

SMITH MARSTON

*Building Surveyors*

**Neighbouring Daylight and Sunlight Study**

**228 Plessey Road, Blyth, NE24 3NW**

**10 March 2023**



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**Smith Marston Building Surveyors**

**NEIGHBOURING DAYLIGHT AND SUNLIGHT STUDY**  
22138 - 228 Plessey Road, Blyth, NE24 3NW

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# **1 EXECUTIVE SUMMARY**

## **1.1 Overview**

- 1.1.1 Smith Marston Building Surveyors have been commissioned by Birch Tree Northern Ltd to undertake a daylight and sunlight study of the proposed development at 228 Plessey Road, Blyth, NE24 3NW.
- 1.1.2 The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice, 3<sup>rd</sup> Edition' by P J Littlefair 2022.
- 1.1.3 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring residential property at 226 Plessey Road, Blyth, NE24 3NW.
- 1.1.4 The window key in Appendix 1 identifies the windows analysed in this study. Appendix 2 gives the numerical results of the various daylight and sunlight tests.
- 1.1.5 All neighbouring windows (that have a requirement for daylight or sunlight) pass the relevant BRE diffuse daylight and direct sunlight tests.
- 1.1.6 The development narrowly misses the recommendations of the BRE overshadowing to gardens and open spaces test, with the amount of garden being able to receive 2 hours of sunlight on 21<sup>st</sup> March, reducing by 28%. This is more than the 20% threshold at which the BRE considers the loss of sunlight will be noticeable.
- 1.1.7 In summary, the numerical results in this assessment demonstrate that the proposed development will have a low impact on the light receivable by its neighbouring property windows and rooms, although some loss of sunlight to the garden will occur which may be noticeable to the neighbour at 226.

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## **2 INFORMATION SOURCES**

### **2.1 Drawings**

2.1.1 This report is based a measured survey of the external parts of already built extension 228 Plessey Road, Blyth, NE24 3NW, tied to the adjacent property at 226 by use of measurements taken with a Nikon Total Station, to locate the relative heights and positions of the properties and their windows.

### **2.2 Daylight Distribution Room Layout Information**

2.2.1 The daylight distribution test has been applied based on the room layout information found in plans at Northumberland County Council's planning portal under the neighbour's application reference 11/02956/FUL.

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### **3 METHODOLOGY OF THE STUDY**

#### **3.1 Local Planning Policy**

3.1.1 We understand that the Local Authority take the conventional approach of considering daylight and sunlight amenity with reference to the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice, by P J Littlefair 2011. This report is based on the 3<sup>rd</sup> edition of the BRE guide which was published on 8 June 2022.

3.1.2 The standards set out in the BRE guide are intended to be used flexibly. The BRE guide states:

3.1.3 "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 designer. Although it gives numerical guidelines, these should be interpreted flexibly, since natural lighting is only one of many factors in site layout design."

3.1.4 In reference to applying different numerical target values in different locations, the BRE guide states:

3.1.5 "These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location."

#### **3.2 National Planning Policy Framework**

3.2.1 The BRE numerical guidelines should be considered in the context of the revised National Planning Policy Framework (NPPF), which stipulates that local planning authorities should take a flexible approach to daylight and sunlight to ensure the efficient use of land. The NPPF states:

3.2.2 "Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they

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would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."

### **3.3 National Planning Practice Guidance**

3.3.1 The BRE numerical guidelines should also be considered in the context of the National Planning Practice Guidance (NPPG). The NPPG states that developments should maintain acceptable living standards. It goes on to explain that what this means in practice is that appropriate levels of sunlight and daylight, will depend to some extent on the context for the development. This is consistent with the BRE guide which as noted in paragraphs 3.1.4 to 3.1.5 above, states that site location is a relevant factor when setting sunlight and daylight targets.

### **3.4 Daylight to Windows**

3.4.1 Diffuse daylight is the light received from the sun which has been diffused through the sky. Even on a cloudy day, when the sun is not visible, a room will continue to be lit with light from the sky. This is diffuse daylight.

3.4.2 Diffuse daylight calculations should be undertaken to all rooms within domestic properties, where daylight is required, including living rooms, kitchens and bedrooms. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. These room types are non-habitable and do not have a requirement for daylight.

3.4.3 The BRE guide contains two tests which measure diffuse daylight:

#### **Test 1 Vertical Sky Component**

3.4.4 The Vertical Sky Component is a measure of available skylight at a given point on a vertical plane. Diffuse daylight may be adversely affected if after a development the Vertical Sky Component is both less than 27% and less than 0.8 times its former value.

3.4.5 The BRE guide states that the total amount of skylight can be calculated by finding the Vertical Sky Component at the centre of each main window. However, the guide states that if there would be a significant loss of light to the main window but the room also has one or more smaller windows, an overall Vertical Sky Component may be

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derived by weighting each Vertical Sky Component element in accordance with the proportion of the total glazing area represented by its window.

### **Test 2 Daylight Distribution**

- 3.4.6 The distribution of daylight within a room can be calculated by plotting the 'no sky line'. The no sky line is a line which separates areas of the working plane that do and do not have a direct view of the sky. Daylight may be adversely affected if, after the development, the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value.

The BRE guide states that both the total amount of skylight (Vertical Sky Component) and its distribution within the building (Daylight Distribution) are important.

### **3.5 Sunlight Availability to Windows**

- 3.5.1 The BRE sunlight tests should be applied to all main living rooms and conservatories which have a window which faces within 90 degrees of due south. The BRE guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight. It also states that normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms which also comprise a living space. The tests should also be applied to non-domestic buildings where there is a particular requirement for sunlight.

