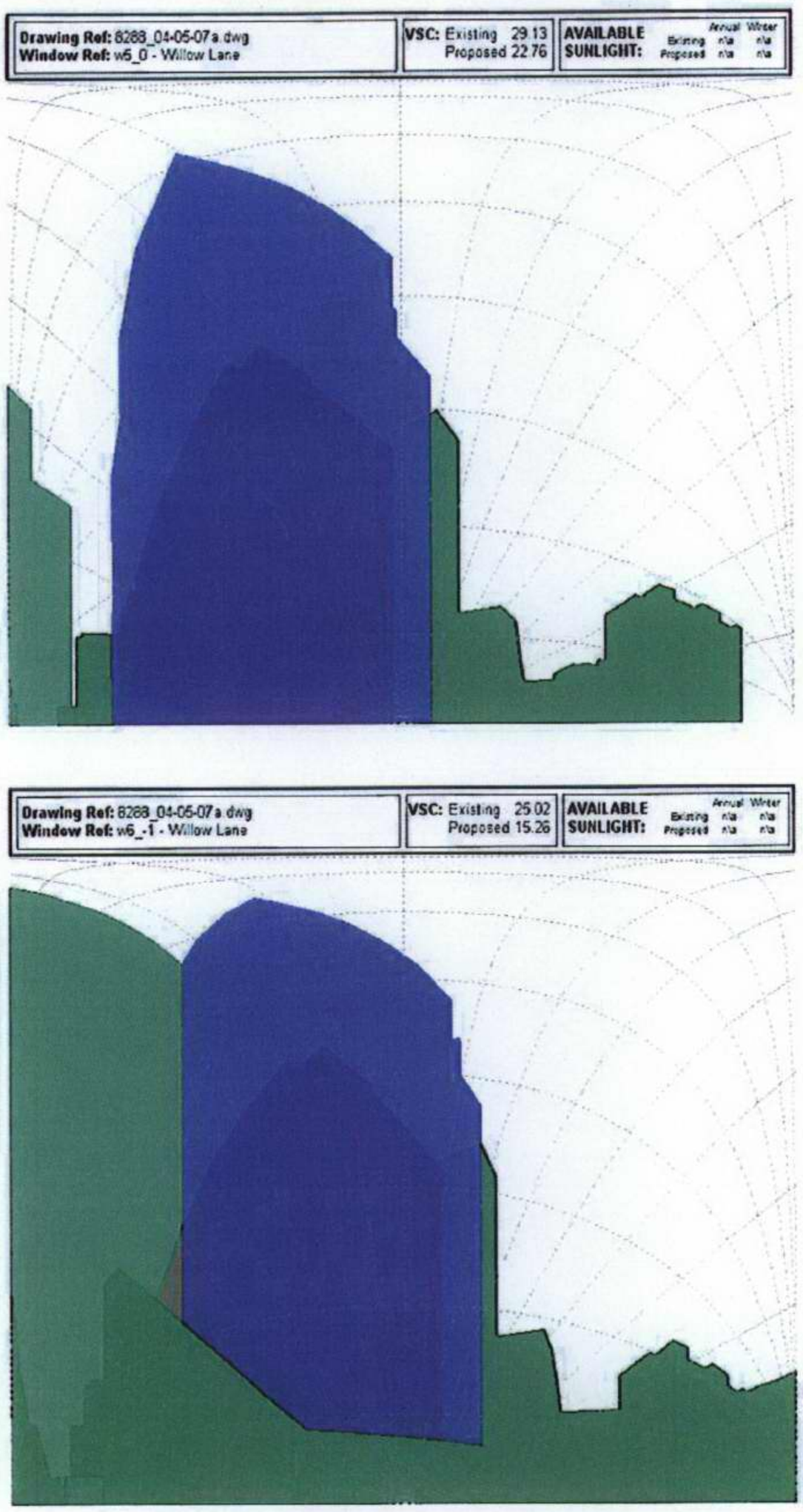


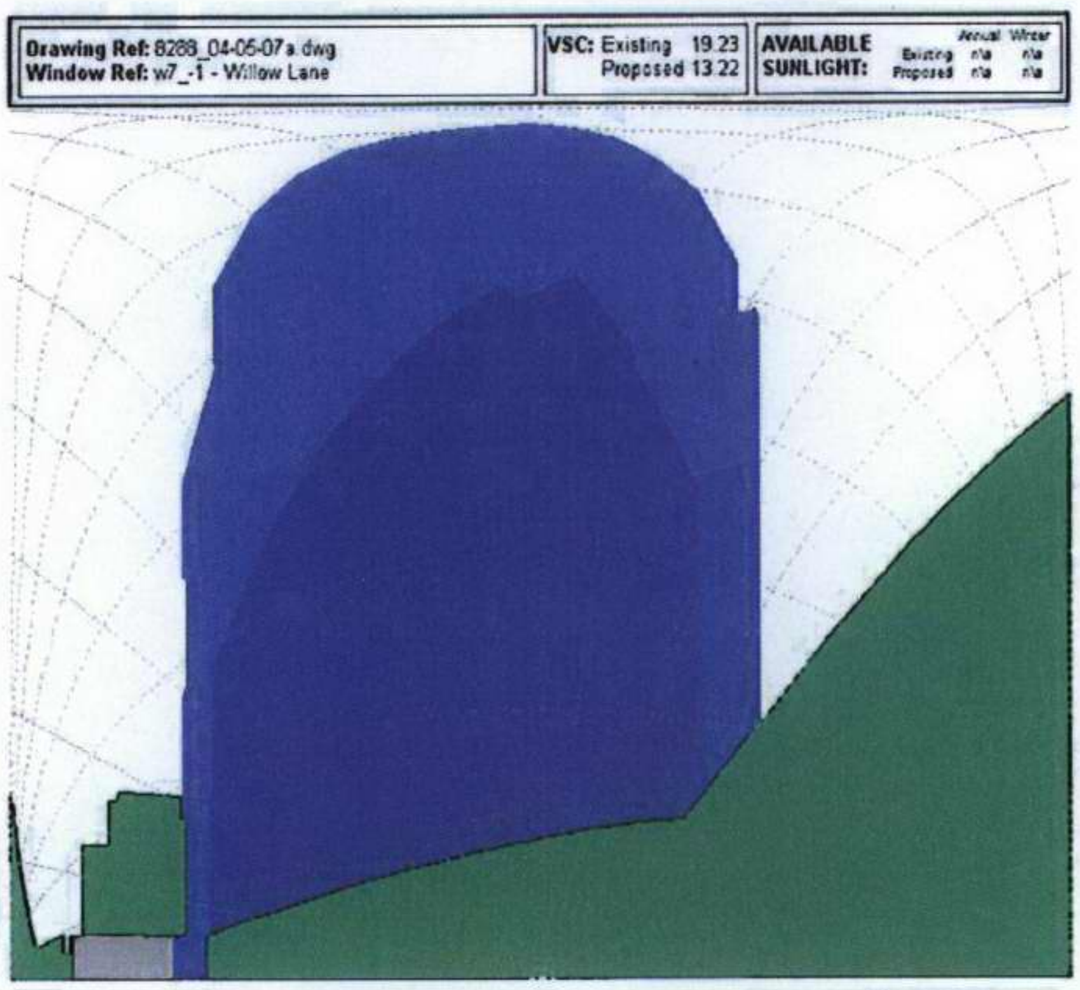
Drawing Ref: 6288_04-05-07a.dwg **Window Ref:** w4_0 - Willow Lane	**VSC:** Existing 30.13 Proposed 26.00	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a



Drawing Ref: 6288_04-05-07a.dwg **Window Ref:** w5_-1 - Willow Lane	**VSC:** Existing 24.37 Proposed 18.17	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a n/a Proposed n/a n/a




Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w5_0 - Willow Lane
VSC: Existing 29.13
Proposed 22.76
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a
Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w6_1 - Willow Lane
VSC: Existing 25.02
Proposed 15.26
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a
Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w6_0 - Willow Lane
VSC: Existing 28.68
Proposed 18.81
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a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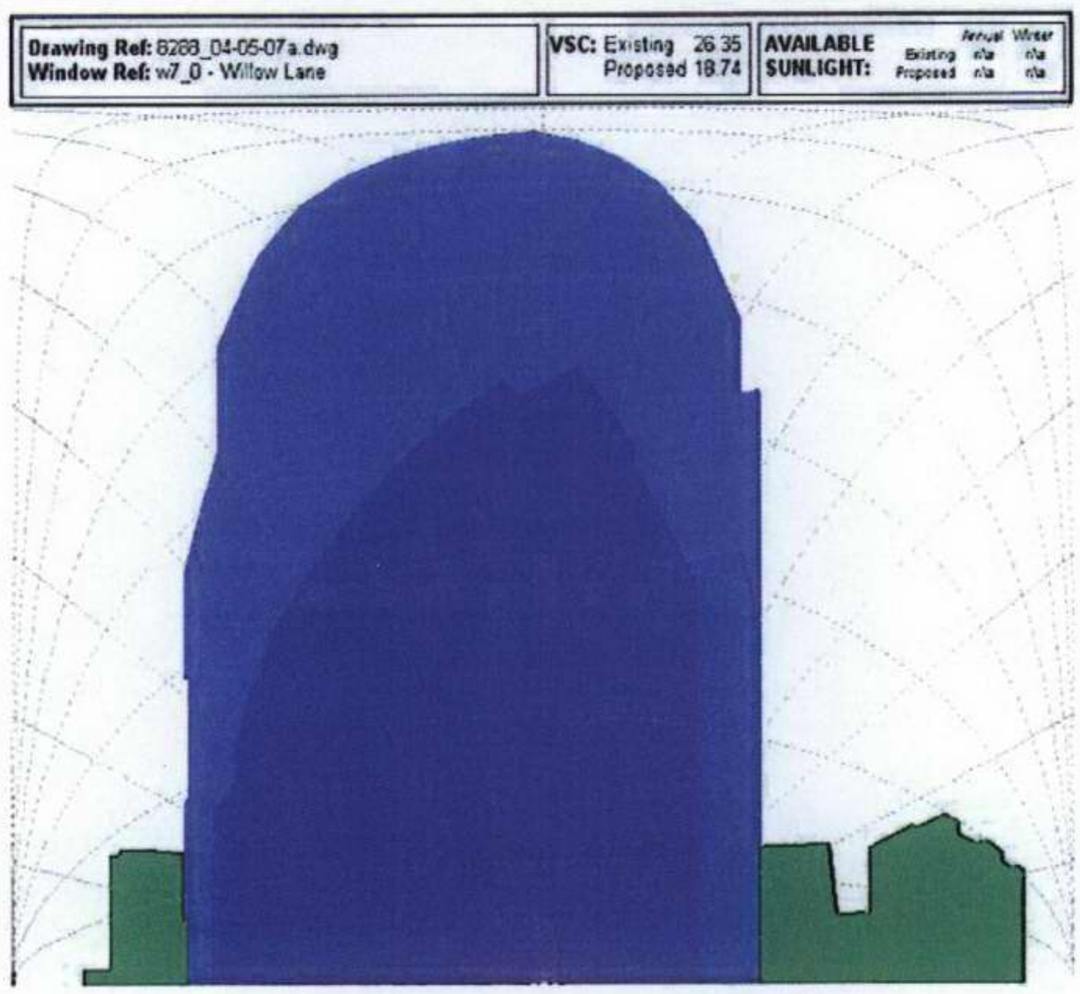
Window Ref: w7_-1 - Willow Lane
VSC: Existing 19.23
Proposed 13.22
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a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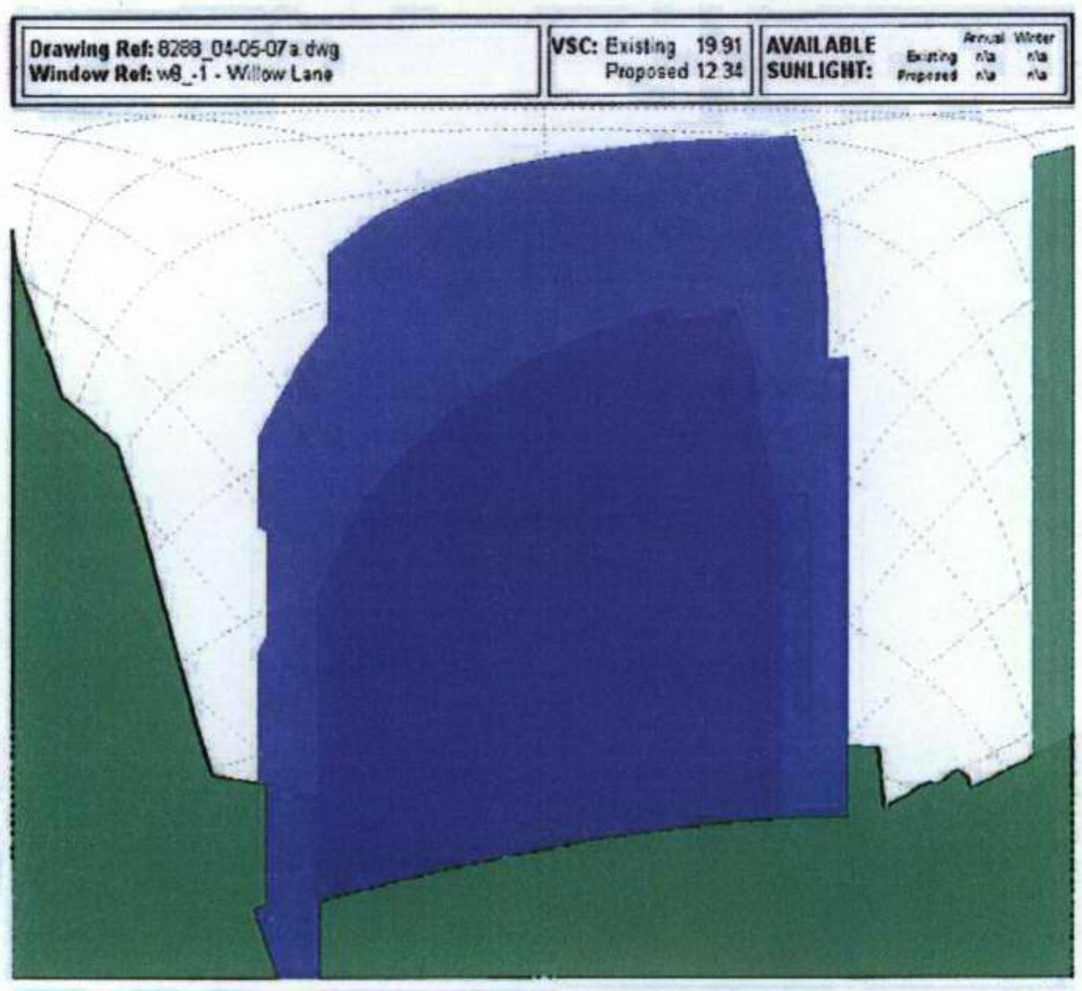
Window Ref: w7_0 - Willow Lane
VSC: Existing 26.35
Proposed 18.74
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a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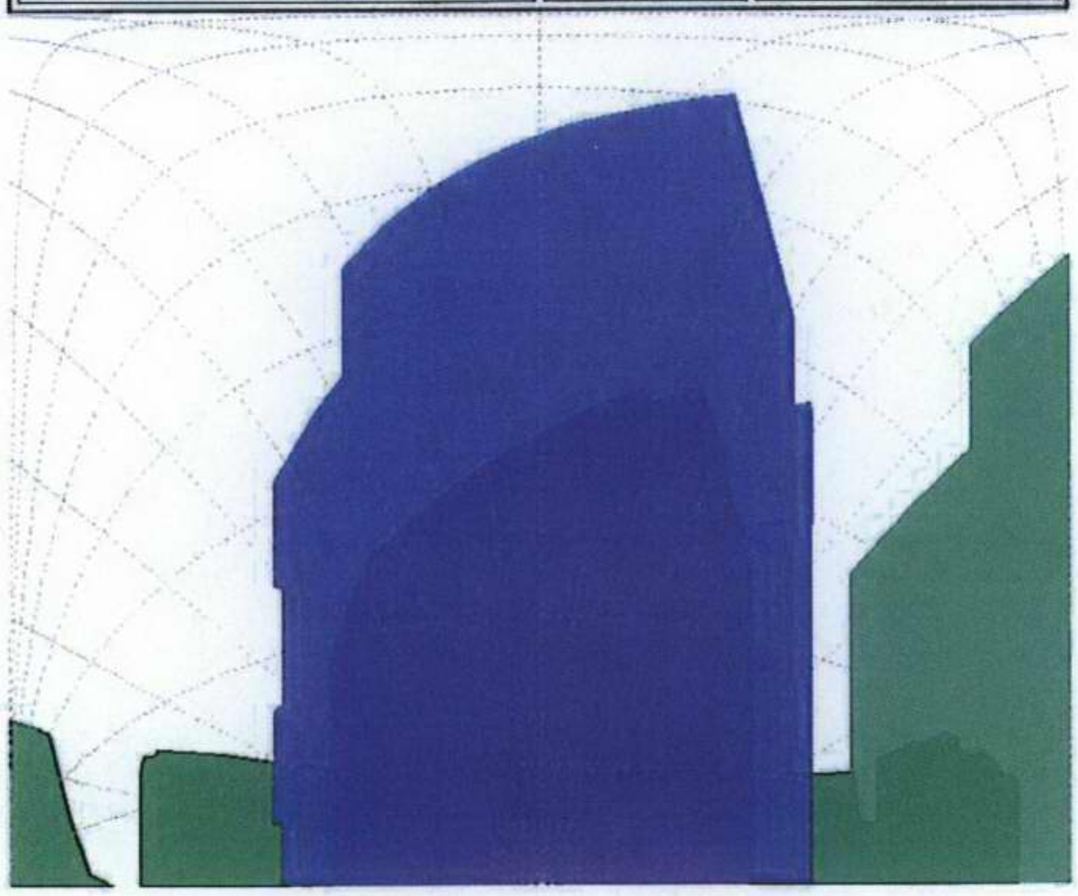
Window Ref: w8_-1 - Willow Lane
VSC: Existing 19.91
Proposed 12.34
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a

Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w8_0 - Willow Lane

VSC: Existing 28.83
Proposed 18.03

AVAILABLE SUNLIGHT:

	Annual	Winter
Existing	n/a	n/a
Proposed	n/a	n/a

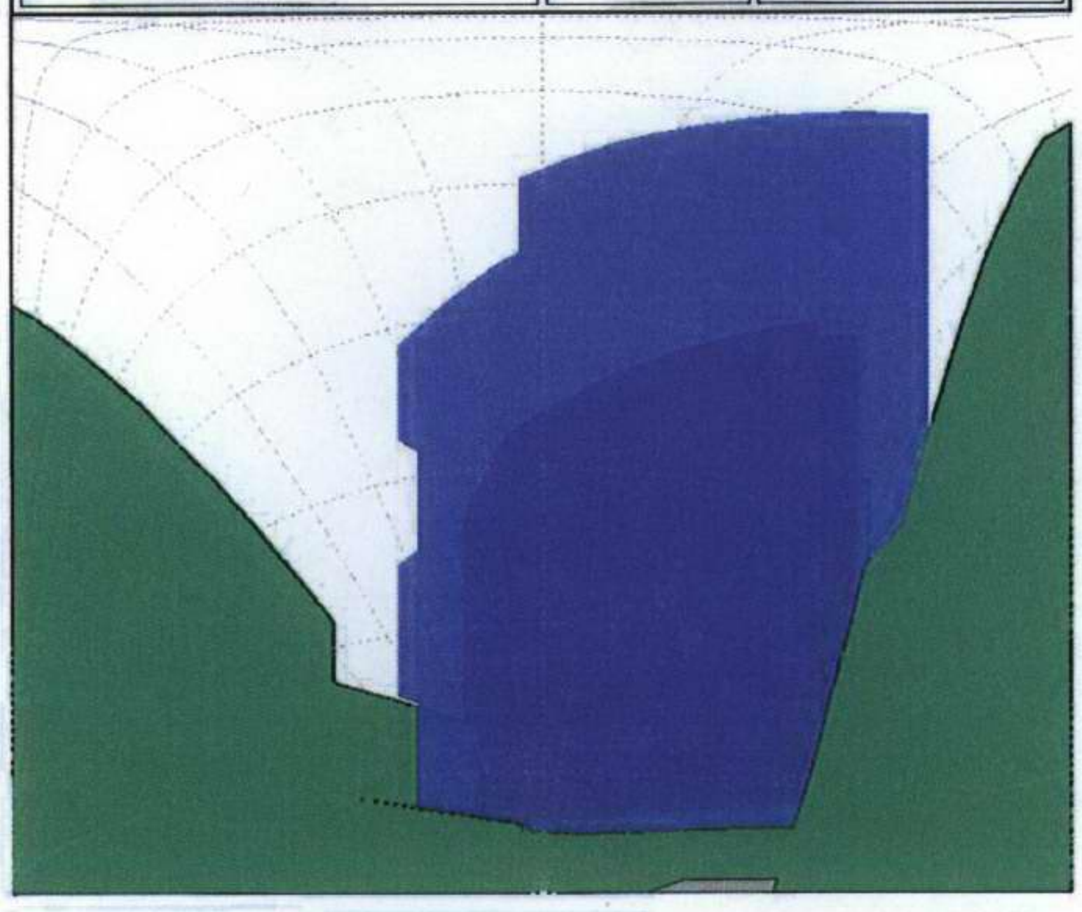


Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w9_-1 - Willow Lane

VSC: Existing 18.46
Proposed 12.63

AVAILABLE SUNLIGHT:

