RIGHT OF LIGHT CONSULTING
Chartered Surveyors

Daylight and Sunlight Report

(Neighbouring Properties)

4 February 2022

Site at Ballymany
Ballymany Road
Newbridge
Kildare
Ireland W12 T925

RICS
Regulated by RICS

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1 EXECUTIVE SUMMARY

1.1 Overview

1.1.1 Right of Light Consulting has been commissioned by Briargate Developments Newbridge Ltd to undertake a daylight and sunlight study of the proposed development at Site at Ballymany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925.

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, 2nd Edition' by P J Littlefair 2011.

1.1.3 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring residential properties at 41 to 49, 64 to 71 The Elms, Laneview and Millfield.

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. Where room layouts are not known the daylight distribution test has not been undertaken.

1.1.5 All neighbouring windows (that have a requirement for daylight or sunlight) pass the relevant BRE diffuse daylight and direct sunlight tests. The development also passes the BRE overshadowing to gardens and open spaces test.

1.1.6 In summary, the numerical results in this study demonstrate that the proposed development will have a low impact on the light receivable by its neighbouring properties. In our opinion, the proposed development sufficiently safeguards the daylight and sunlight amenity of the neighbouring properties.

2 INFORMATION SOURCES

2.1 Drawings

2.1.1 This report is based on the following drawings:

Reddy Architecture + Urbanism

	Ballymany Newbridge OSI Site Plan	Rev -
	D1920 Proposed Road Layout - Phase 1_RAU-NO Distributor Road	Rev -
P20-071	Site Survey	Rev -
P20-071K-RAU-XX-XX-DR-A-31070	Site Survey	Rev P03.01
P20-071_RAU-XX-XX-A-31000	House Type C2 3B5P	Rev P03.01
P20-071K-02-08-XXX-DR-RAU-AR-2001	Apartment Block A Front & Elevation 02	Rev P03.01
P20-071K-02-08-XXX-DR-RAU-AR-2002	Apartment Block A Rear & Elevation 03	Rev P03.01
P20-071K-15-02-L00-DR-RAU-AR-1001	Apartment Block Floor Plans	Rev P03.01
P20-071K-15-02-L01-DR-RAU-AR-1001	1st Floor Plan	Rev P03.01
P20-071K-15-02-L02-DR-RAU-AR-1003	2nd Floor Plan	Rev P03.01
P20-071K-15-02-L03-DR-RAU-AR-1004	3rd Floor Plan	Rev P03.01
P20-071K-RAU-01-XX-DR-A-31100	House Type B1 4B7P	Rev P01.01
P20-071K-RAU-02-XX-DR-A-31100	House Type C1 3B5P	Rev P03.01
P20-071K-RAU-04-XX-DR-A-31100	House Type C3 3B50	Rev P03.01
P20-071K-RAU-05-XX-DR-A-31100	House Type D 2B4P	Rev P03.01
P20-071K-RAU-05-XX-DR-A-31100	Duplex Type 1_ Sheet 1 3B5P/1B2P	Rev P03.01
P20-071K-RAU-05-XX-DR-A-31100	Duplex Type 1_ Sheet 2 3B5P/1B2P	Rev P03.01
P20-071K-RAU-08-ZZ-DR-A-71001	House Type G Plans/ Elevations/ Section	Rev P01
P20-071K-RAU-10-ZZ-DR-A-71001	Duplex Type 2 Plans/ Elevations/ Section	Rev P03.01
P20-071K-RAU-22-XX-DR-A-31120	Duplex Type 3- 2B4P over 2B4P_ Sheet 1 D3 A and D3 B	Rev P03.01
P20-071K-RAU-22-XX-DR-A-31121	Duplex Type 3 - 2B4P over 2B4P_ Sheet 2 D3 A and D3 B	Rev P03.01
P20-071K-RAU-XX-XX-DR-A-31700	Proposed Creche	Rev P03.01
P20-071K-RAU-XX-XX-DR-	Proposed Creche Elevations/ Section	Rev P03.01

A-31701		
P20-071K-RAU-XX-ZZ-DR-A-31001	Site Layout 1/3	Rev P03.01
P20-071K-RAU-XX-ZZ-DR-A-31002	Site Layout 2/3	Rev P03.01
P20-071K-RAU-XX-ZZ-DR-A-31003	Site Layout 3/3	Rev P03.01
P20-071-RAU-05-XX-DR-A-31100	House Type E 4B7P	Rev P03.01
<u>van Dijk Architects</u>		
1458-PA-004A	Part Site Layout (Part 1 of 3) South portion of Site	Rev B

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, 2nd Edition' by P J Littlefair 2011. A new European standard BS EN 17037 'Daylight in Buildings' was published in May 2019. An update to the BRE guide to take into account the European standard is expected sometime in 2021. It is not yet clear, how and to what extent, the European recommendations will be adopted by the BRE and Local Authorities.

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."

3.2 National Planning Policy Framework

3.2.1 The BRE numerical guidelines should be considered in the context of the 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 would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."

3.3 Daylight to Windows

3.3.1 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.

3.3.2 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.

3.3.3 The BRE guide states that the tests may also be applied to non-domestic buildings where there is a reasonable expectation of daylight. The BRE guide explains that this would normally include schools, hospitals, hotels and hostels, small workshops and some offices. The BRE guide is not explicit in terms of which types of offices it regards as having a requirement for daylight. However, it is widely accepted amongst consultants and local authorities, that for planning purposes, offices (which are commercial in nature) do not have a requirement for daylight. The point is touched on in the 'Daylighting and Sunlighting' guidance note published by the Royal Institution of Chartered Surveyors (RICS), which gives guidance to surveyors on how to produce their reports:

3.3.4 "The report should establish the limits of the assessment. For example, existing commercial premises are rarely assessed for loss of amenity."

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

Test 1 Vertical Sky Component

3.3.6 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.

3.3.7 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. The BRE guide does not define the term 'main window'. However, in our opinion, where a room has

multiple windows, the largest window is usually taken as the main window and the smaller window(s) as secondary. Although we generally follow the practice of testing all windows, including secondary windows, our interpretation of the BRE guide is that the Vertical Sky Component targets do not apply to secondary windows.

Test 2 Daylight Distribution

3.3.8 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.

3.3.9 The BRE guide states that both the total amount of skylight (Vertical Sky Component) and its distribution within the building (Daylight Distribution) are important. The BRE guide states that where room layouts are known, the impact on the daylighting distribution can be found by plotting the 'no sky line' in each of the main rooms. Therefore, we are of the opinion that application of the test is not a requirement of the BRE guide where room layouts are not known. We don't endorse the practice of applying the test based on assumed room layouts, because the test is very sensitive to the size and layout of the room and the results are likely to be misleading. However, we can provide additional daylight distribution data upon request by the local authority, if neighbouring room layout information is confirmed.

3.4 Sunlight availability to Windows

3.4.1 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 guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight. The tests should also be applied to non-domestic buildings where there is a particular requirement for sunlight.

3.4.2 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 of due north, but a secondary window faces within 90 degrees of 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.

3.5 Overshadowing to Gardens and Open Spaces

3.5.1 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.

3.5.2 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.

3.5.3 The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this study. The 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.

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 properties at 41 to 49, 64 to 71 The Elms, Laneview and Millfield.

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.

4.2 Daylight to Windows

Vertical Sky Component

4.2.1 All windows with a requirement for daylight pass the Vertical Sky Component test.

Daylight Distribution

4.2.2 As the room layouts of the neighbouring properties are unknown, the daylight distribution test has not been undertaken.

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 All gardens and open spaces tested meet the BRE recommendations.

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 its neighbouring properties. In our opinion, the proposed development sufficiently safeguards the daylight and sunlight amenity of the neighbouring properties.

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. The study has been undertaken without access to the proposed development site or 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 The impact on solar panels is a material planning consideration. However, the BRE guide does not provide assessment criteria for this. The assessment of impact on any neighbouring solar panels is therefore beyond the scope of this report.

5.1.6 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.

5.1.7 This report is based upon and subject to the scope of work set out in Right of Light Consulting’s quotation and standard terms and conditions.