- 3.5.2 The test is intended to be applied to main windows which face within 90 degrees of due south. However, the BRE guide explains that if the main window faces within 90 degrees due north, but a secondary window faces within 90 degrees due south, sunlight to the secondary window should be checked. For completeness, we have tested all windows which face within 90 degrees of due south. The BRE guide states that sunlight availability may be adversely affected if the centre of the window:

- receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and
- receives less than 0.8 times its former sunlight hours during either period and



- 
- has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

### **3.6 Overshadowing to Gardens and Open Spaces**

3.6.1 The availability of sunlight should be checked for all open spaces where sunlight is required. This would normally include:

- Gardens, usually the main back garden of a house
- Parks and playing fields
- Children's playgrounds
- Outdoor swimming pools and paddling pools
- Sitting out areas, such as those between non-domestic buildings and in public squares
- Focal points for views such as a group of monuments or fountains.

3.6.2 One way to consider overshadowing is by preparing shadow plots. However, the BRE guide states that it must be borne in mind that nearly all structures will create areas of new shadow, and some degree of transient overshadowing is to be expected. Therefore, shadow plots are of limited use as interpretation of the plots is subjective. Shadow plots have not been undertaken as part of this study.

3.6.3 The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this study. This guide recommends that at least 50% of the area of each amenity space listed above should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sunlight on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

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## **4 RESULTS OF THE STUDY**

### **4.1 Windows & Amenity Areas Considered**

4.1.1 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring residential property at 226 Plessey Road, Blyth, NE24 3NW.

4.1.2 Appendix 1 provides a plan and photographs to indicate the positions of the windows and outdoor amenity areas analysed in this study. Appendix 2 lists the detailed numerical daylight and sunlight test results. Appendix 3 provides No Sky Line contours illustrating daylight distribution in rooms.

### **4.2 Daylight to Windows**

#### Vertical Sky Component

4.2.1 All relevant windows at 226 Plessey Road with a requirement for daylight pass the Vertical Sky Component test.

#### Daylight Distribution

4.2.2 We have undertaken the Daylight Distribution test where room layouts are known. All rooms with a requirement for daylight pass the daylight distribution test.

### **4.3 Sunlight to Windows**

4.3.1 All windows that face within 90 degrees of due south have been tested for direct sunlight. All windows with a requirement for sunlight pass both the total annual sunlight hours test and the winter sunlight hours test. The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

### **4.4 Overshadowing to Gardens and Open Spaces**

4.4.1 The development narrowly misses achieving the BRE overshadowing to gardens and open spaces test, with the amount of garden being able to receive 2 hours of sunlight on 21st March, reducing by 28%. This is more than the 20% threshold at which the BRE considers the loss of sunlight will be noticeable.

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## **4.5 Conclusion**

- 4.5.1 In summary, the numerical results in this study demonstrate that the proposed development will have a low impact on the light receivable by the rooms and windows in the neighbouring property at 226 Plessey Road. The development narrowly misses achieving the recommendation for the BRE overshadowing to gardens and open spaces test, with the amount of the neighbouring rear garden being able to receive 2 hours of sunlight on 21st March, reducing by 28%. This is more than the 20% threshold at which the BRE considers the loss of sunlight will be noticeable.

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## **5 CLARIFICATIONS**

### **5.1 General**

- 5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.
- 5.1.2 The study is limited to assessing daylight, sunlight and overshadowing to neighbouring properties as set out in section 2.2, 3.2 and 3.3 of the BRE Guide.
- 5.1.3 The study is based on the information listed in section 2 of this report and a site visit undertaken on 14 February 2023. We have not had access to neighbouring properties.
- 5.1.4 This study does not calculate the effects of trees and hedges on daylight, sunlight and overshadowing to gardens. The BRE guide states that it is usual to ignore the effect of existing trees.
- 5.1.5 We have undertaken the study following the guidelines of the RICS publication "Surveying Safely". Where limited access or information is available, assumptions will have been made which may affect the conclusions reached in this report. For example, where neighbouring room uses are not known, we will either make an assumption regarding the use, or take the prudent approach of treating the use of the room as being used for domestic purposes. Therefore, the report may need to be updated if room uses are confirmed by the local authority or by the consultation responses.
- 5.1.6 This report is based upon and subject to the scope of work set out in Smith Marston Building Surveyor's quotation and standard terms and conditions.