	Annual	Winter
Existing	n/a	n/a
Proposed	n/a	n/a

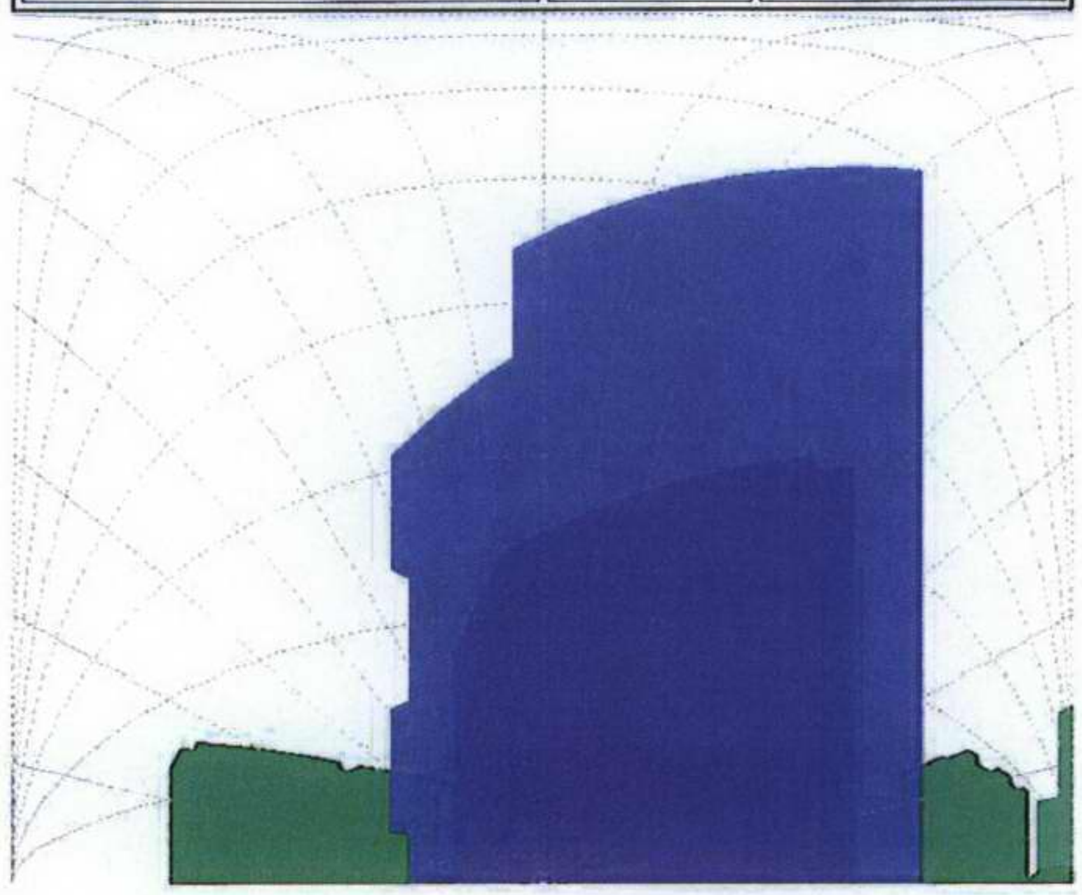


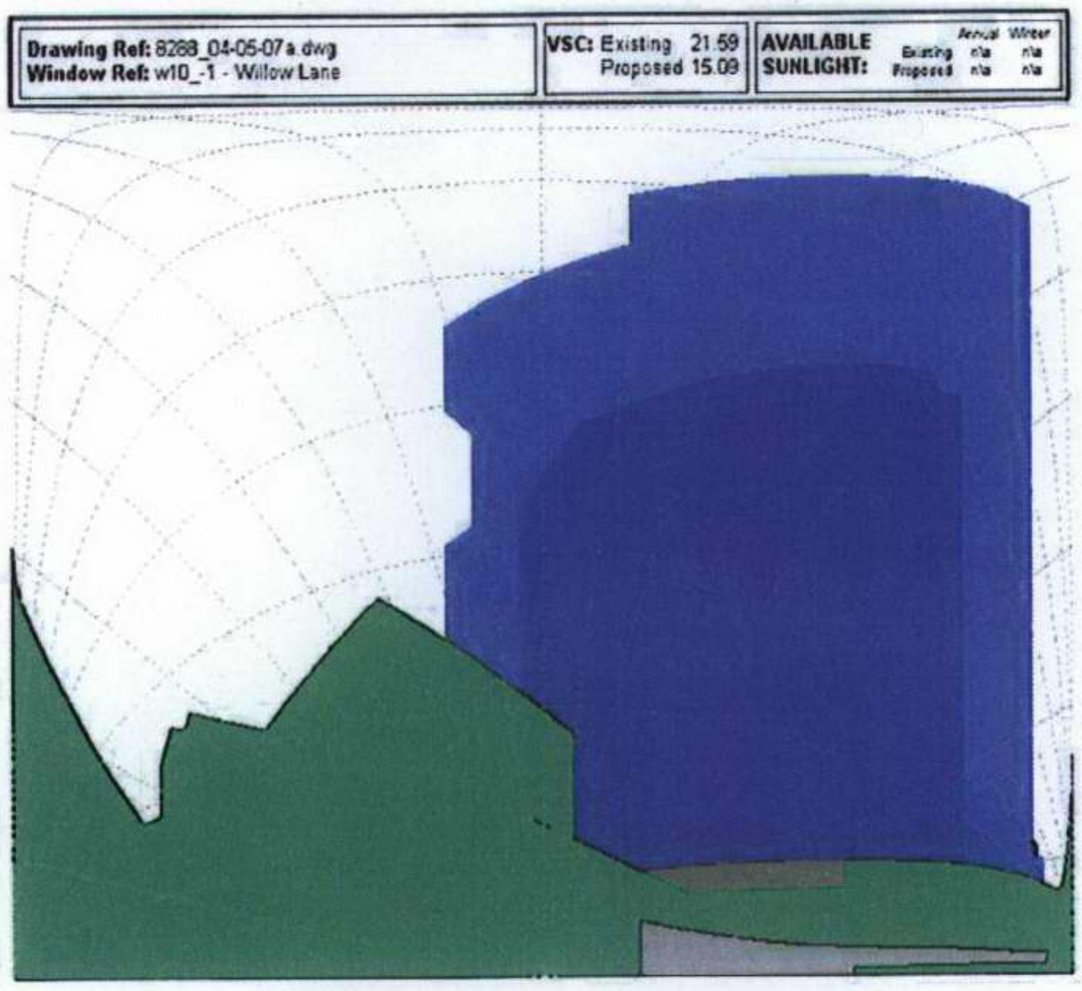
Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w9_0 - Willow Lane

VSC: Existing 30.75
Proposed 23.15

AVAILABLE SUNLIGHT:

	Annual	Winter
Existing	n/a	n/a
Proposed	n/a	n/a




Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w10_-1 - Willow Lane
VSC: Existing 21.59
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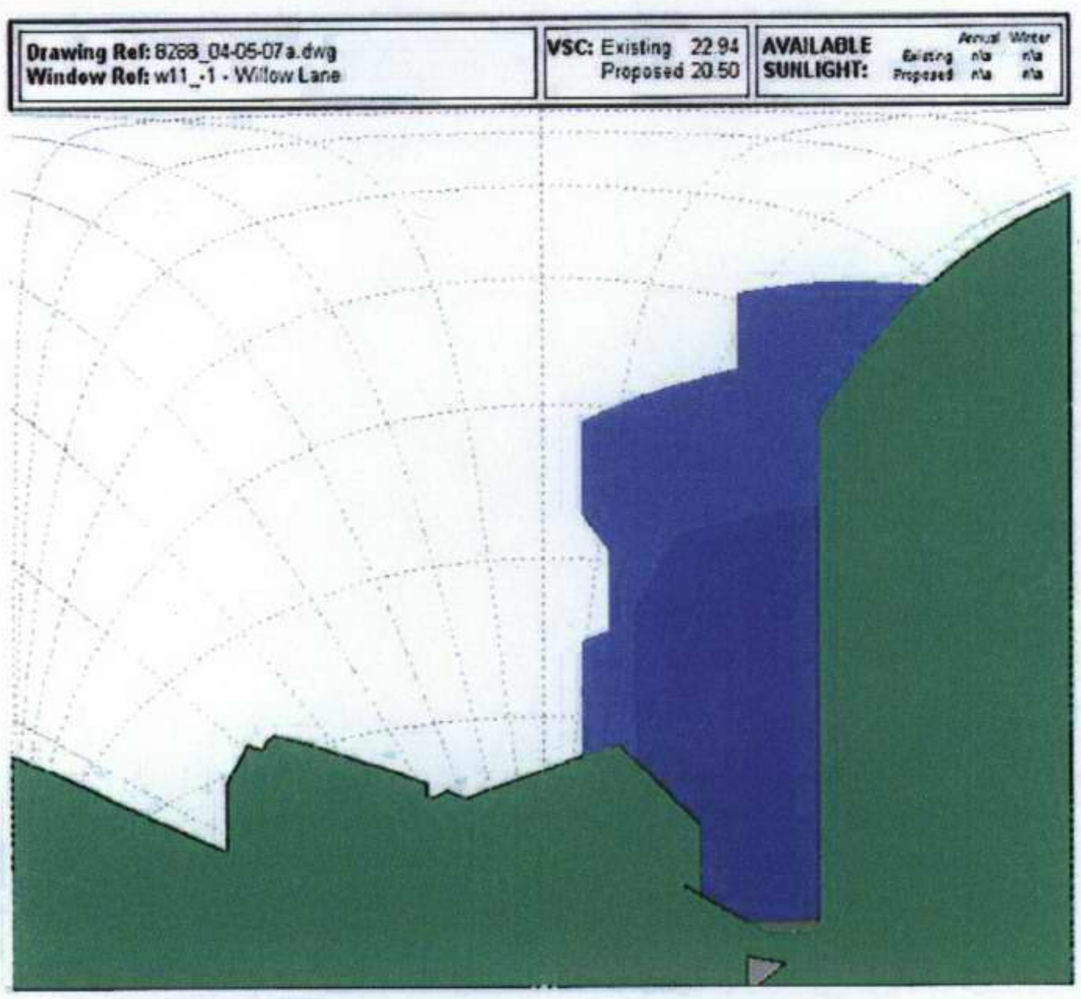
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a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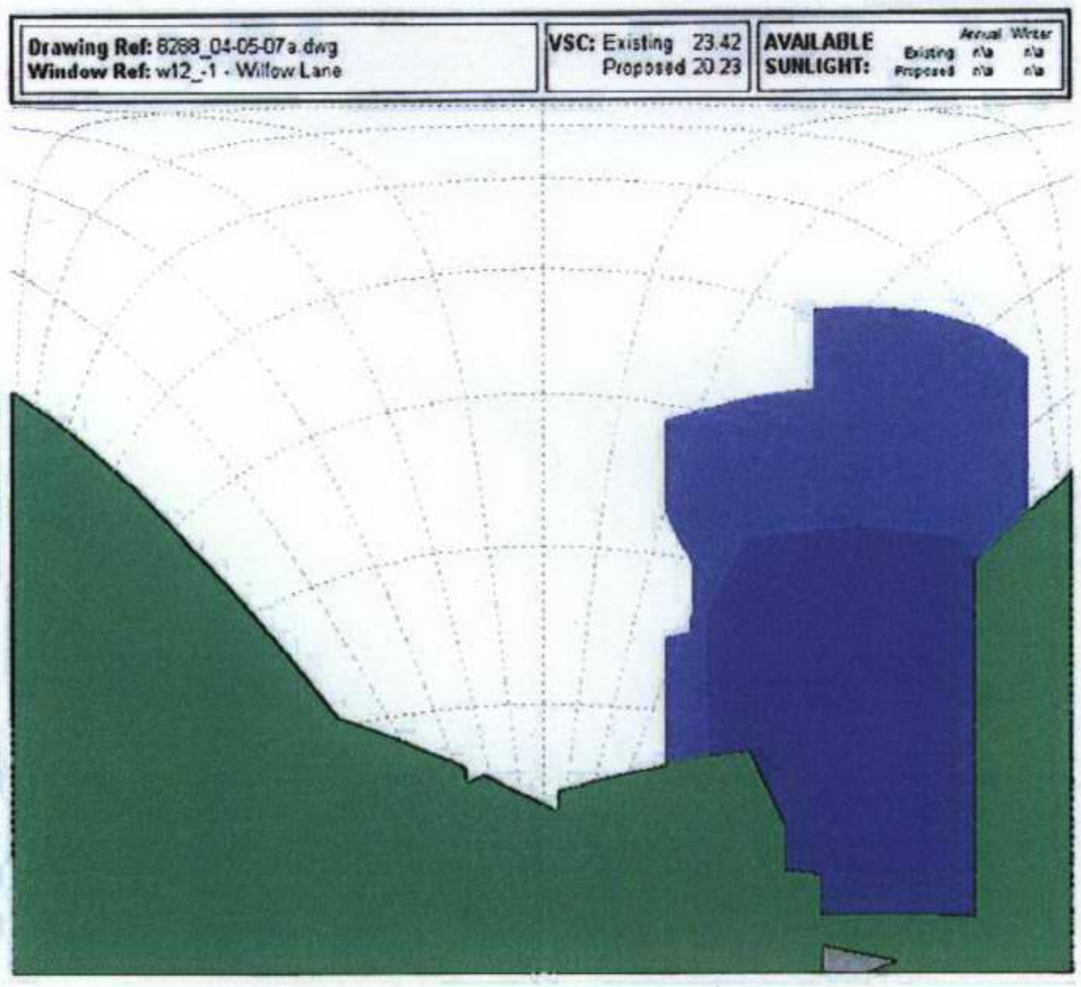
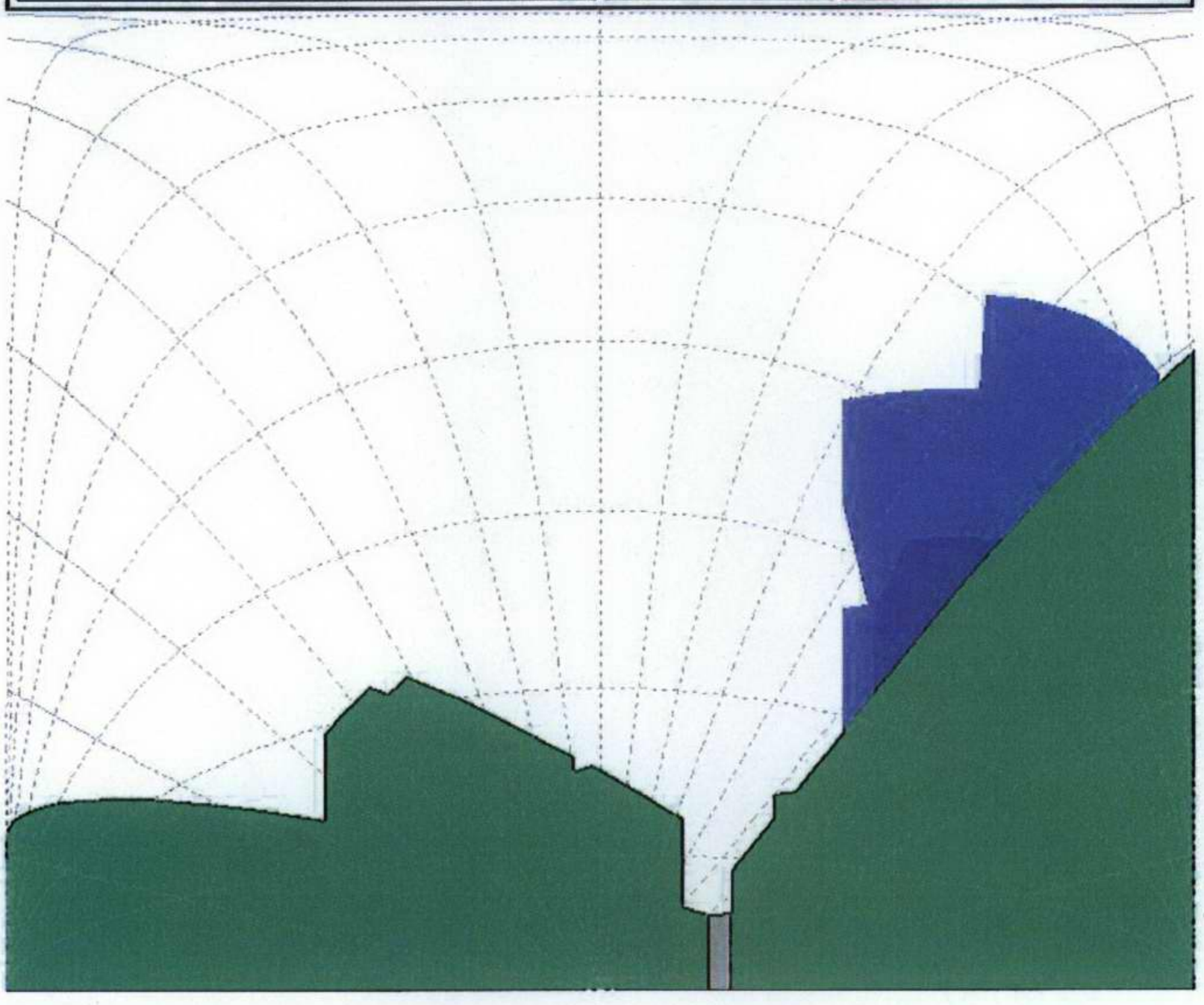
Window Ref: w11_-1 - Willow Lane
VSC: Existing 22.94
Proposed 20.50
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a


Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w12_-1 - Willow Lane
VSC: Existing 23.42
Proposed 20.23
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a

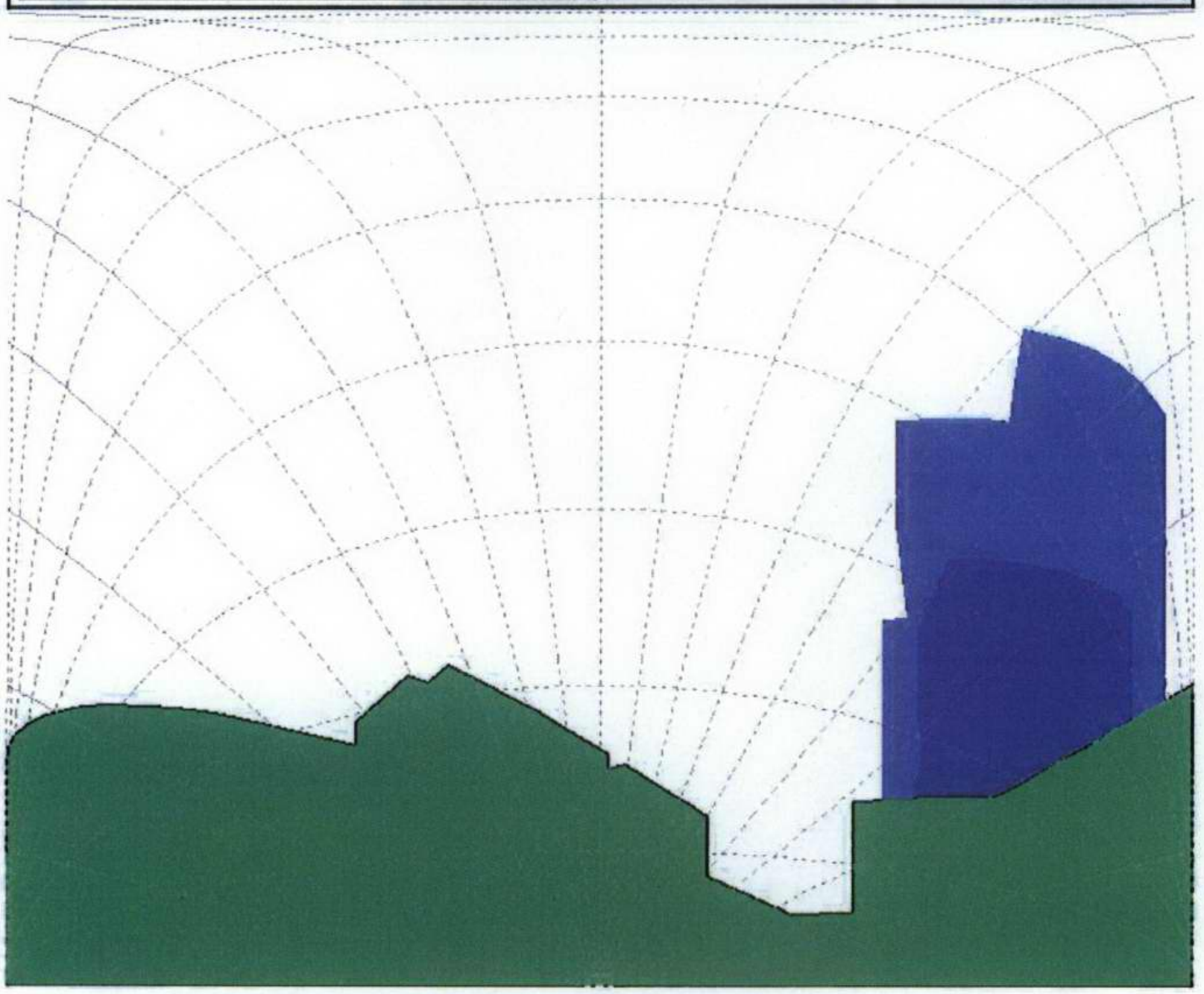
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w13_-1 - Willow Lane	**VSC:** Existing 27.86 Proposed 26.09	**AVAILABLE SUNLIGHT:**

	Annual	Winter
Existing	n\a	n\a
Proposed	n\a	n\a

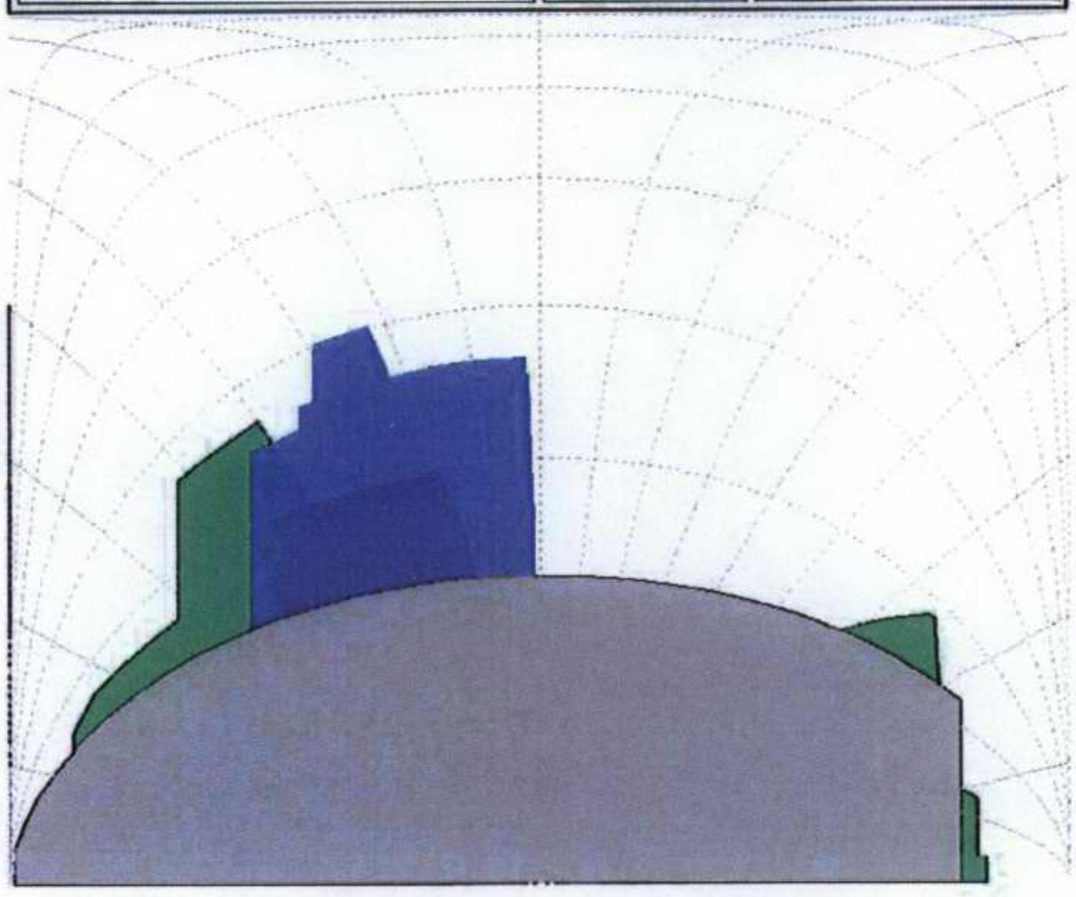


Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w14_-1 - Willow Lane	**VSC:** Existing 28.86 Proposed 26.70	**AVAILABLE SUNLIGHT:**