APPENDICES

APPENDIX 1

WINDOW & GARDEN KEY


Standhouse Road
Millfield
Laneview
The Elms
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Proposed
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Ballymany
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Standhouse Road
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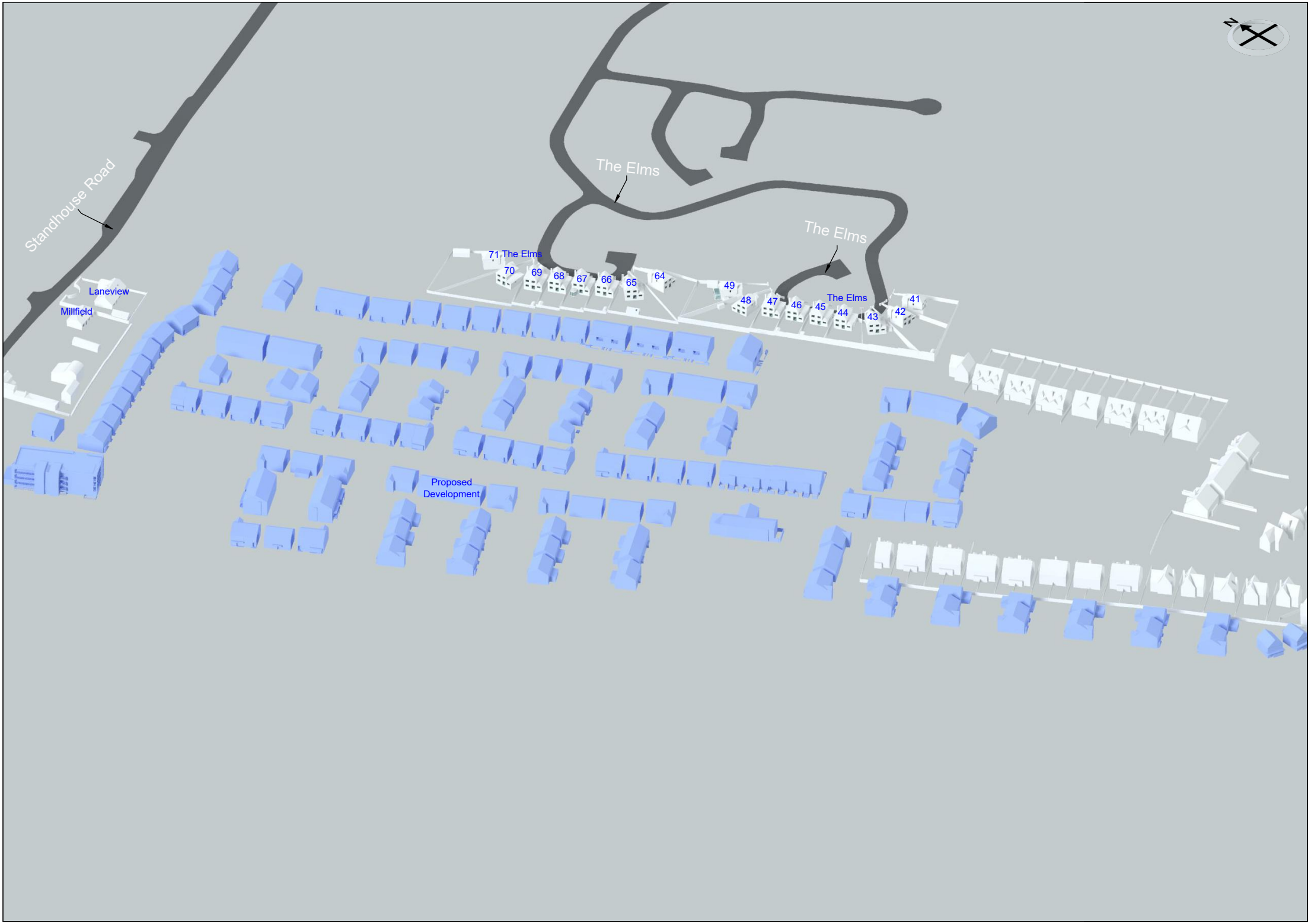
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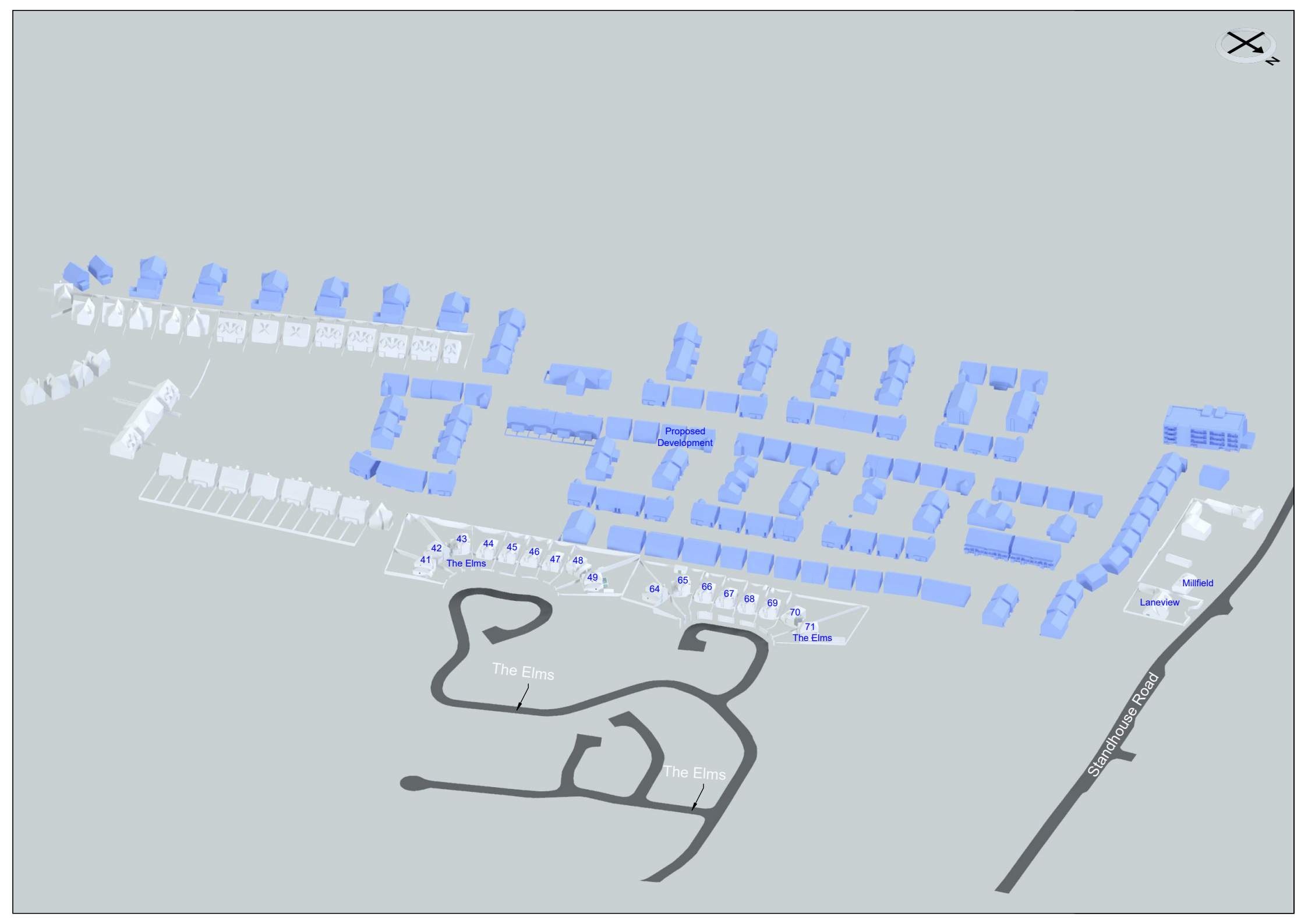
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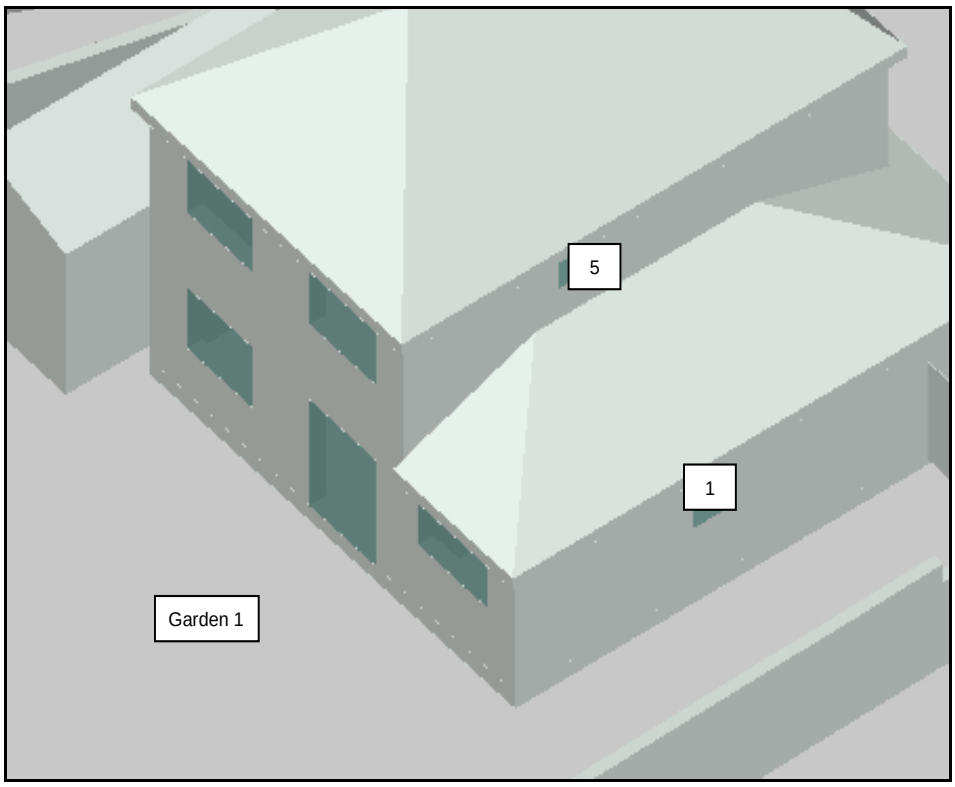
Neighbouring Windows



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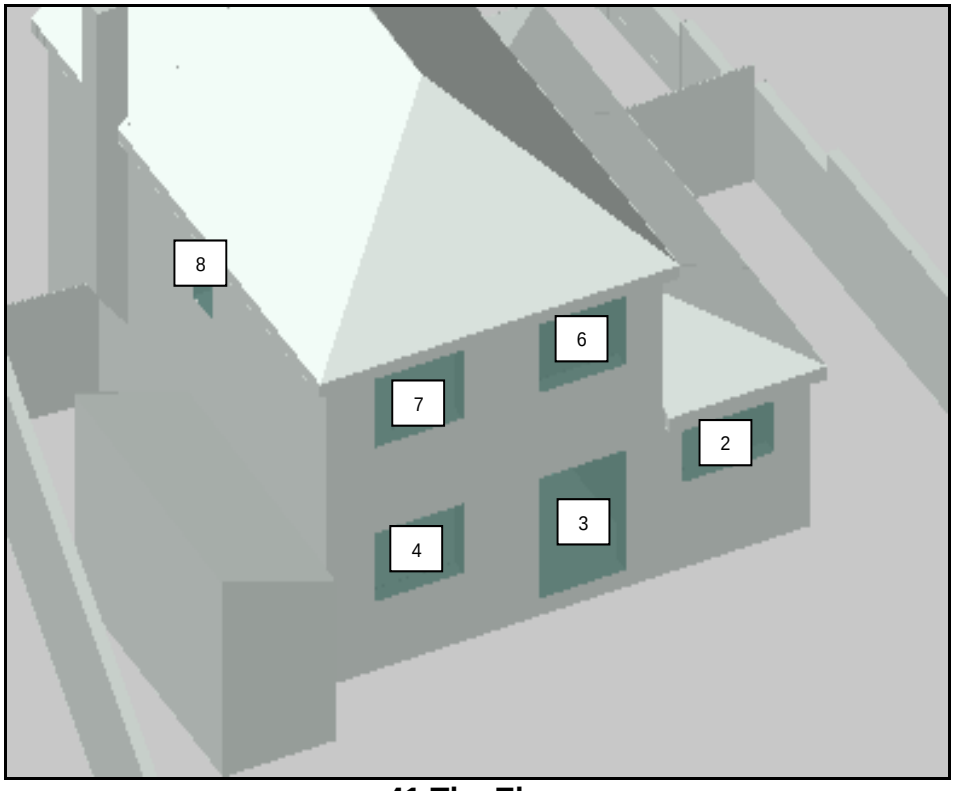