## APPENDICES

**APPENDIX 1**  
**WINDOW KEY & GARDEN KEY**

**Key**



Proposed Development



Neighbouring Properties



Neighbouring Gardens and Amenity Areas



226 Plessey Road

228 Plessey Road

Proposed Extension

Rev Date Description

**SMITH MARSTON**

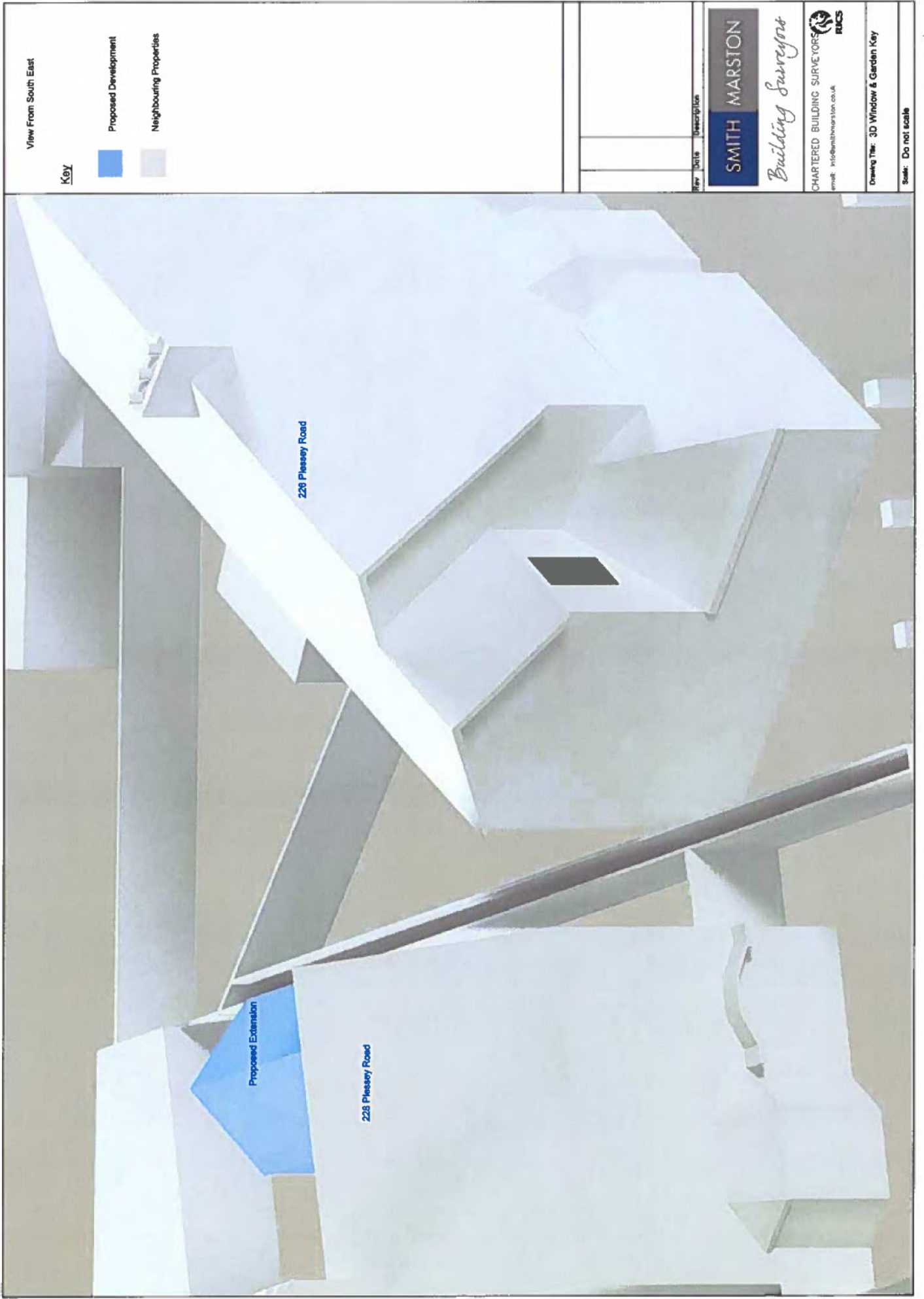
*Building Surveyors*

CHARTERED BUILDING SURVEYORS  
email: info@smithmarston.co.uk  
**RICS**

Drawing Title: 3D Window & Garden Key

Scale: Do not scale





View From South East

Key



Proposed Development



Neighbouring Properties

Rev. Date Description

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RICS  
email: info@smithmarston.co.uk

Drawing Title: 3D Window & Garden Key

Scale: Do not scale



View From South West

**Key**

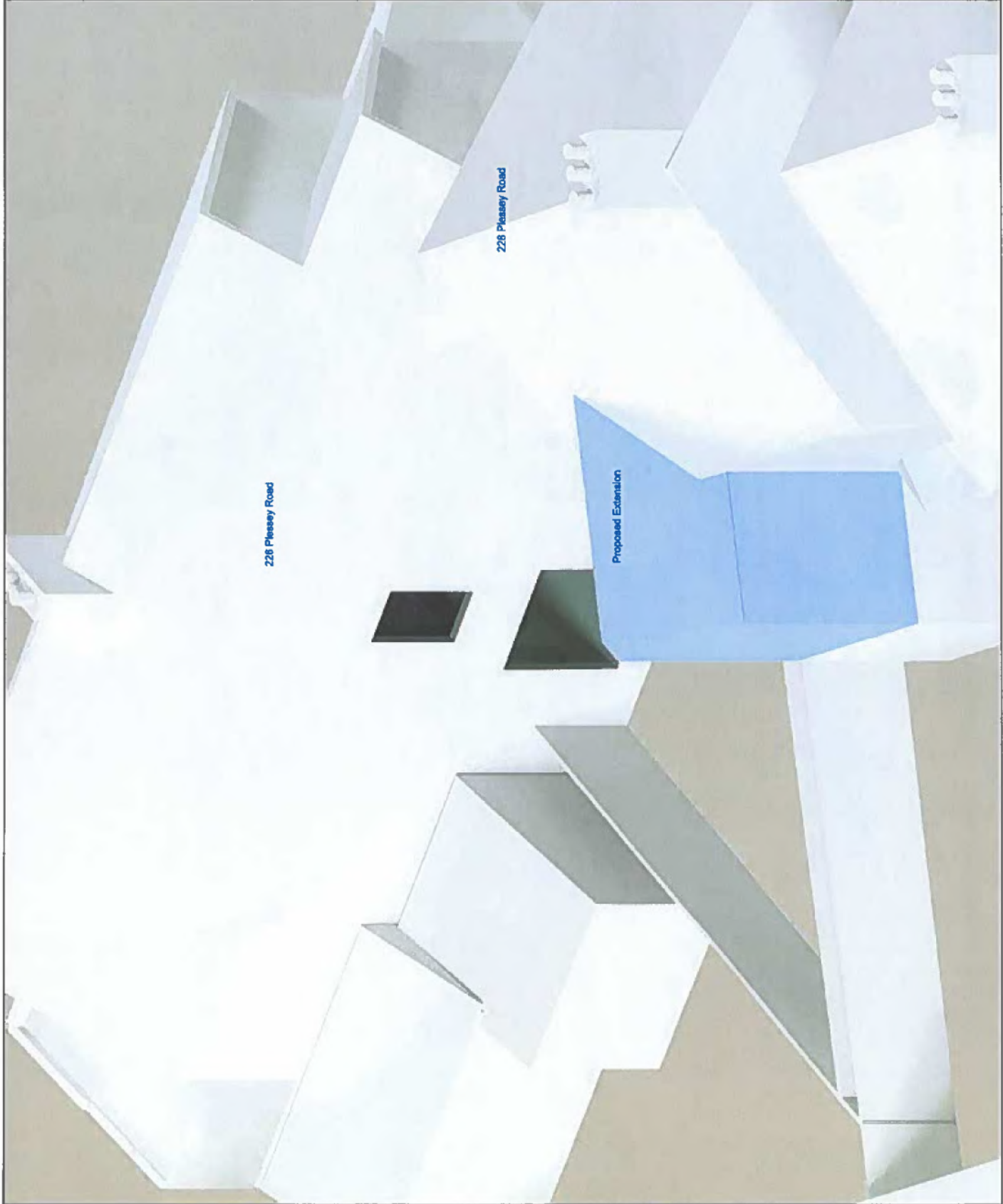
- Proposed Development
- Neighbouring Properties