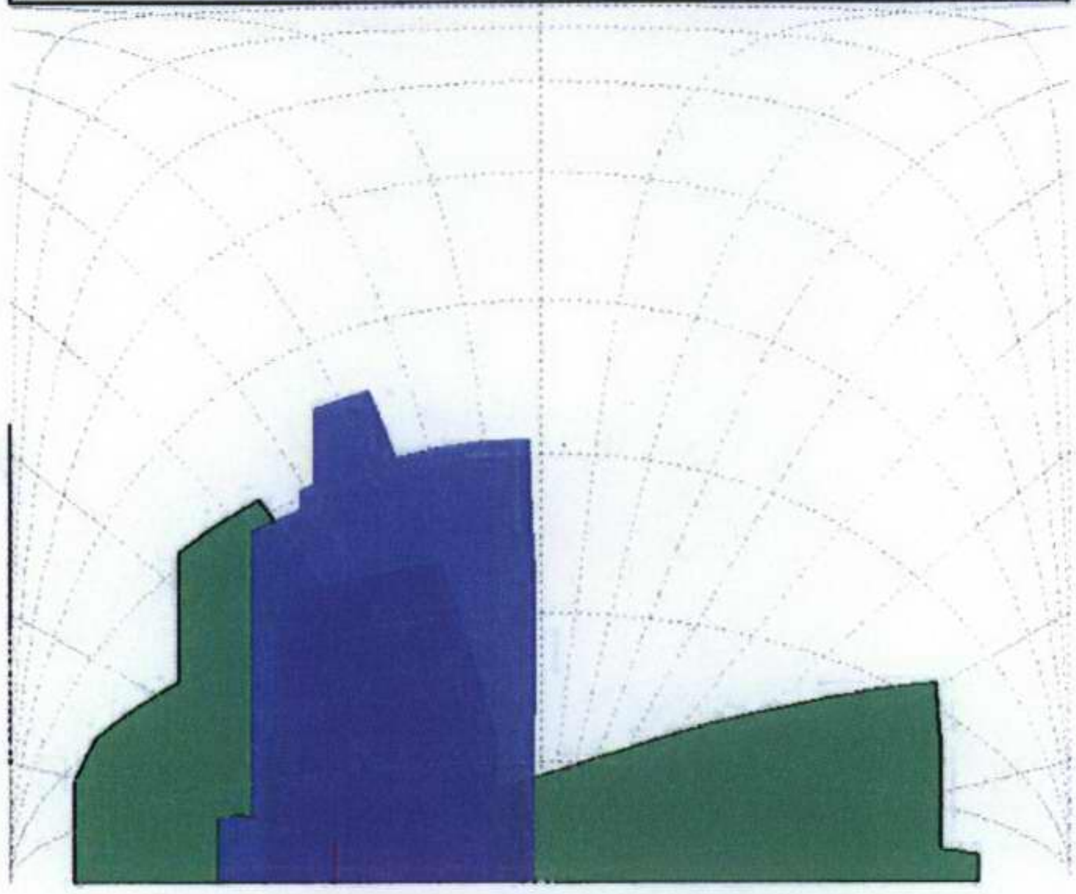
	Annual	Winter
Existing	n\a	n\a
Proposed	n\a	n\a



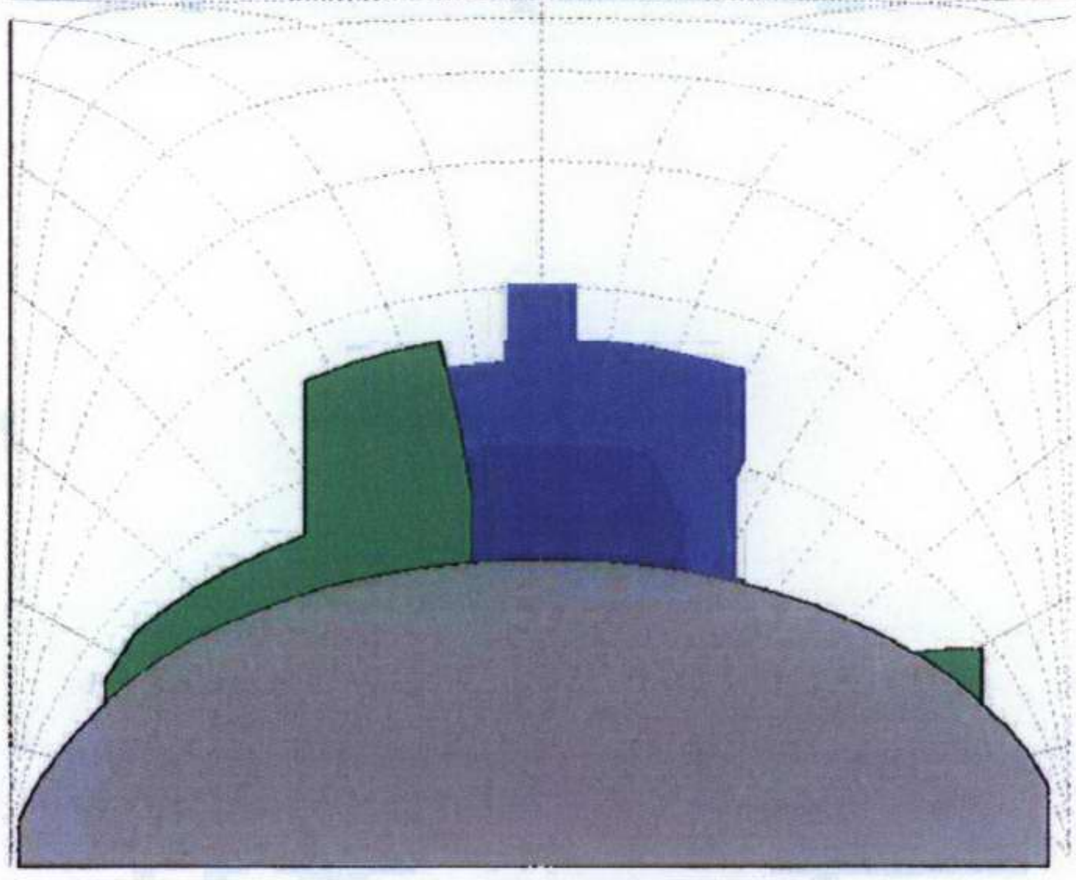
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w1_-1 - Pilgrims Lane	**VSC:** Existing 27.18 Proposed 25.62	**AVAILABLE SUNLIGHT:**	Annual / Winter Existing n/a / n/a Proposed n/a / n/a



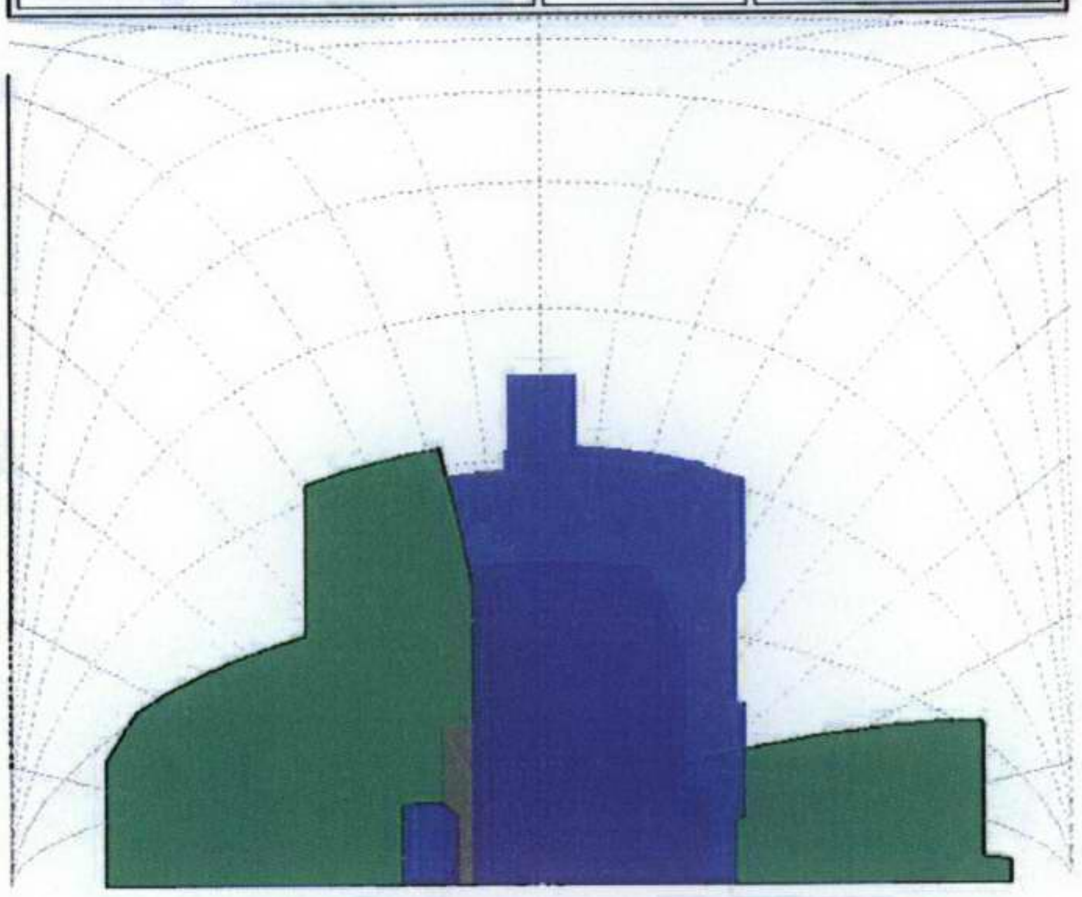
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w1_0 - Pilgrims Lane	**VSC:** Existing 31.58 Proposed 29.68	**AVAILABLE SUNLIGHT:**	Annual / Winter Existing n/a / n/a Proposed n/a / n/a