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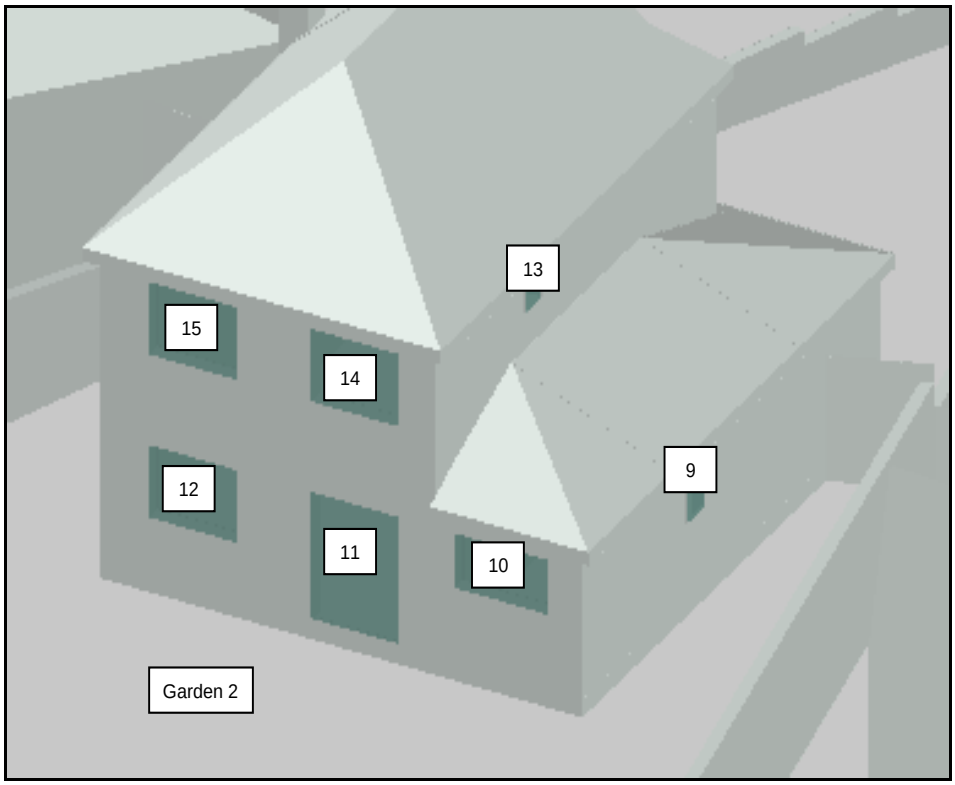

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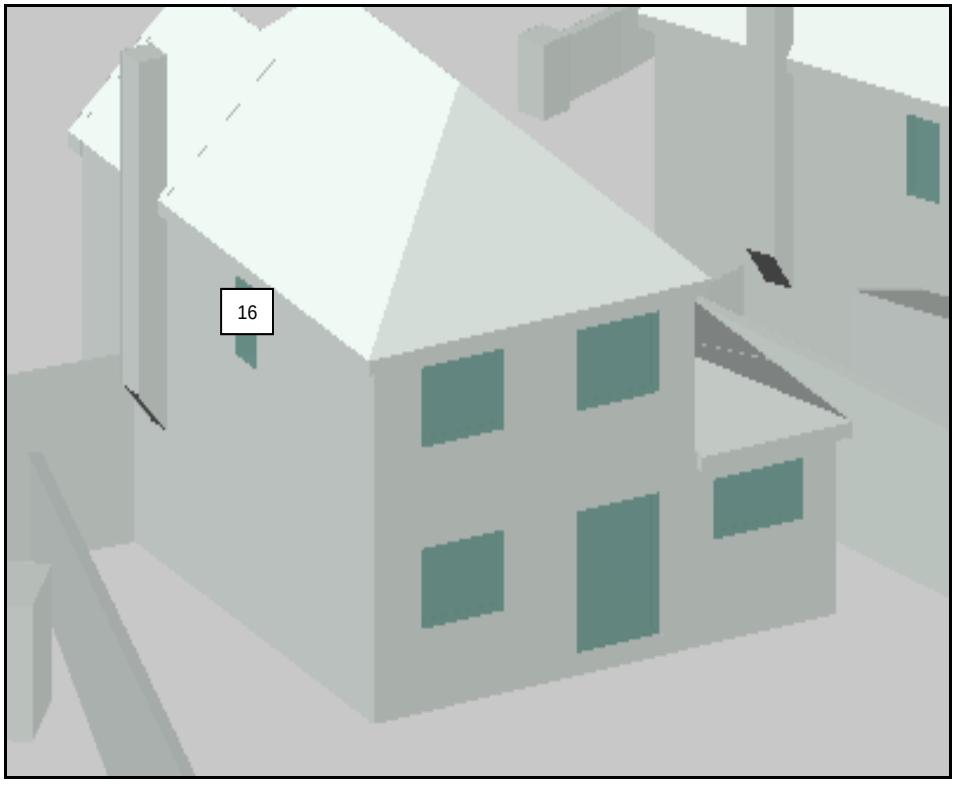

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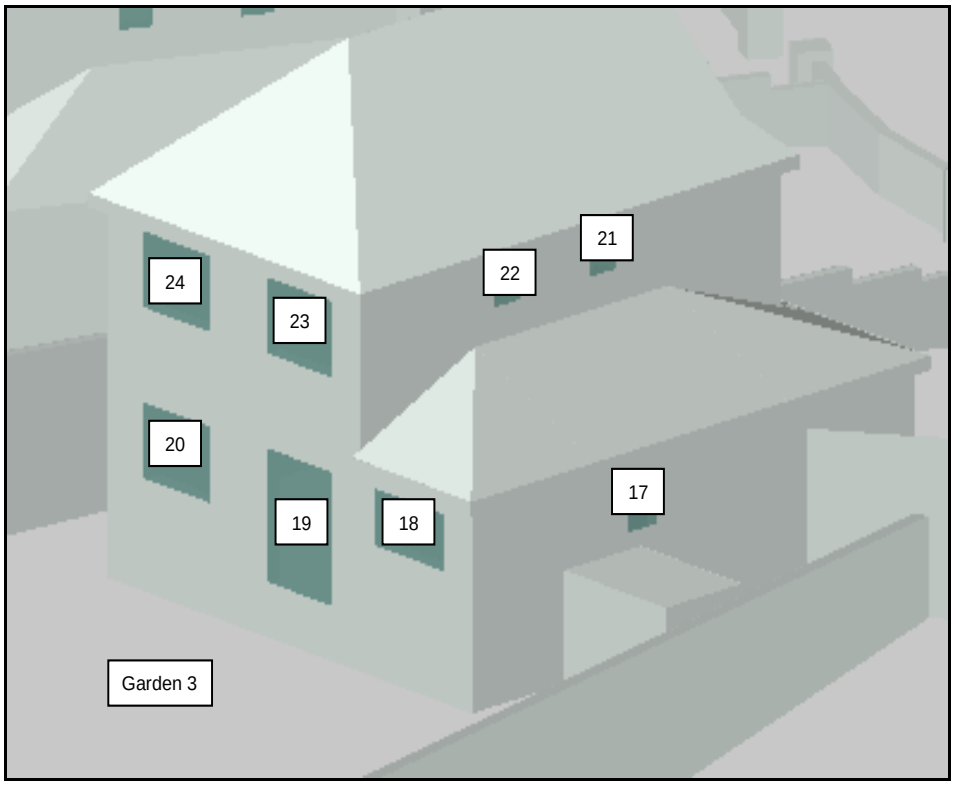

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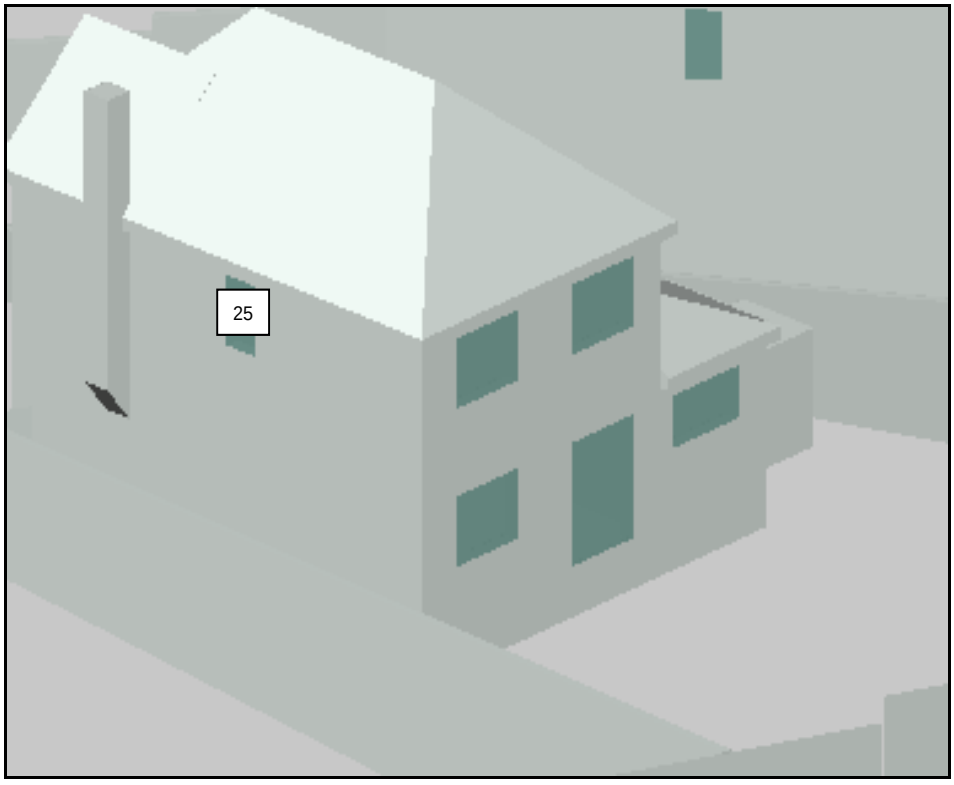