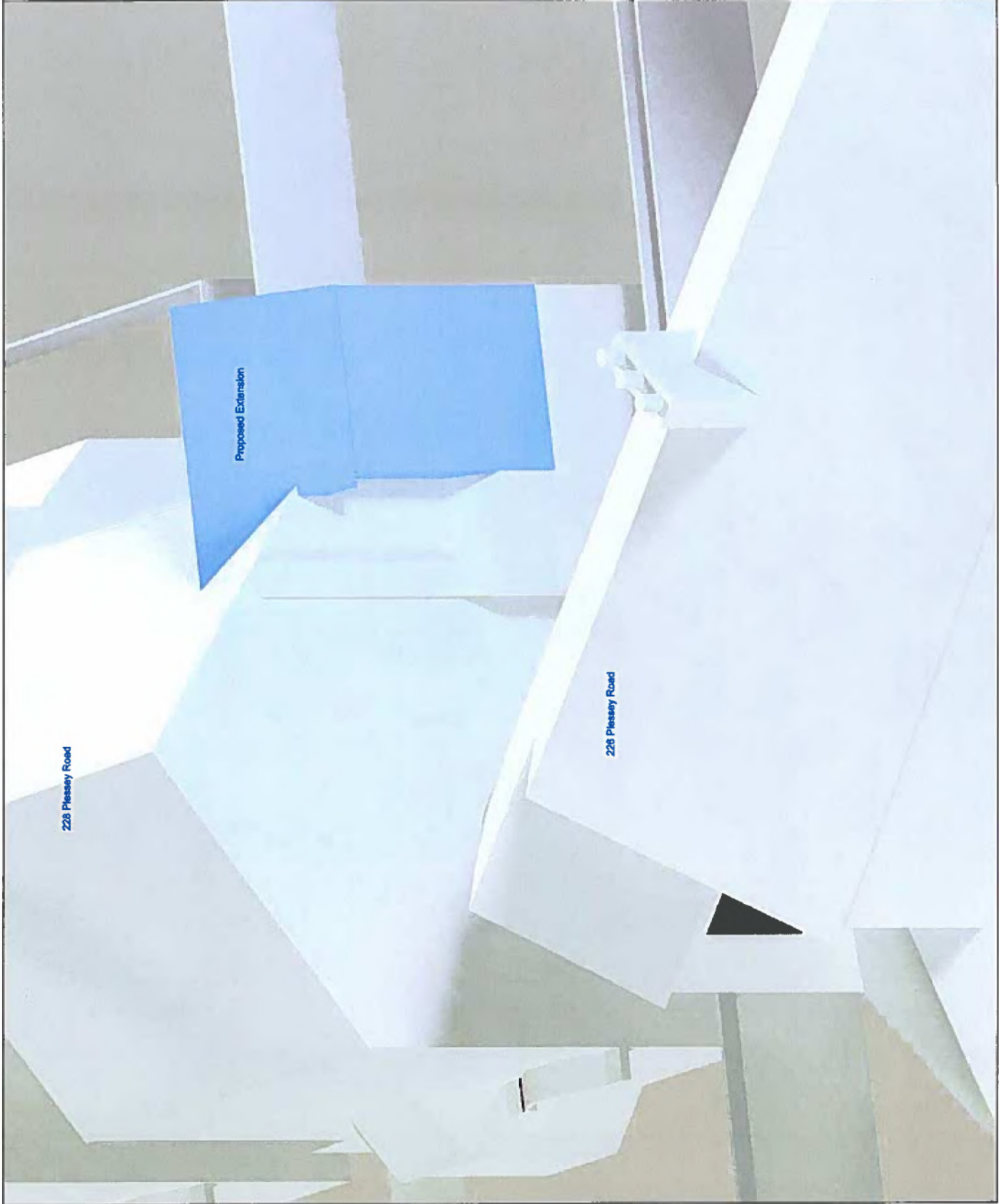
Rev	Date	Description

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Drawing Title: 3D Window & Garden Key  
Scale: Do not scale