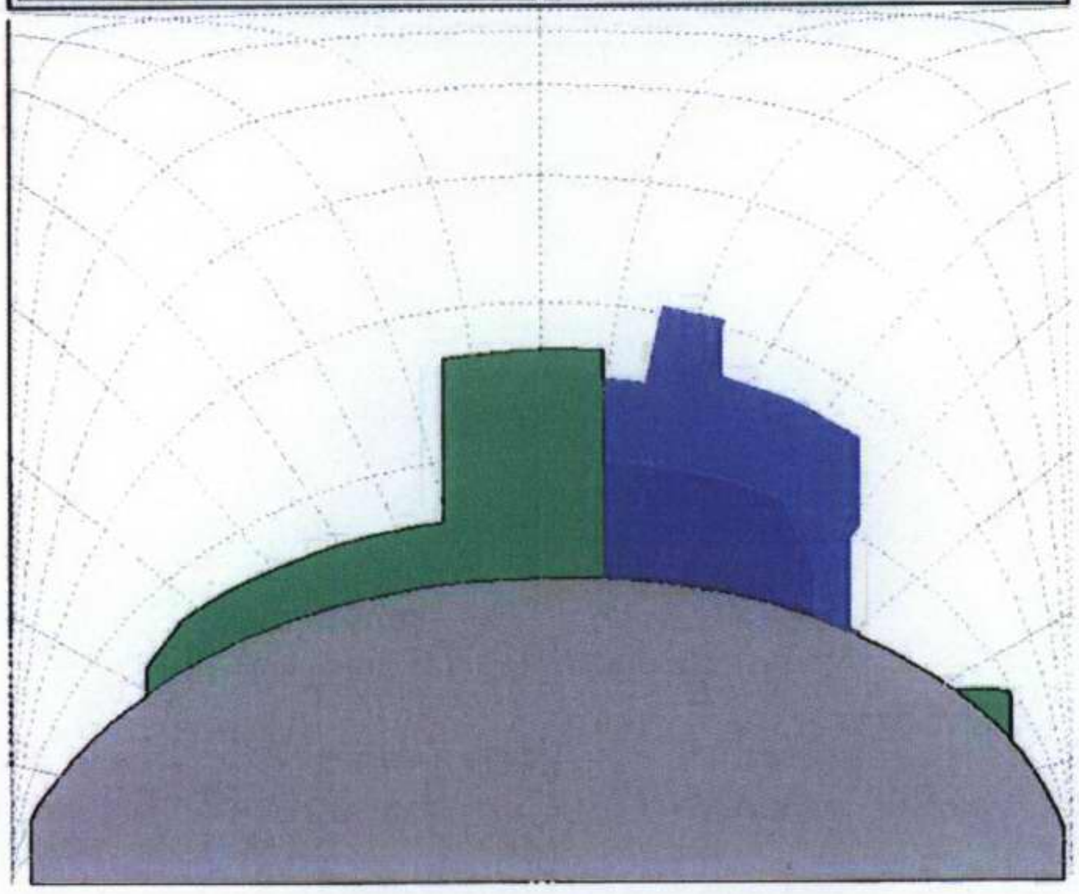
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w2_-1 - Pilgrims Lane	**VSC:** Existing 25.93 Proposed 24.22	**AVAILABLE SUNLIGHT:**	Annual / Winter Existing n/a / n/a Proposed n/a / n/a



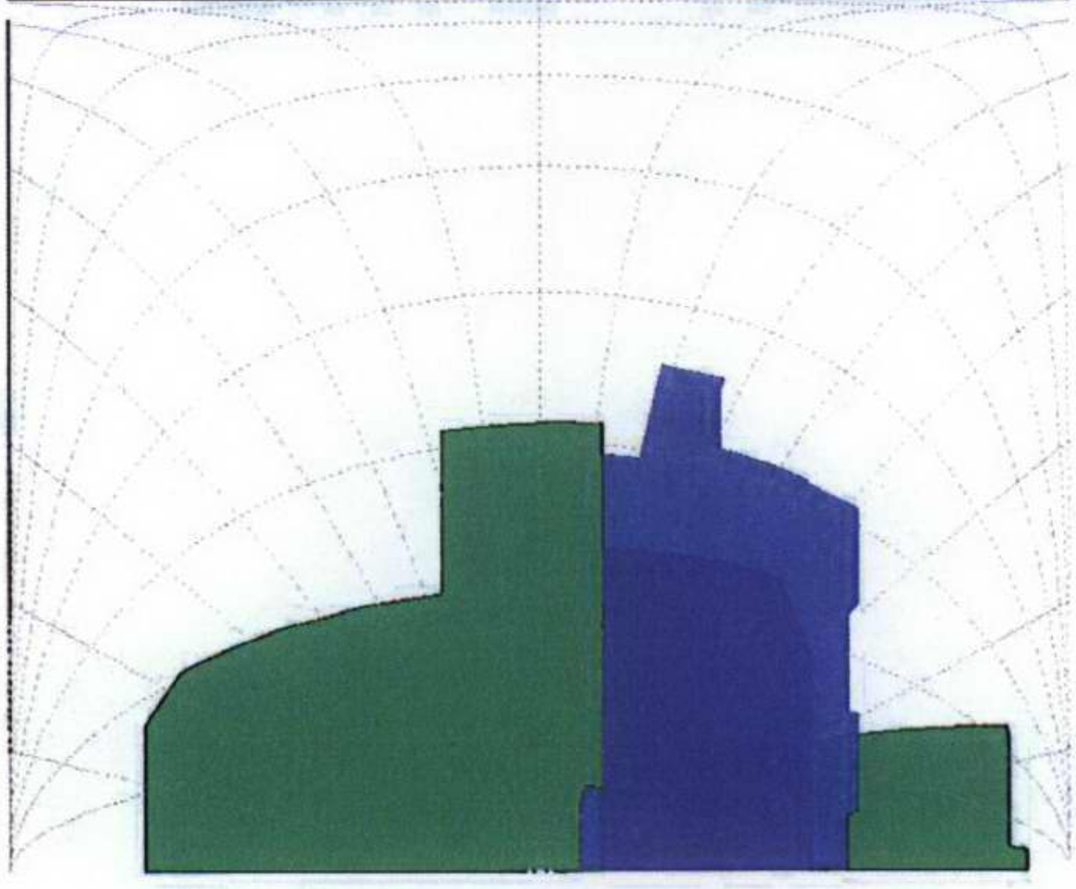
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w2_0 - Pilgrims Lane	**VSC:** Existing 30.04 Proposed 28.01	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a



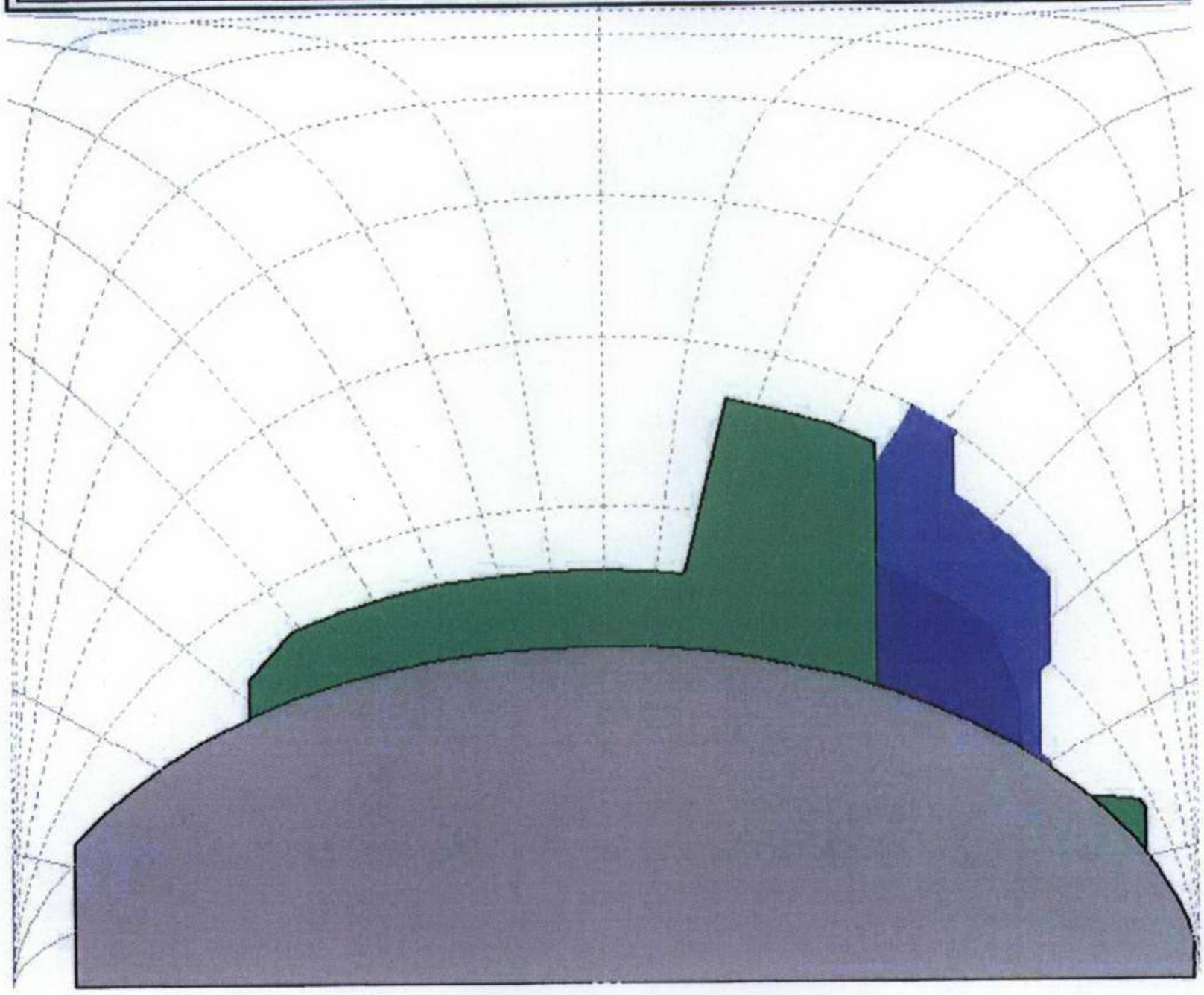
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w3_1 - Pilgrims Lane	**VSC:** Existing 25.61 Proposed 24.16	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a