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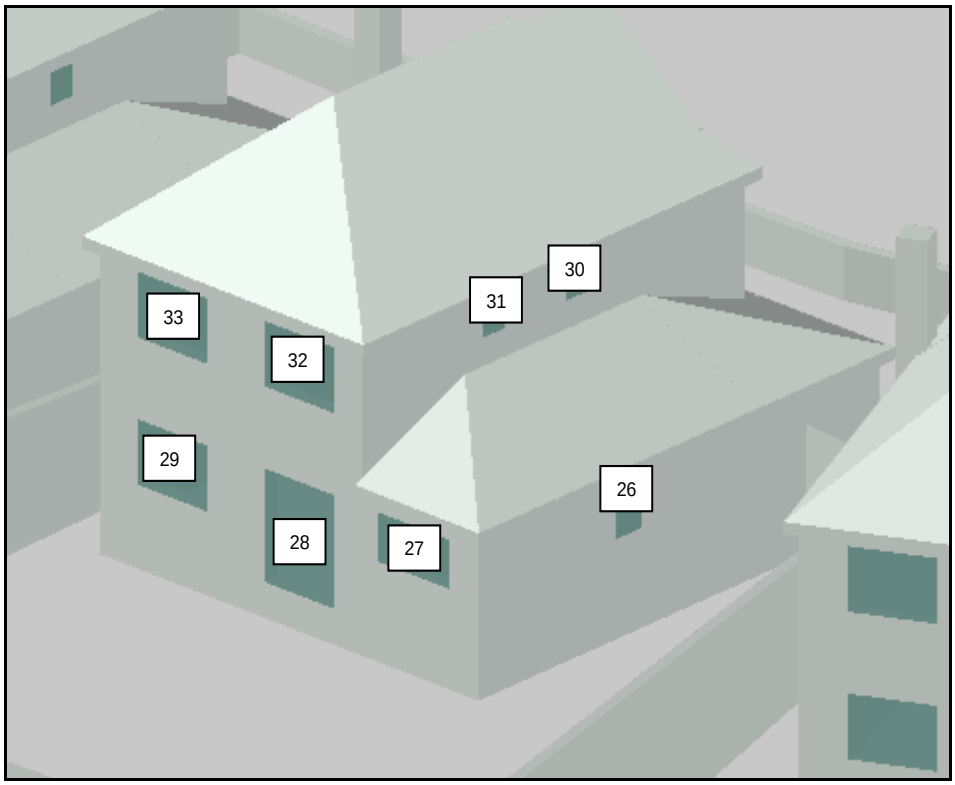

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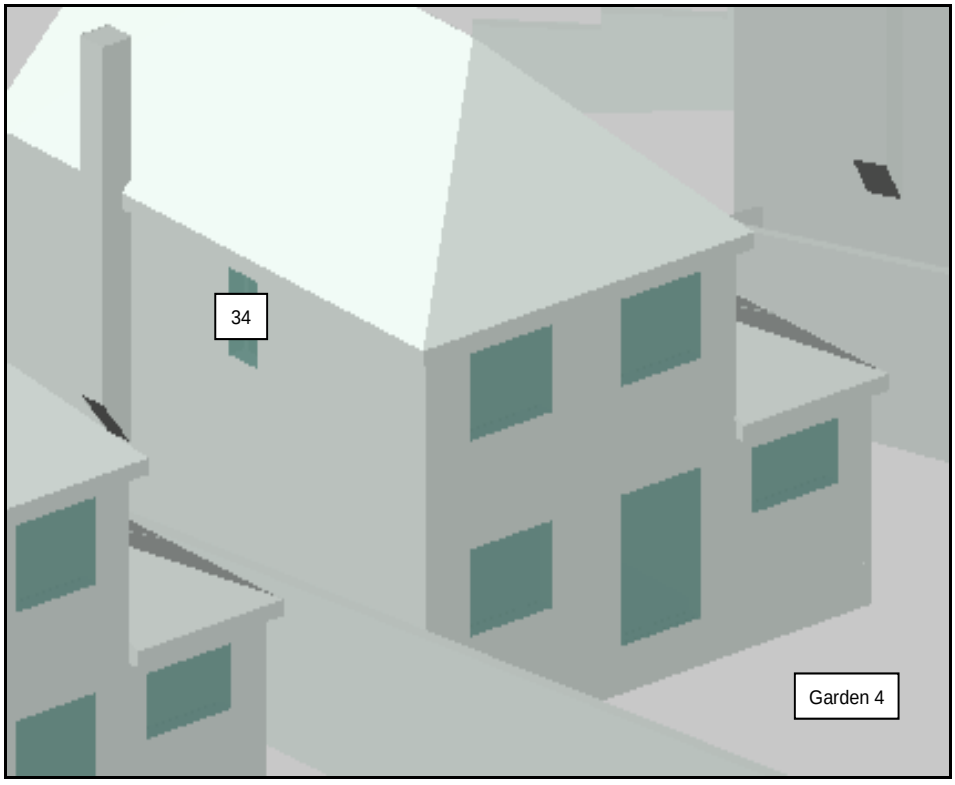

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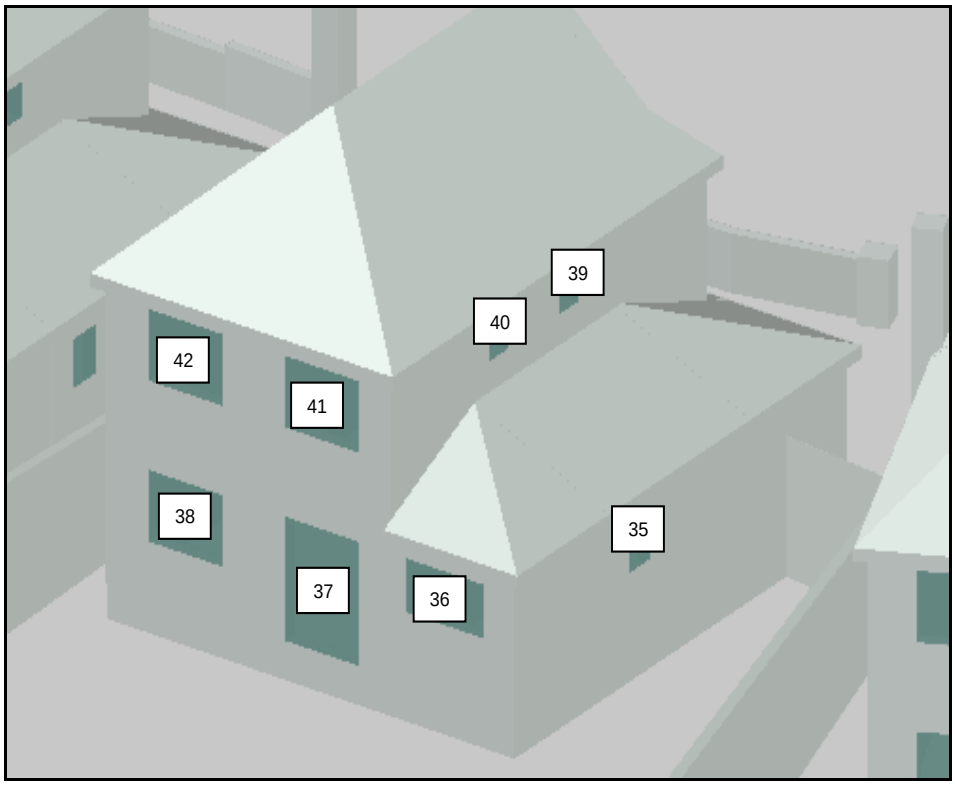

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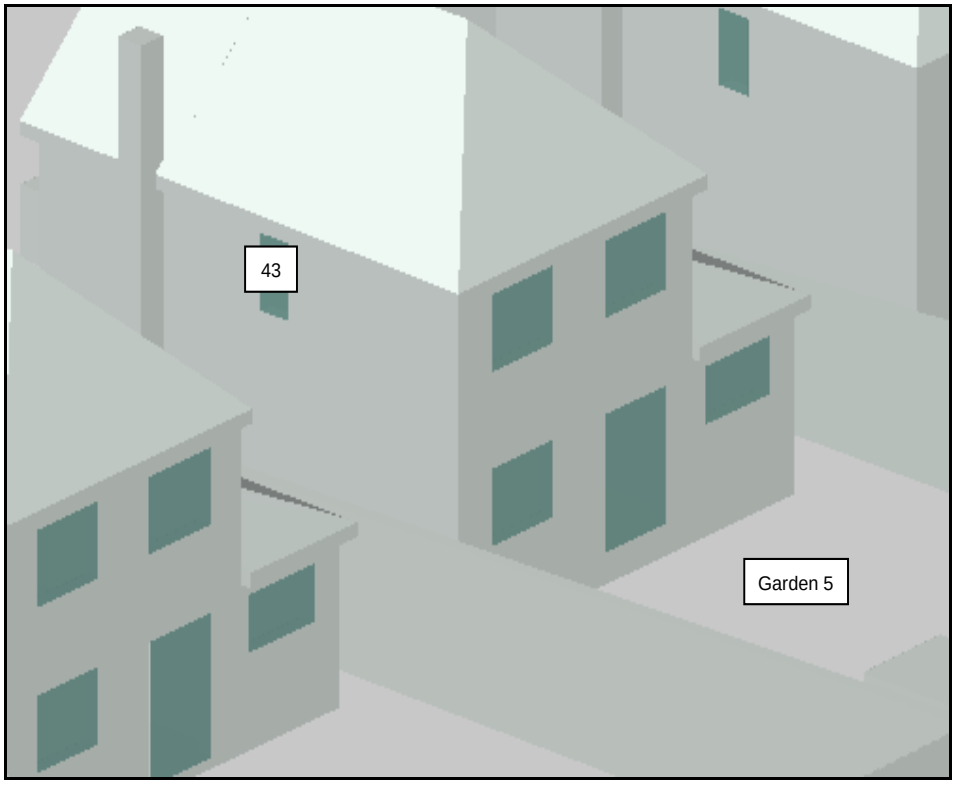