View From North East

**Key**



Proposed Development



Neighbouring Properties

Rev	Date	Description

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**RICS**

Drawing Title: 3D Window & Garden Key

Scale: Do not scale

View From North West

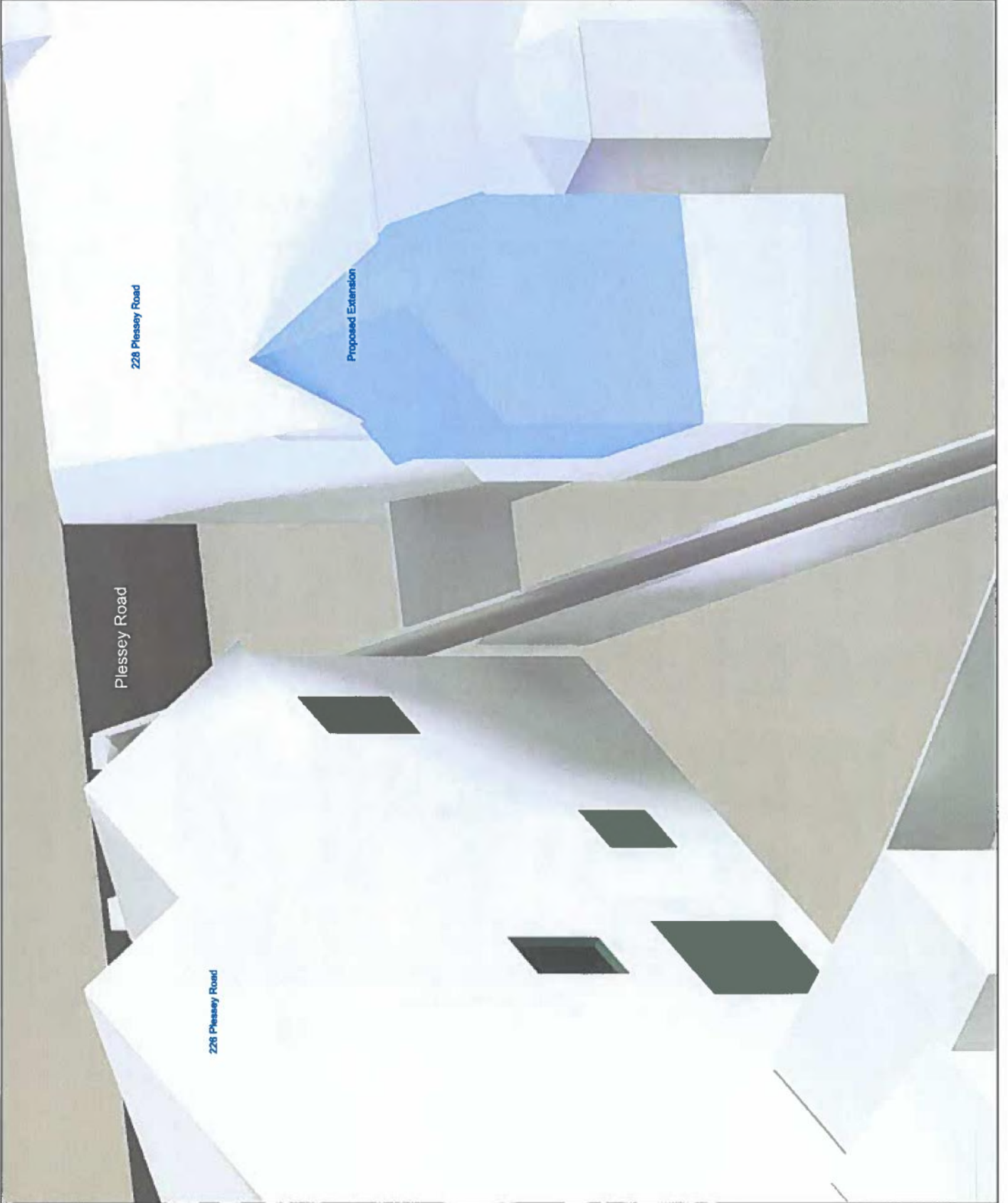
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Proposed Development



Neighbouring Properties



Rev Date Description

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RICS

Drawing Title: 3D Window & Garden Key

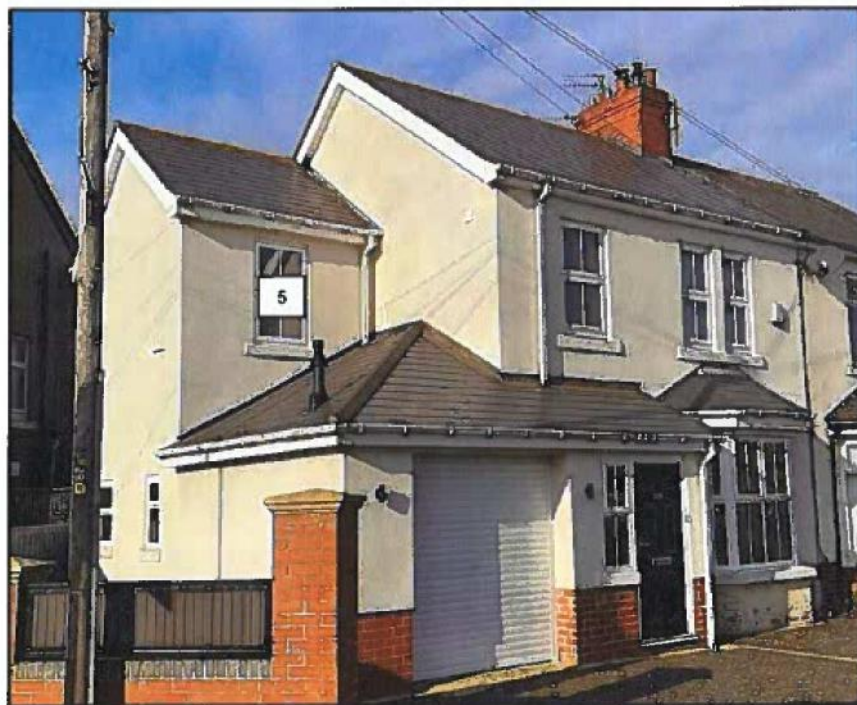
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## Neighbouring Windows