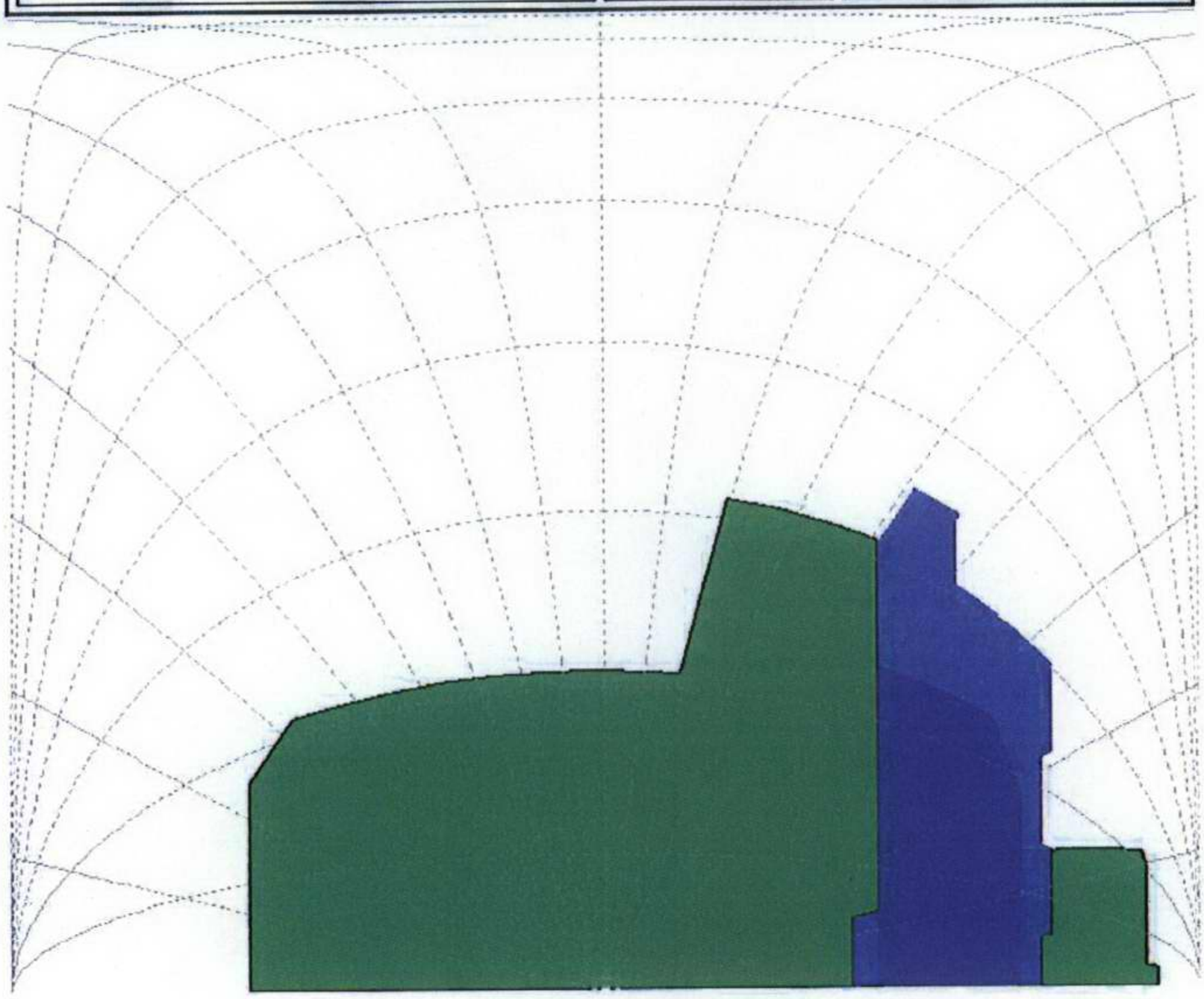
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w3_0 - Pilgrims Lane	**VSC:** Existing 29.57 Proposed 27.93	**AVAILABLE SUNLIGHT:** Annual / Winter Existing n/a / n/a Proposed n/a / n/a

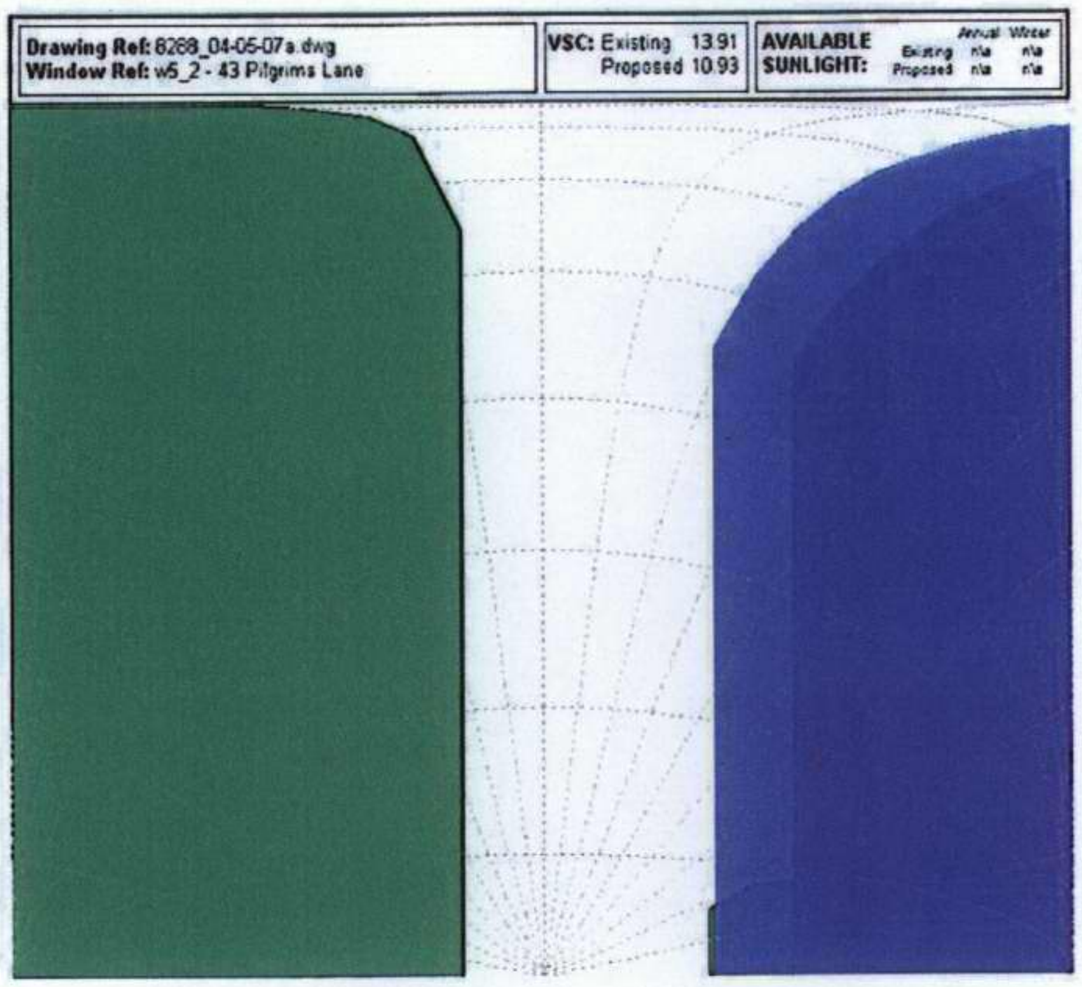


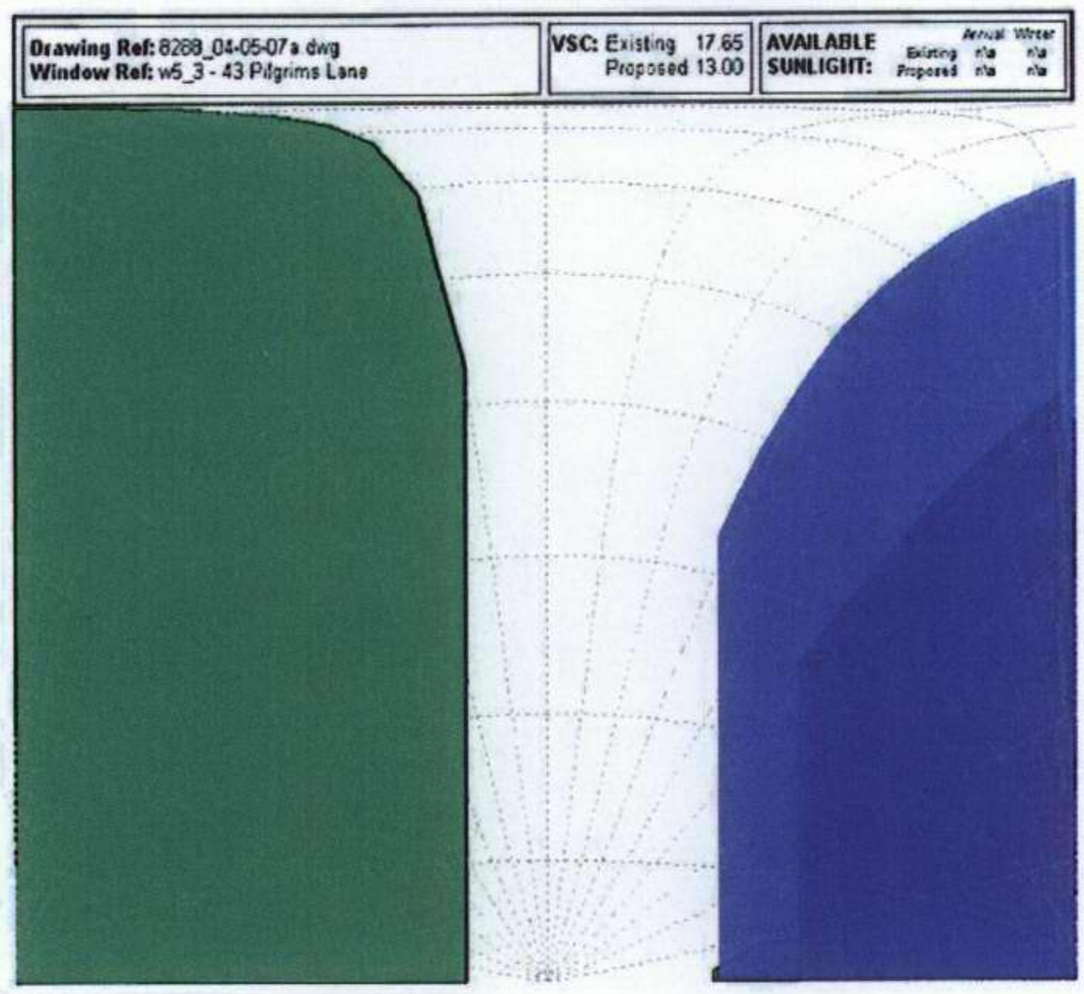
Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w4_-1 - Pilgrims Lane	**VSC:** Existing 26.06 Proposed 25.22	**AVAILABLE SUNLIGHT:**		Annual	Winter
			Existing	n\a	n\a
			Proposed	n\a	n\a