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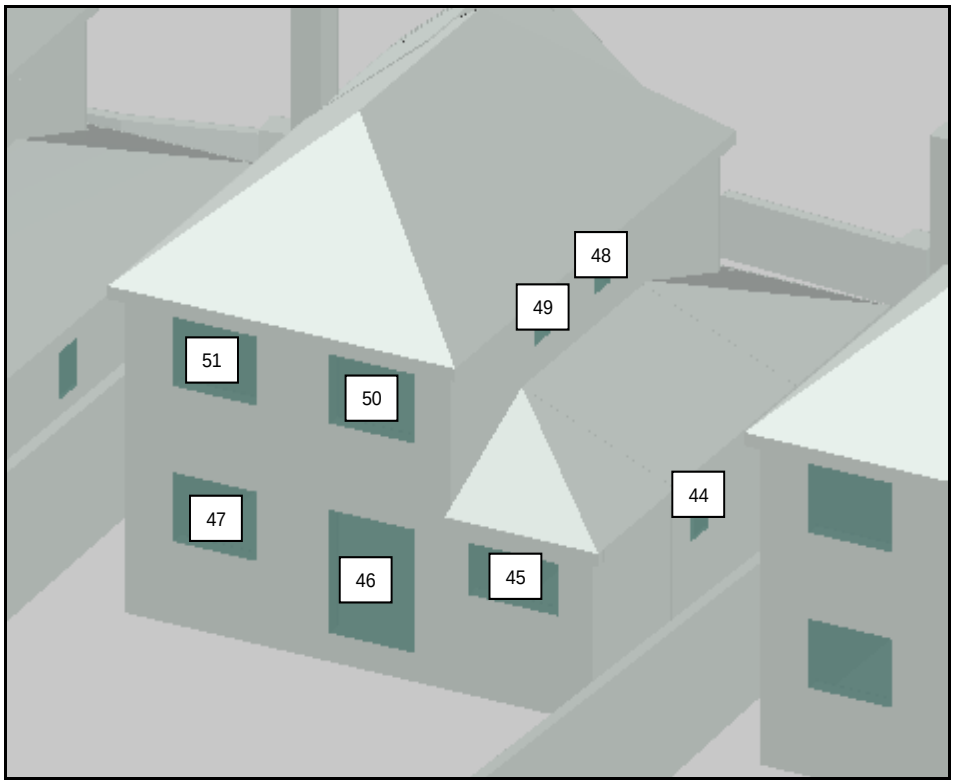

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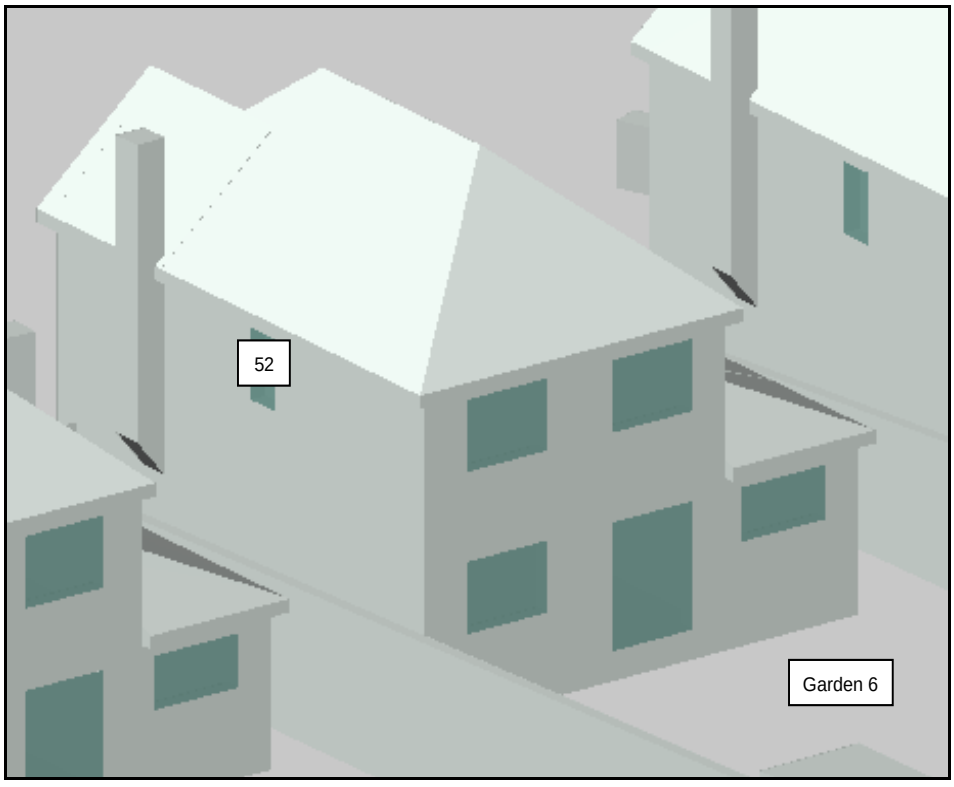

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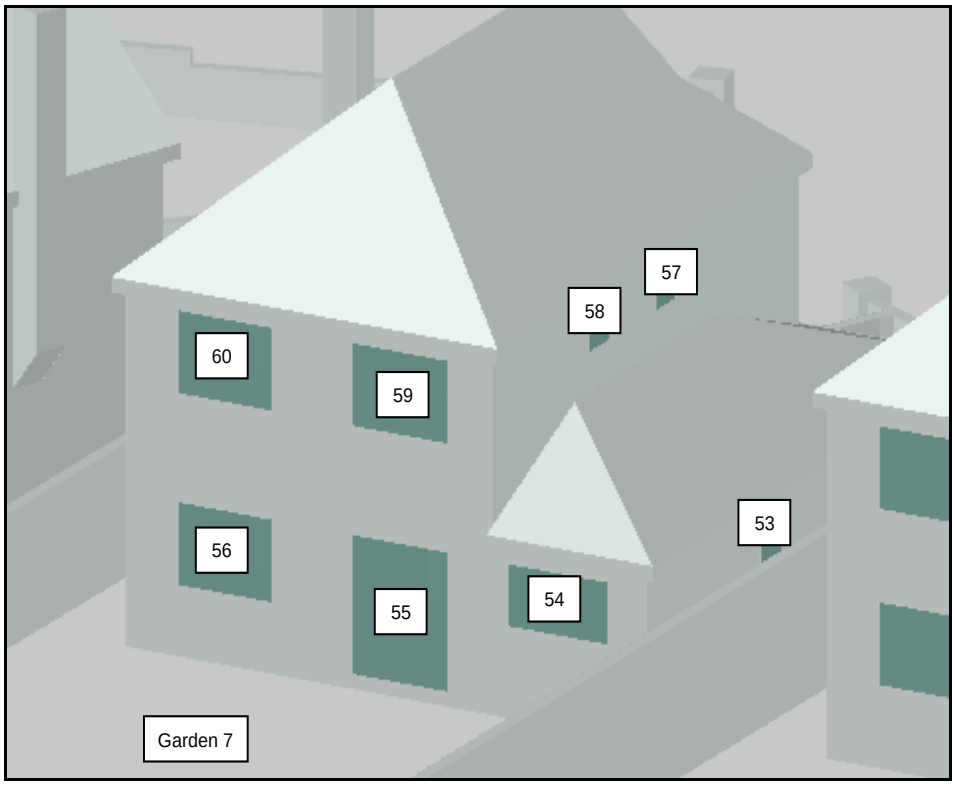

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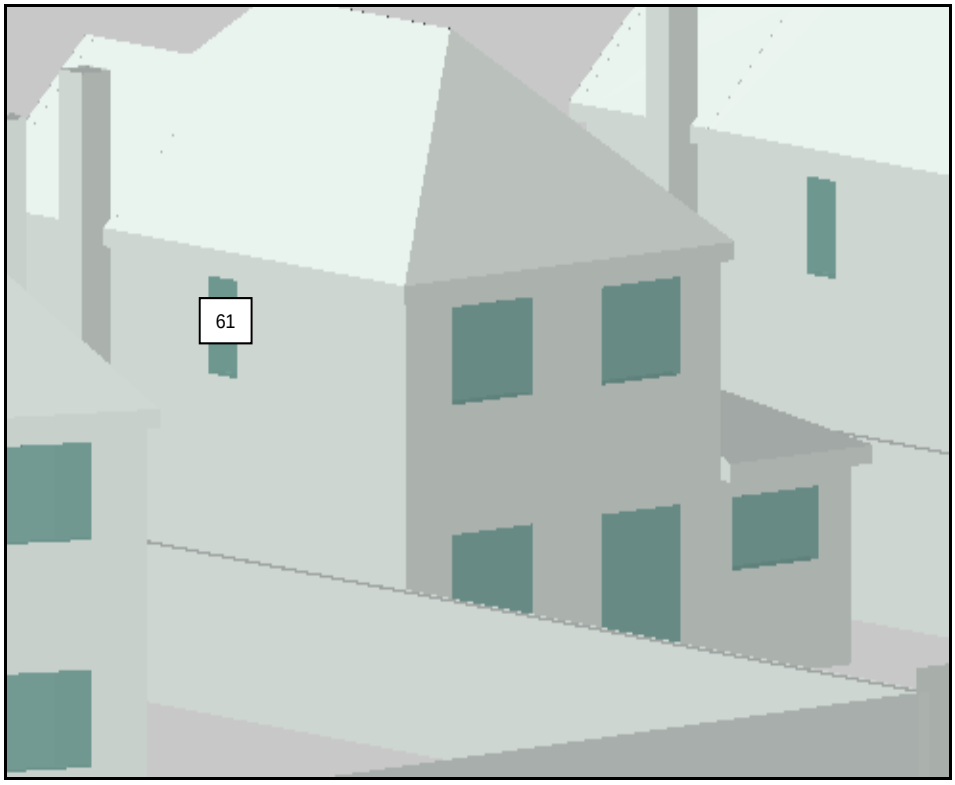