**226 Plessey Road**



**226 Plessey Road**

**Key**

Proposed Development

Neighbouring Properties

Receives under two hours sunlight on 21st March before and after the development.

Receives under two hours sunlight on 21st March before the development; but will receive at least two hours sunlight on 21st March after the development (light improved).

Receives at least two hours sunlight on 21st March before the development; but will receive under two hours sunlight after the development (light loss).

Receives at least two hours sunlight on 21st March before and after the development.

Neighbouring Gardens and Amenity Areas

**Notes:**

1. Contours derived in accordance with BRE Guide : Site Layout Planning for Daylight and Sunlight

Rev

Date

Description

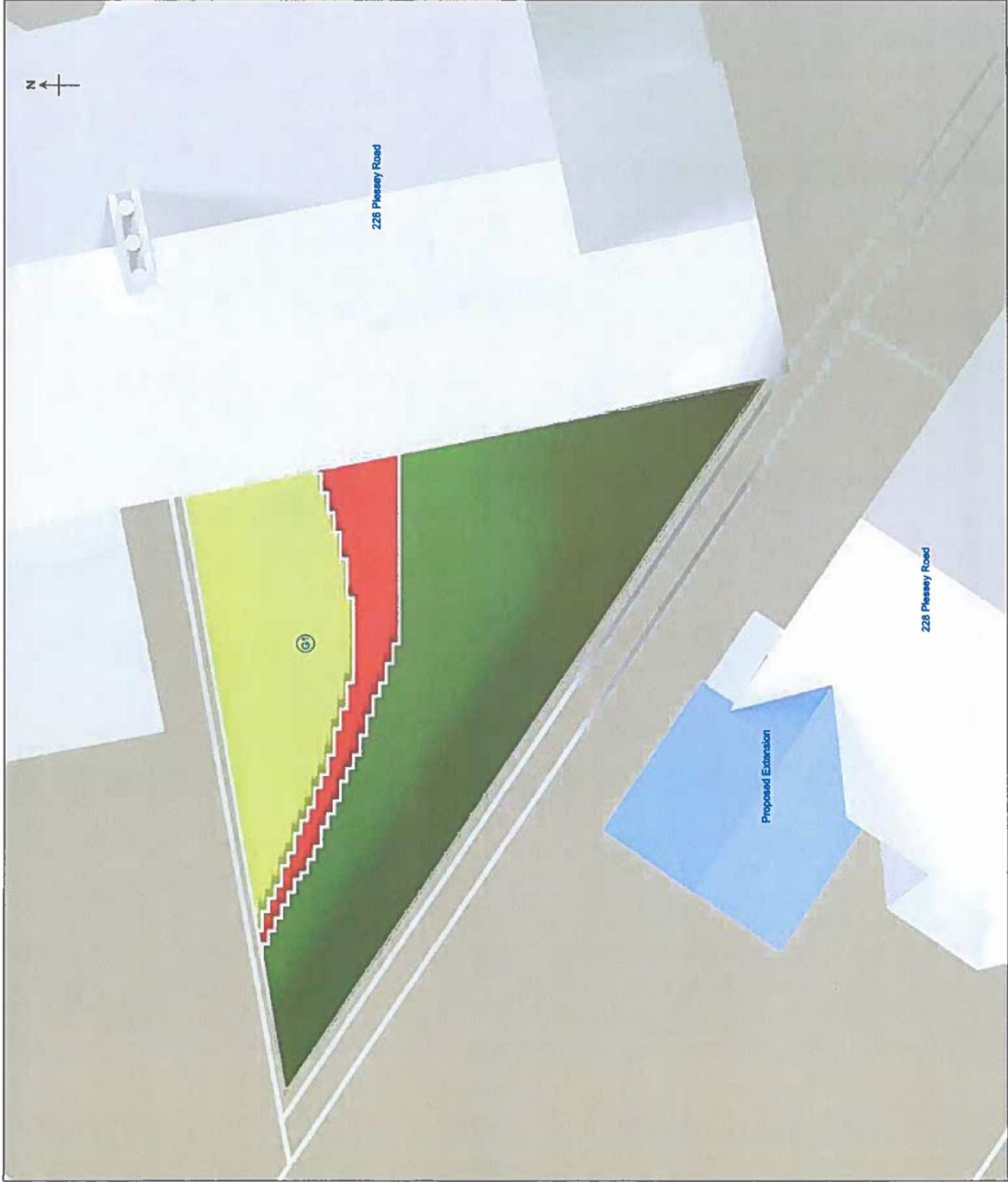
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 RICS