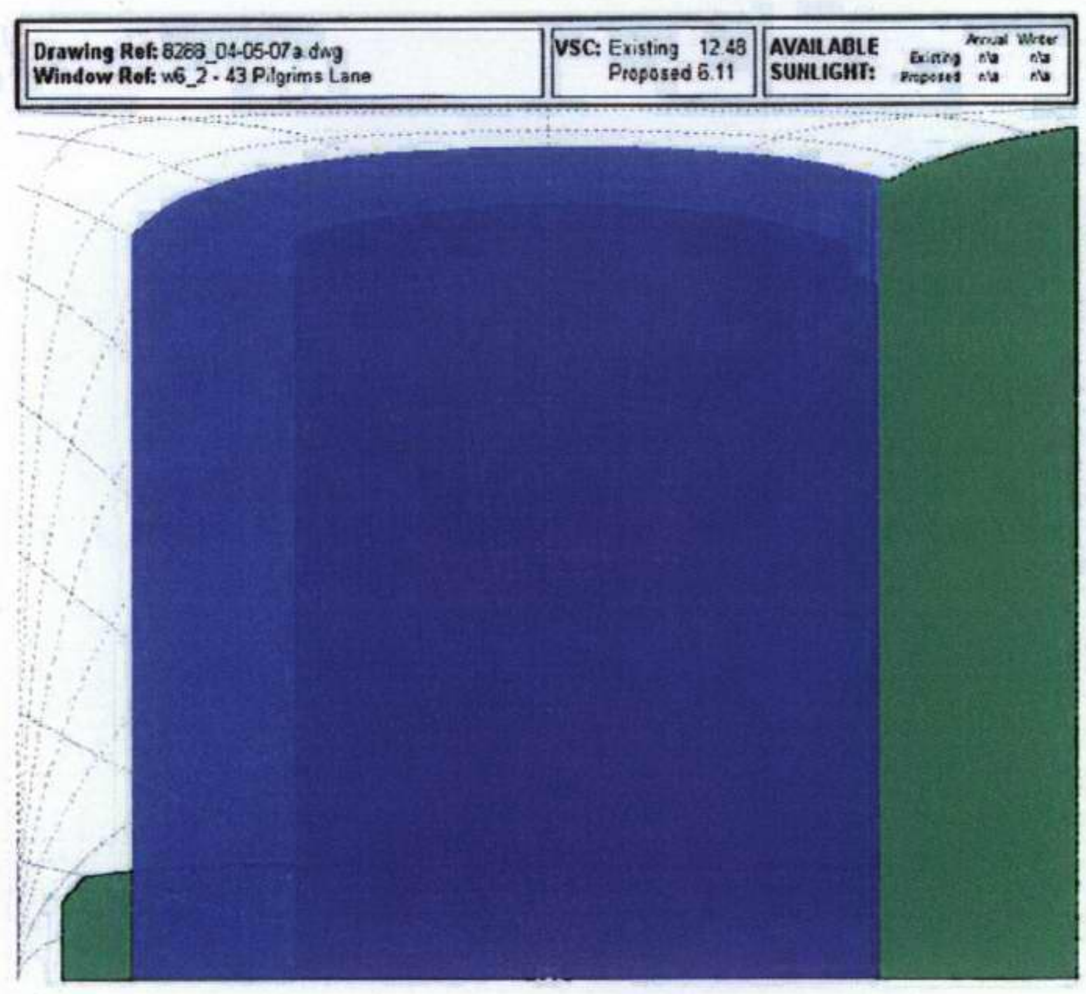


Drawing Ref: 8288_04-05-07a.dwg **Window Ref:** w4_0 - Pilgrims Lane	**VSC:** Existing 30.19 Proposed 29.30	**AVAILABLE SUNLIGHT:**		Annual	Winter
			Existing	n\a	n\a
			Proposed	n\a	n\a

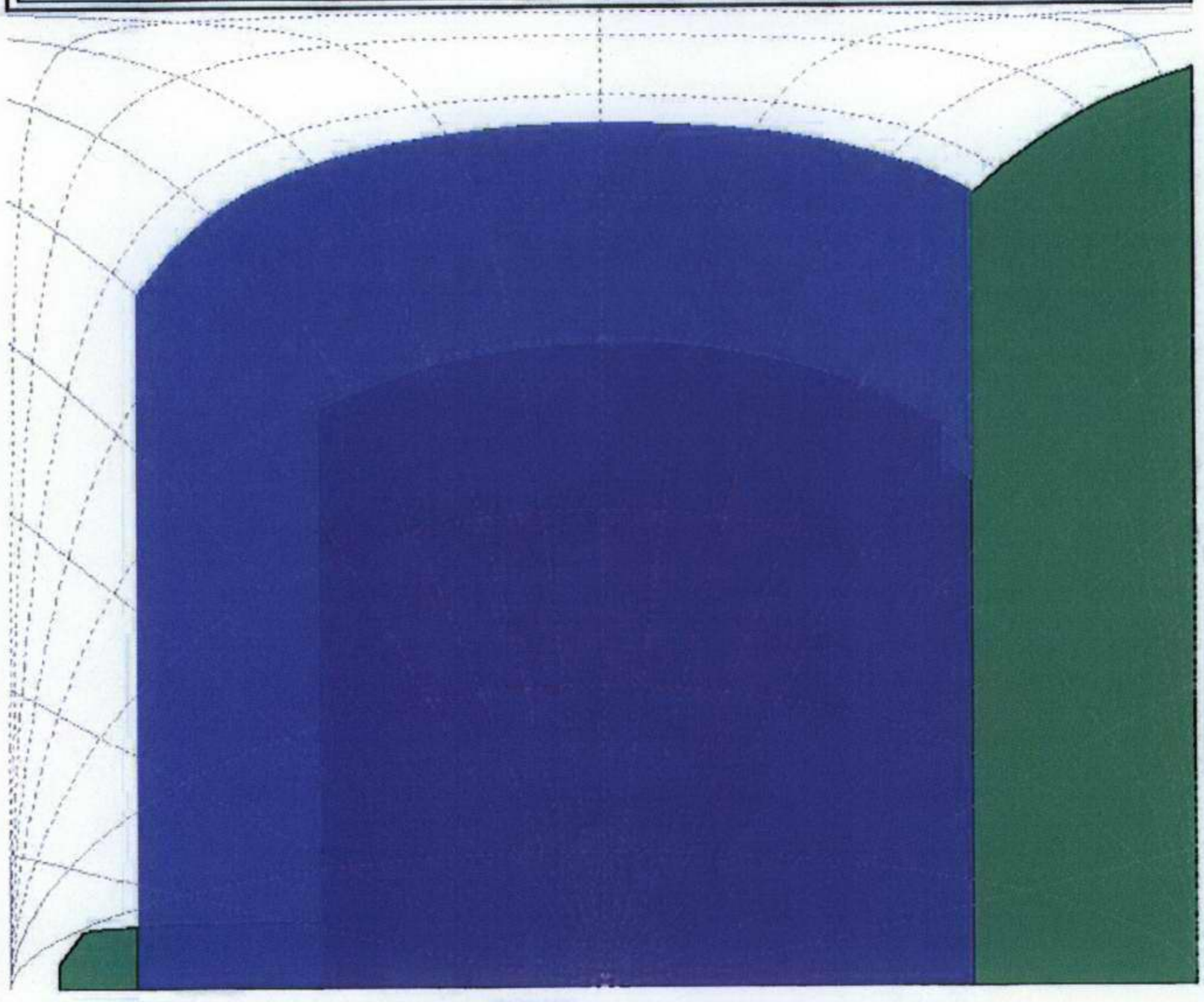



Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w5_2 - 43 Pilgrims Lane
VSC: Existing 13.91
Proposed 10.93
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a

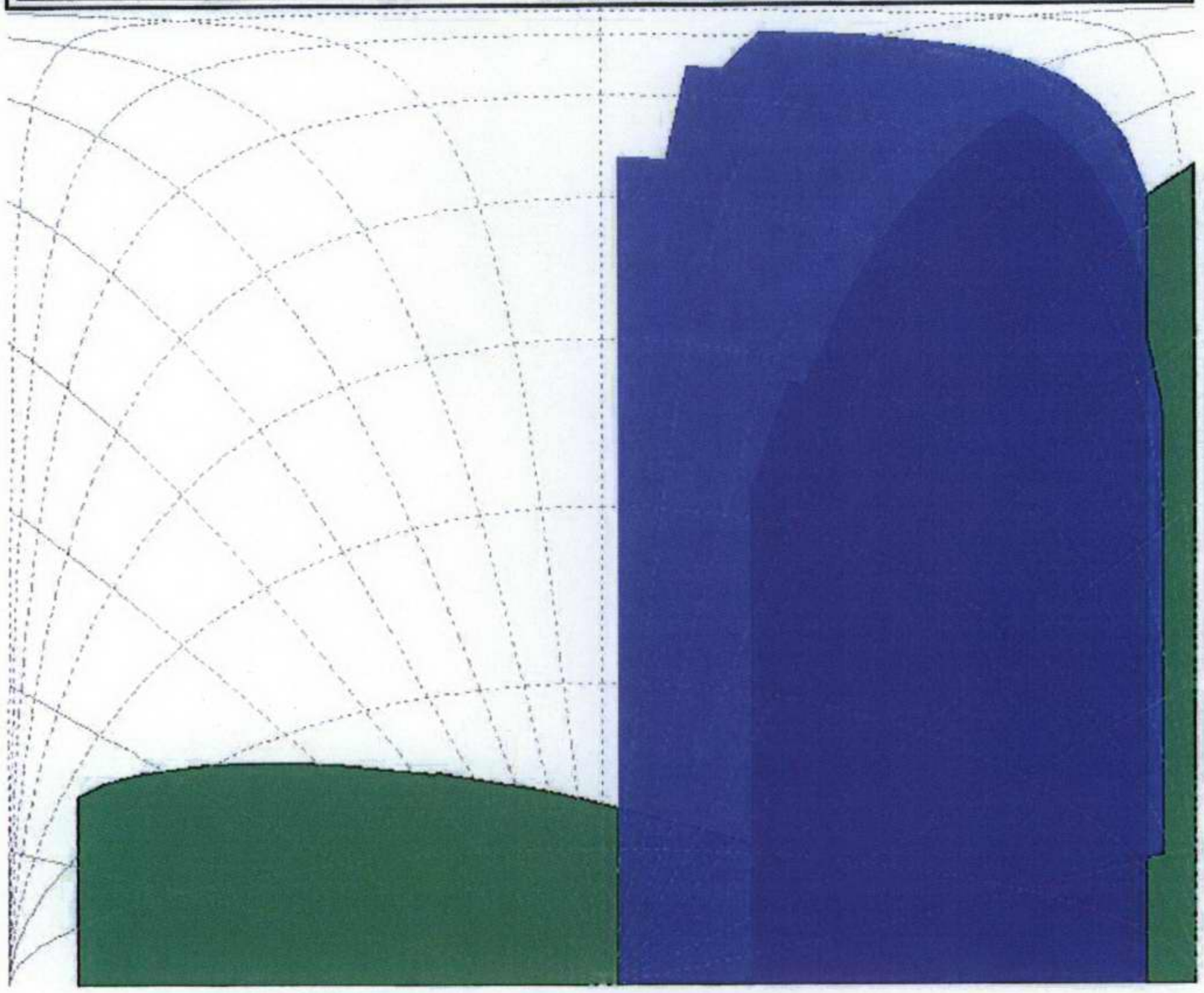

Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w5_3 - 43 Pilgrims Lane
VSC: Existing 17.65
Proposed 13.00
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a


Drawing Ref: 8268_04-05-07a.dwg
Window Ref: w6_2 - 43 Pilgrims Lane
VSC: Existing 12.48
Proposed 6.11
AVAILABLE SUNLIGHT:
Annual Winter
Existing n/a n/a
Proposed n/a n/a

Drawing Ref: 8288_04-05-07a.dwg Window Ref: w6_3 - 43 Pilgrims Lane	VSC: Existing 18.83 Proposed 9.20	AVAILABLE SUNLIGHT:	Annual	Winter
		Existing	n\a	n\a
		Proposed	n\a	n\a



Drawing Ref: 8288_04-05-07a.dwg Window Ref: w7_1 - 43 Pilgrims Lane	VSC: Existing 23.51 Proposed 17.97	AVAILABLE SUNLIGHT:	Annual	Winter
		Existing	n\a	n\a
		Proposed	n\a	n\a



APPENDIX 3

CREDENTIALS