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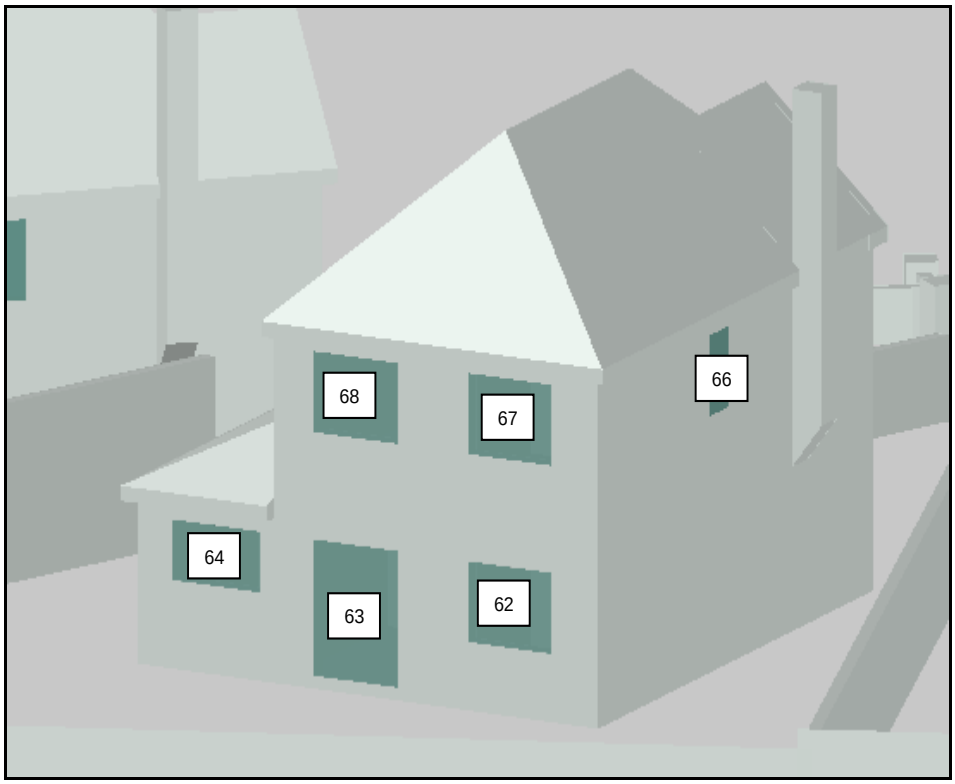

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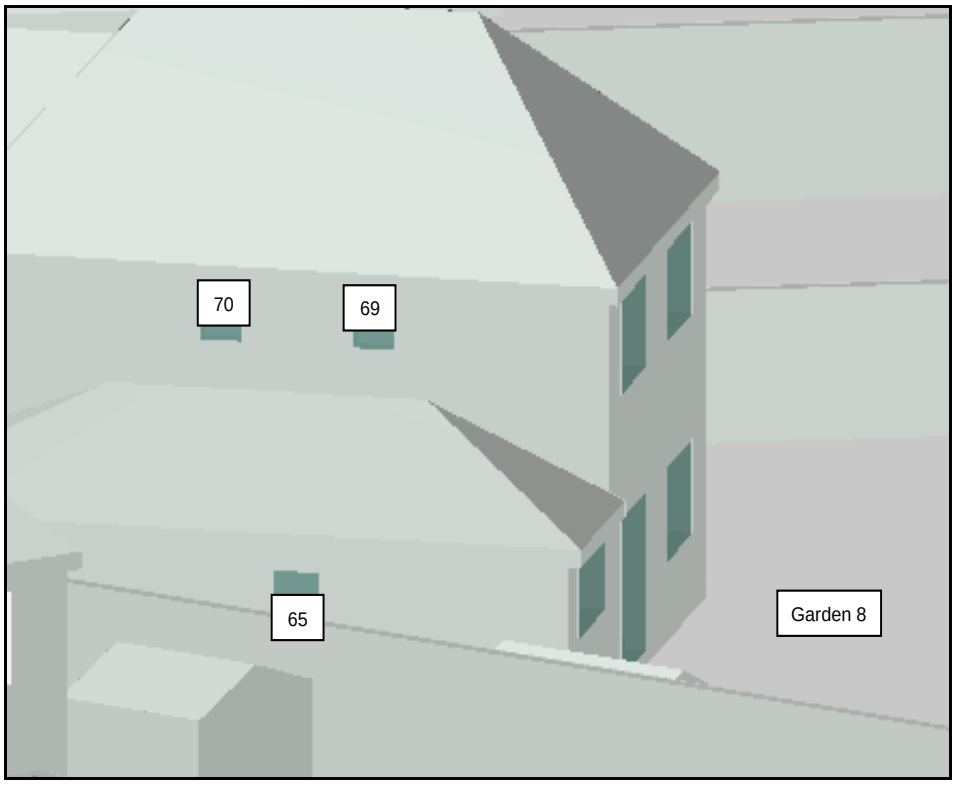

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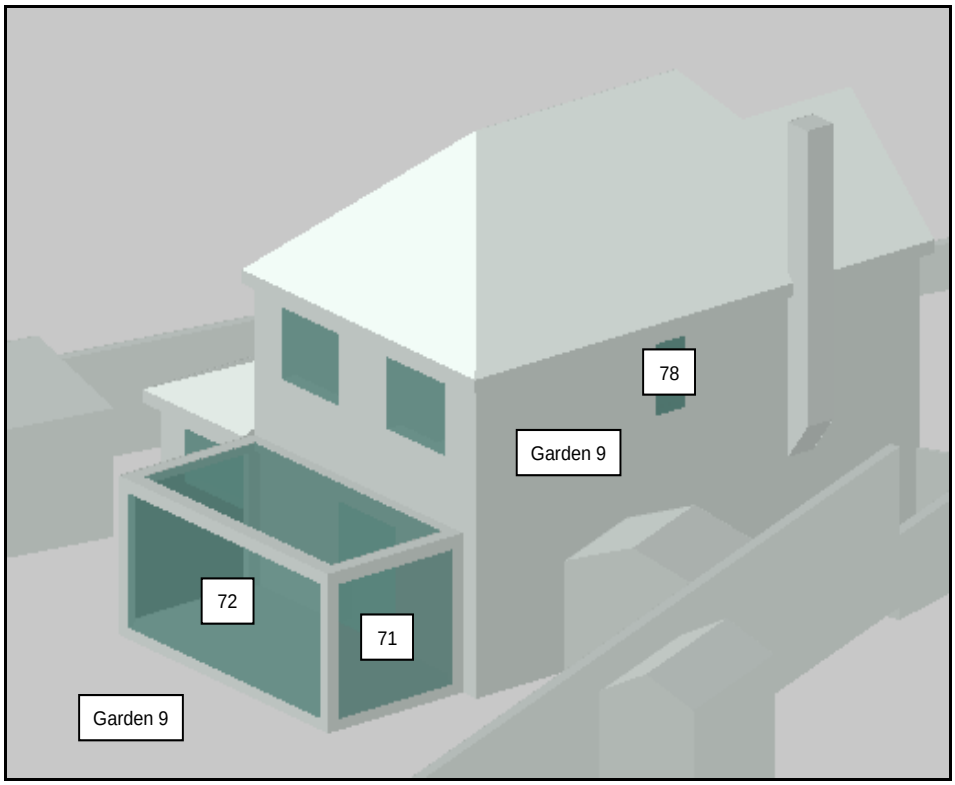

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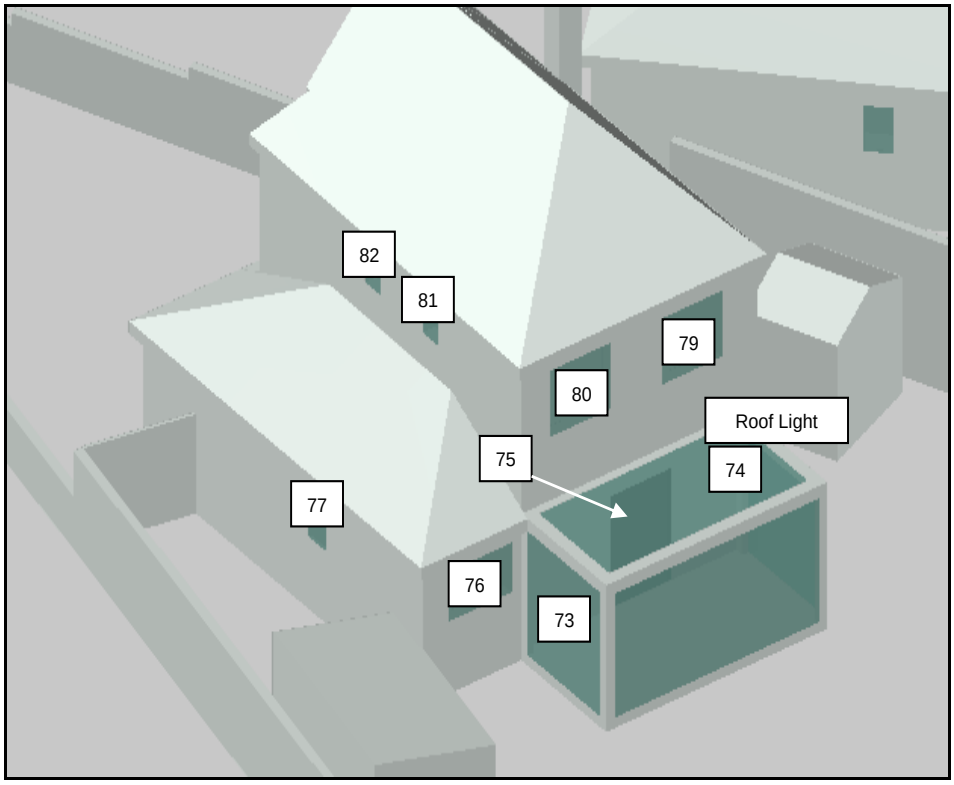

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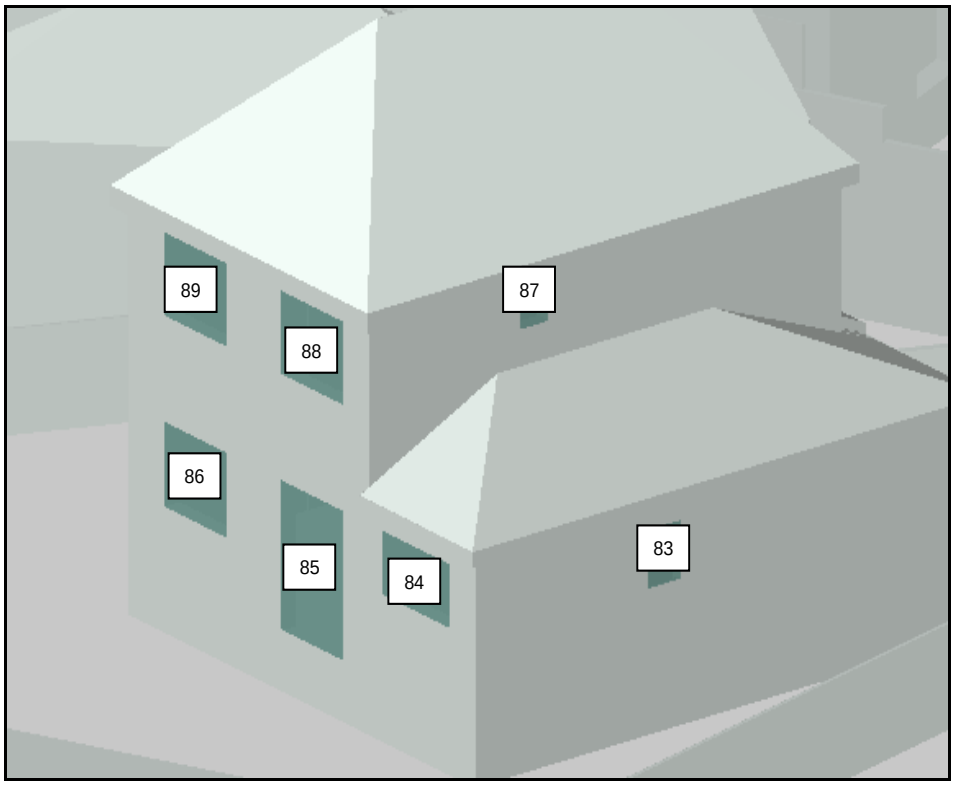