Drawing Title: Overhadowing to Gardens and Open Spaces

Scale: Do not scale



**APPENDIX 2**  
**DAYLIGHT AND SUNLIGHT CALCULATIONS**

**Appendix 2 - Vertical Sky Component**  
**228 Plessey Road, Blyth, NE24 3NW**

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
<u>226 Plessey Road</u>					
<u>Ground Floor</u>					
Window 1	Dining Room	34.6%	32.8%	1.8%	0.95
Window 2	Kitchen	28.3%	25.5%	2.8%	0.9
<u>First Floor</u>					
Window 3	Bedroom	36.7%	35.5%	1.2%	0.97
Window 4	Bedroom	24.2%	22.6%	1.6%	0.93
Window 5	Bedroom	30.5%	30.5%	0.0%	1.0

**Appendix 2 - Daylight Distribution**  
**228 Plessey Road, Blyth, NE24 3NW**

Reference	Room Use	Daylight Distribution			
		Before	After	Loss	Ratio
<b><u>226 Plessey Road</u></b>					
<b><u>Ground Floor</u></b>					
Window 1	Dining Room	100%	99%	1.0%	0.99
Window 2	Kitchen	97%	88%	9.0%	0.91
<b><u>First Floor</u></b>					
Window 3	Bedroom	100%	100%	0.0%	1.0
Windows 4 & 5	Bedroom	89%	89%	0.0%	1.0



**Appendix 2 - Sunlight to Windows**  
**228 Plessey Road, Blyth, NE24 3NW**

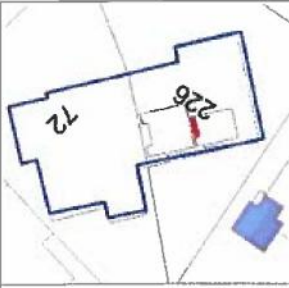
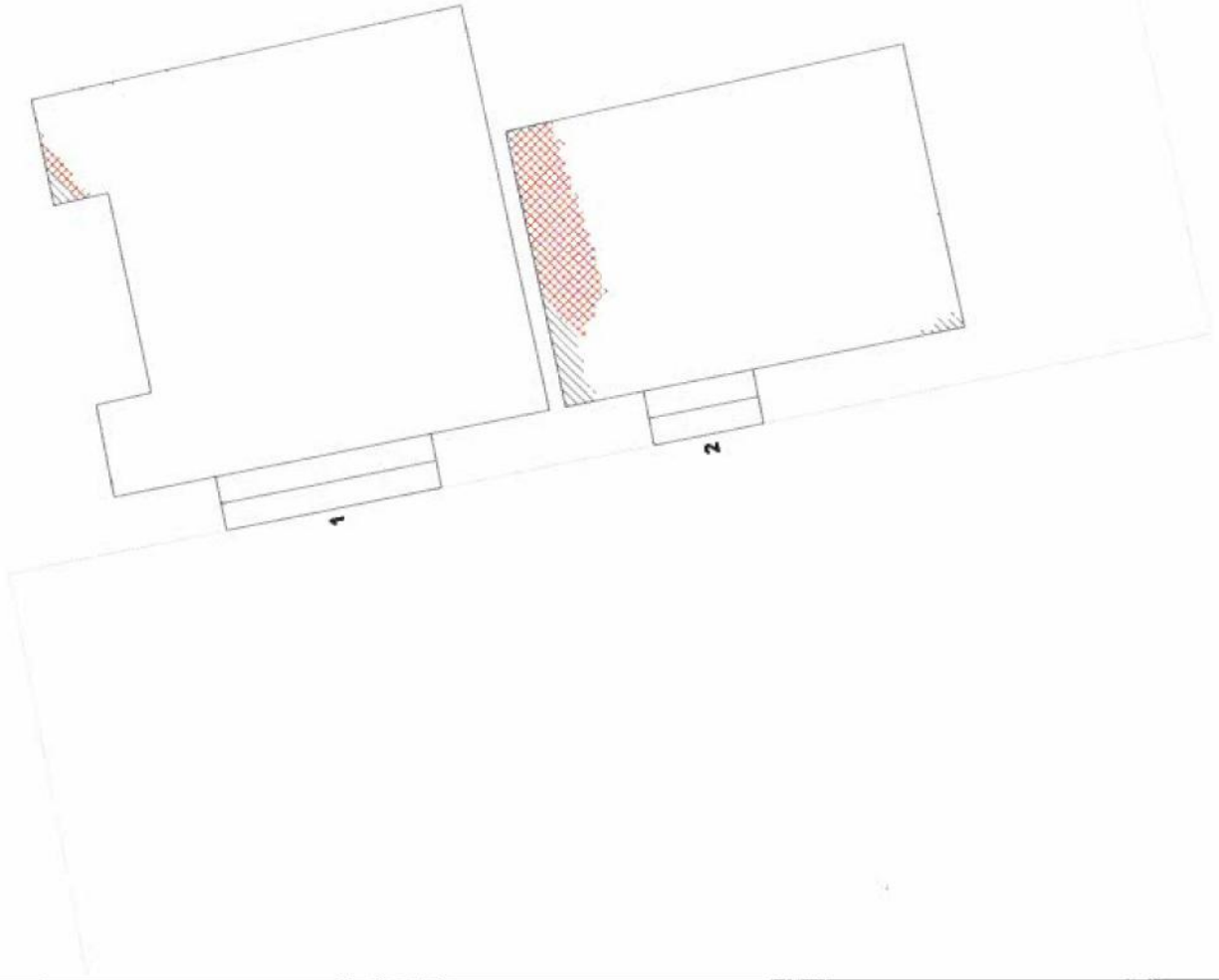
Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
<b><u>226 Plessey Road</u></b>									
<b><u>Ground Floor</u></b>									
Window 1	Dining Room	42%	39%	3%	0.93	5%	2%	3%	0.4
Window 2	Kitchen	27%	23%	4%	0.85	0%	0%	0%	1.0
<b><u>First Floor</u></b>									
Window 3	Bedroom	45%	42%	3%	0.93	9%	6%	3%	0.67
Window 4	Bedroom	19%	18%	1%	0.95	2%	2%	0%	1.0