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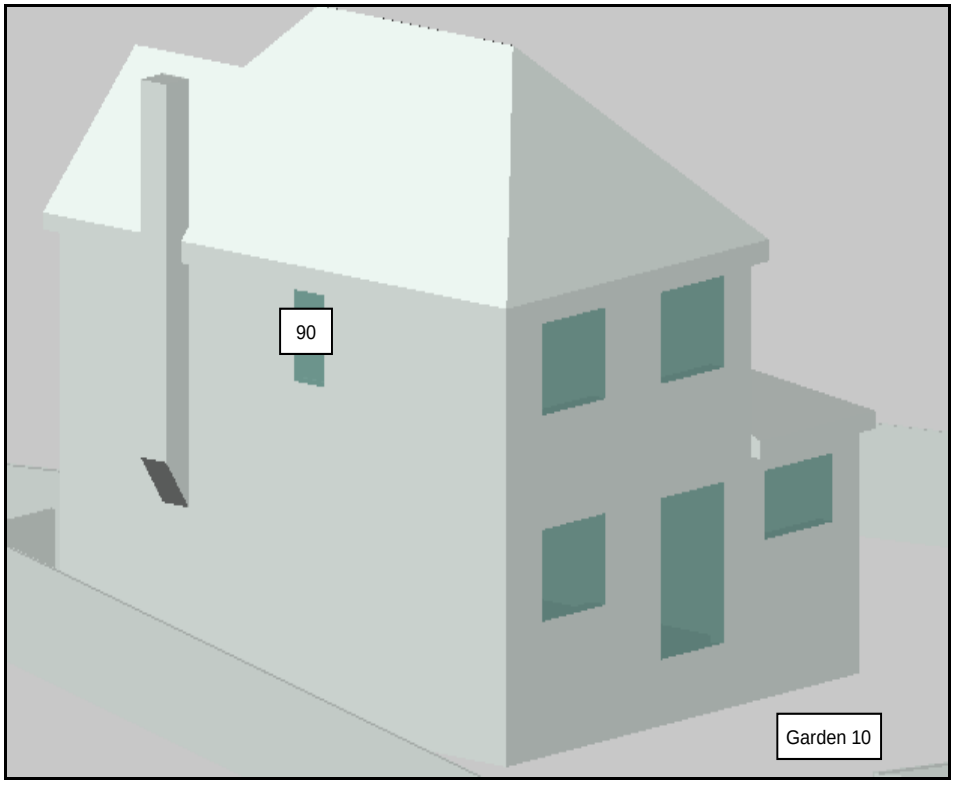

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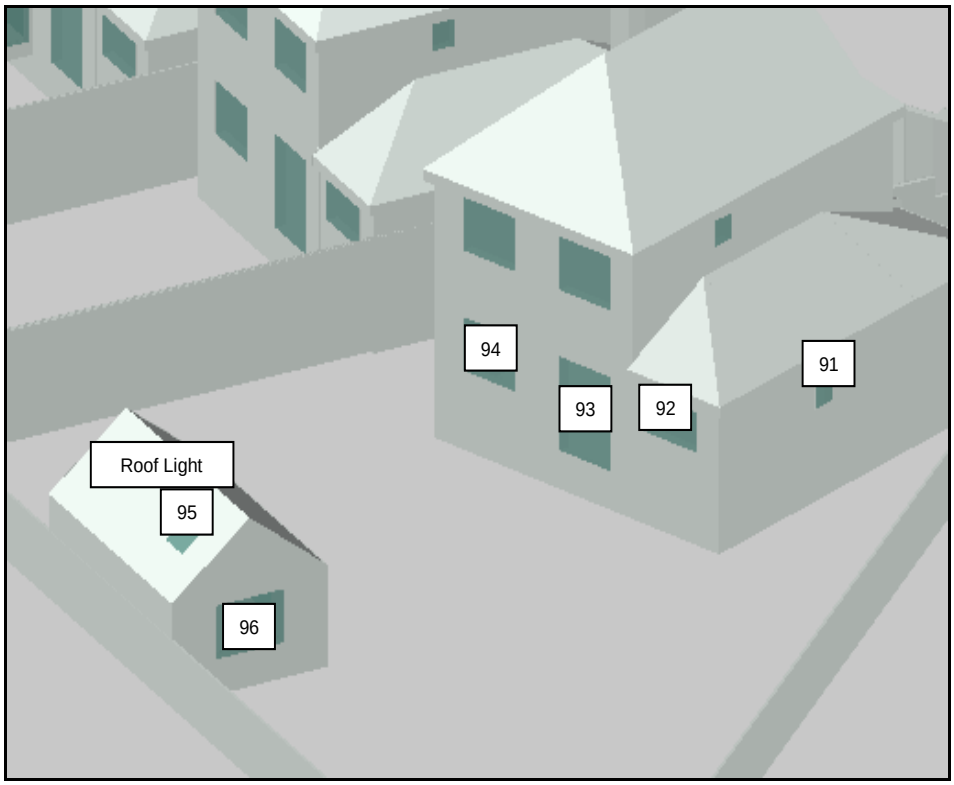

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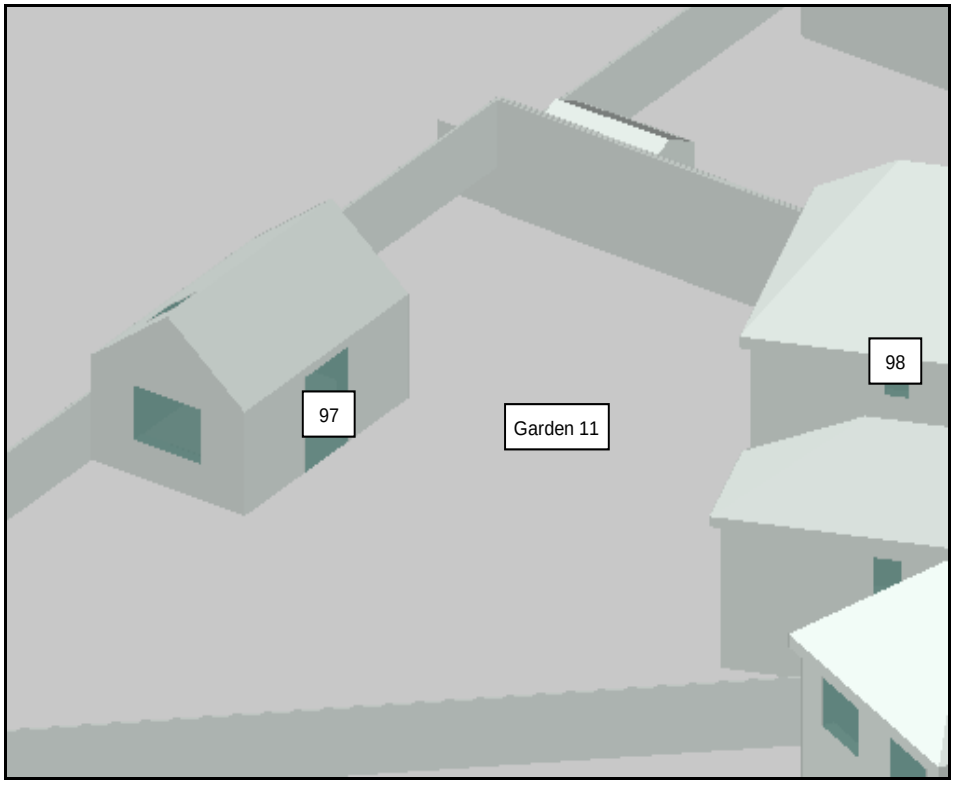

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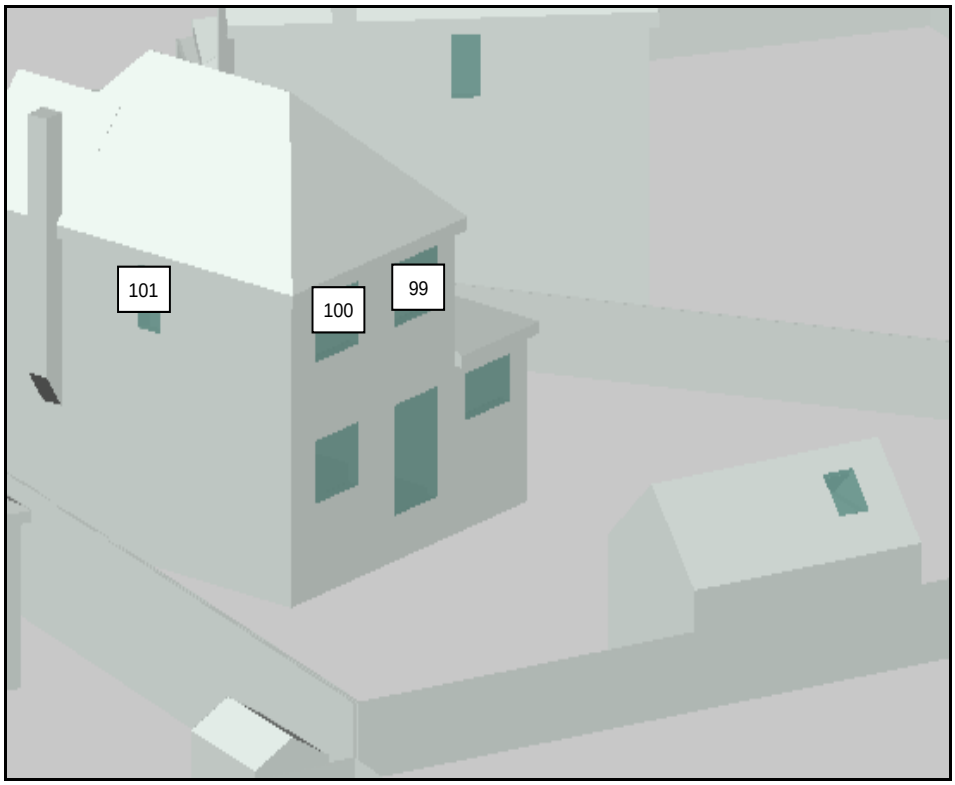