**Appendix 2 - Overshadowing to Gardens and Open Spaces**  
**228 Plessey Road, Blyth, NE24 3NW**

Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
		Before		After		Loss	Ratio	
<u>226 Plessey Road</u>								
<u>Ground Floor</u>								
Garden 1	41.75 m2	15.25 m2	37%	10.99 m2	26%	4.26 m2	11%	0.72

**APPENDIX 3  
NO SKY LINE CONTOURS**

**226 Plessey Road (Ground Floor)**



- 
 Area that does not receive visible sky both before and after the development.
- 
 Area that can receive visible sky as a result of the development.
- 
 Area that cannot receive visible sky as a result of the development.
- 
 Area that can receive visible sky both before and after the development.

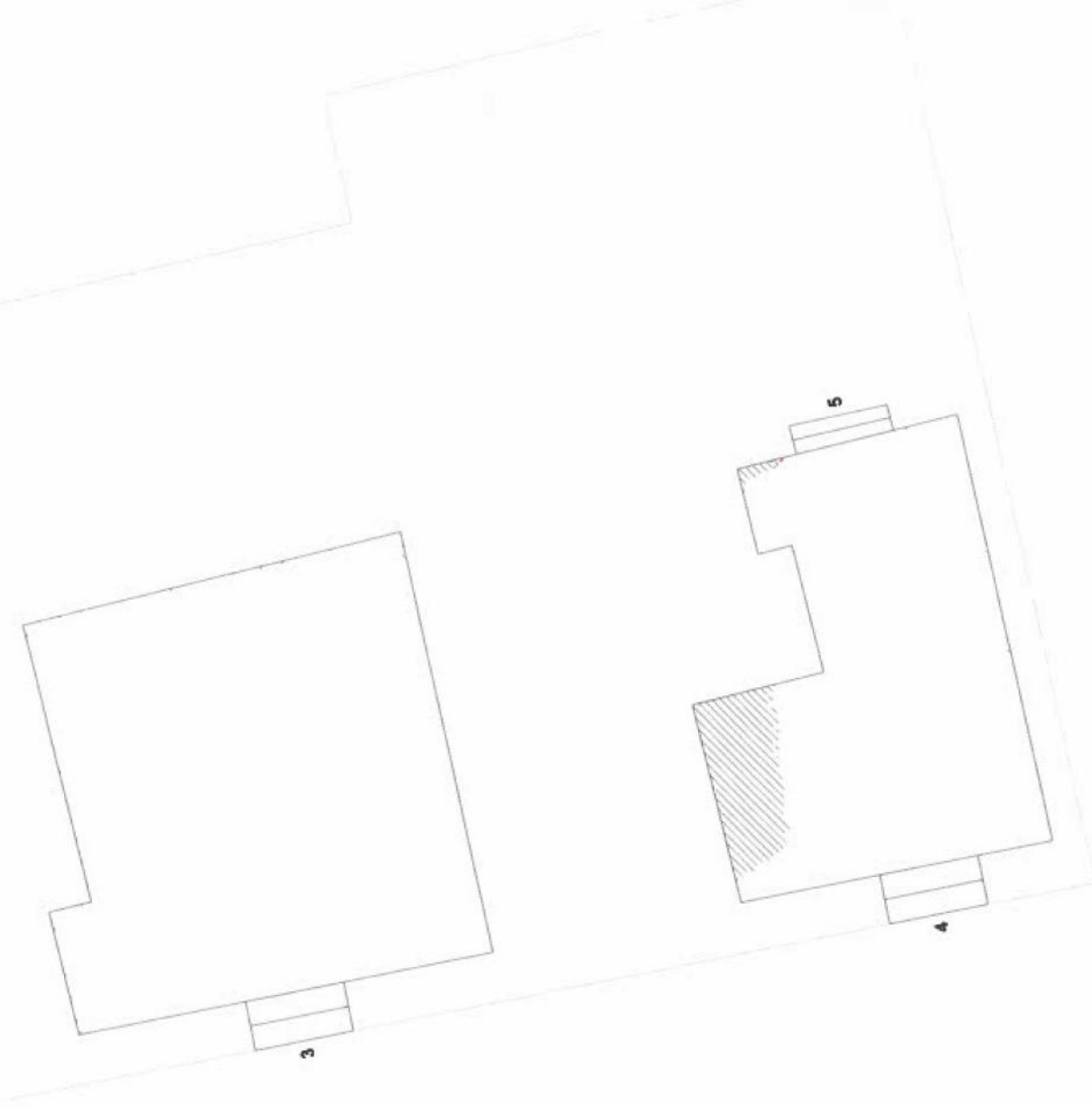
Rev	Date	Description





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Drawing Title: **No Sky Line Contours**  
 Scale: Do not scale

226 Plessey Road (First Floor)



- 
 Area that does not receive visible sky both before and after the development.
- 
 Area that can receive visible sky as a result of the development.
- 
 Area that cannot receive visible sky as a result of the development.
- 
 Area that can receive visible sky both before and after the development.

Rev	Date	Description

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email: info@smithmarston.co.uk  
  
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