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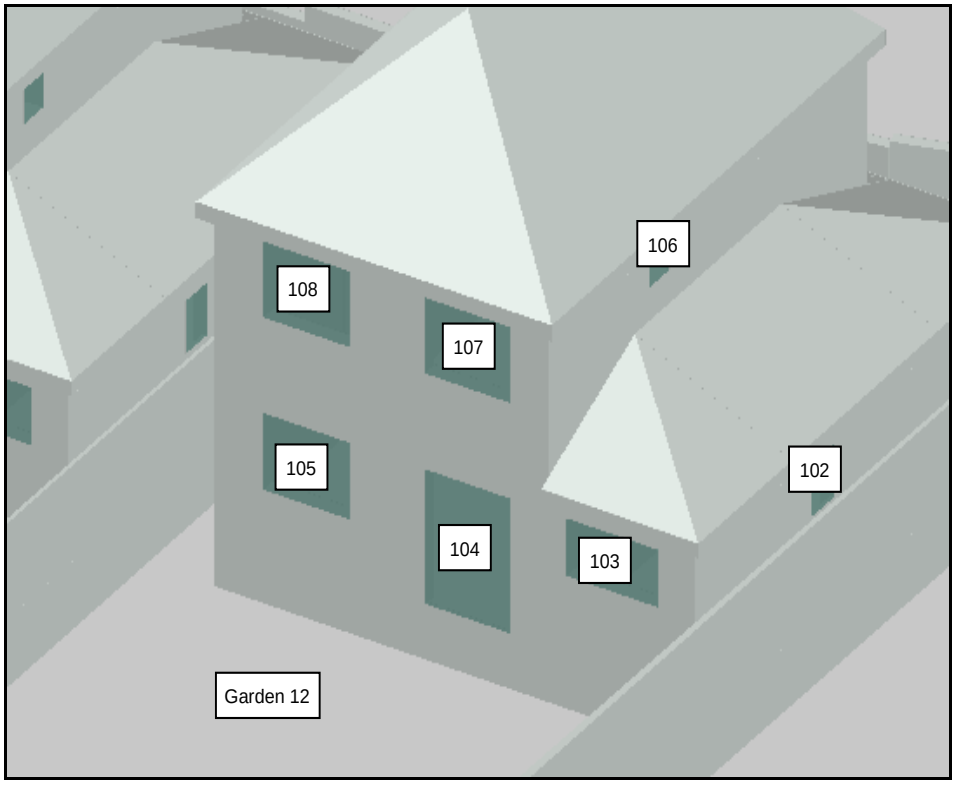
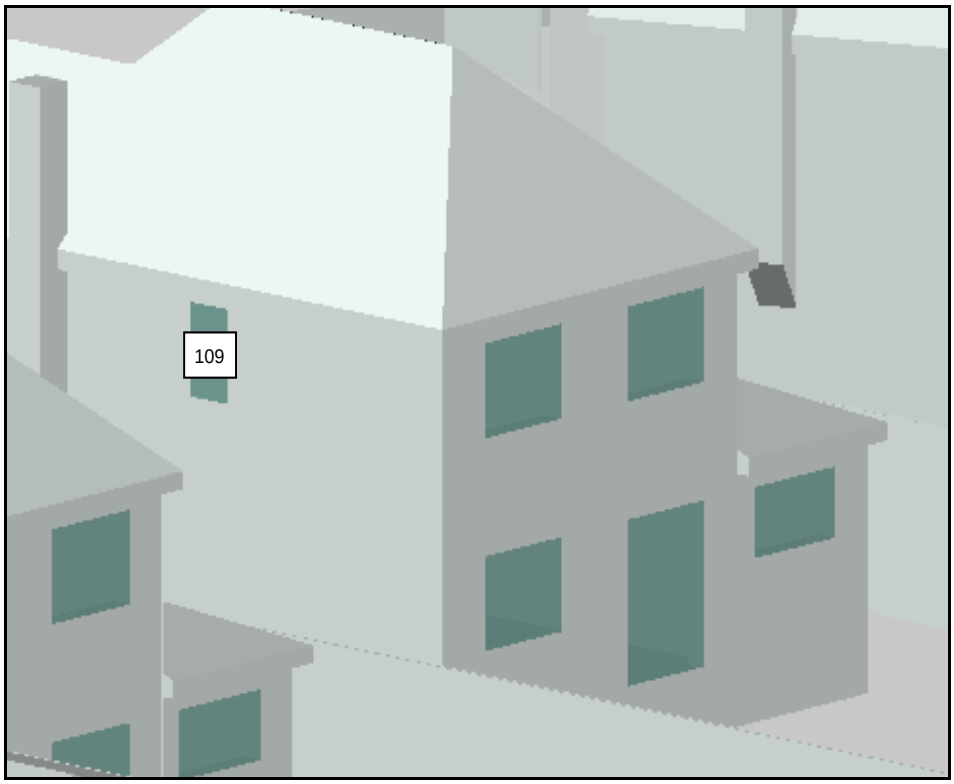


66 The Elms



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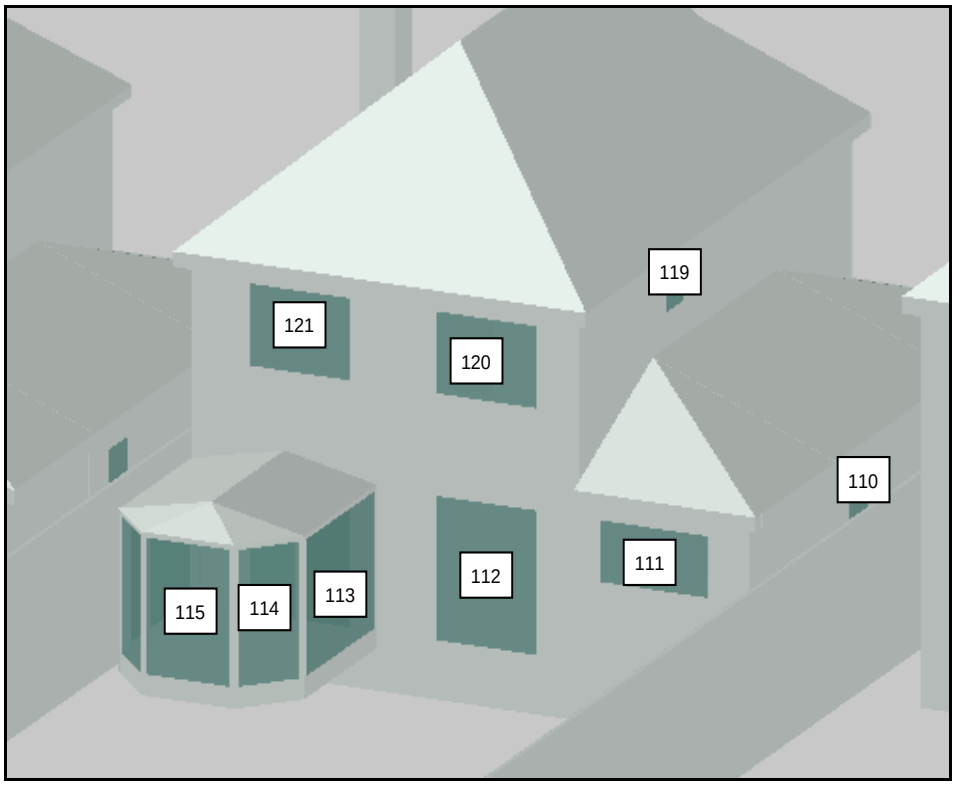
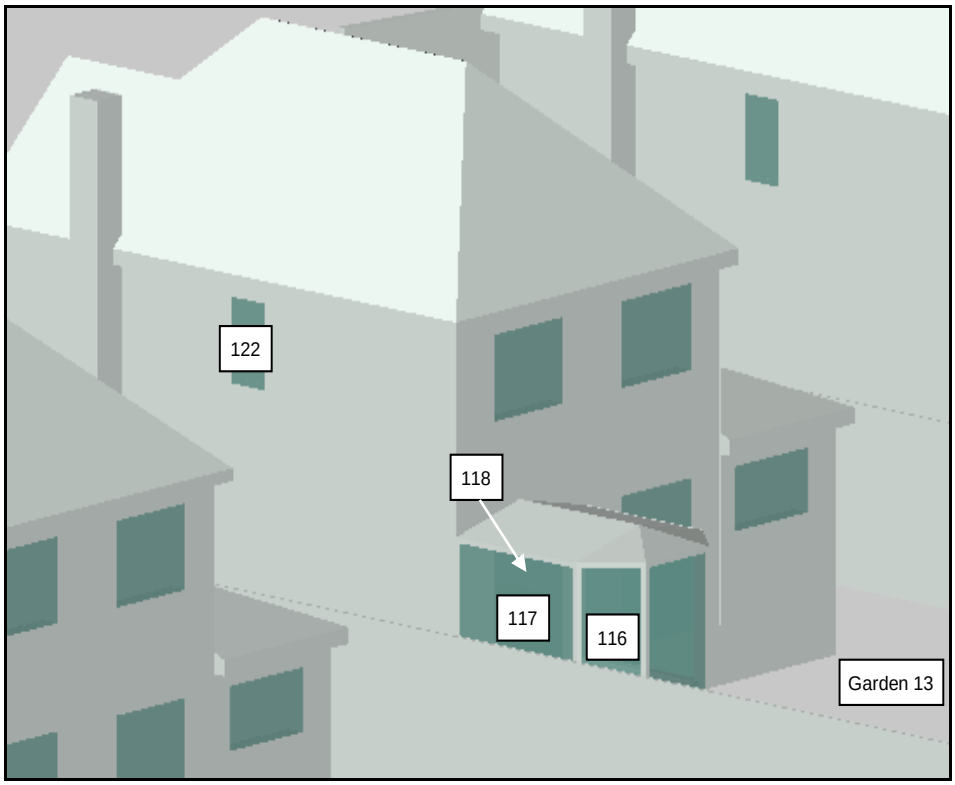
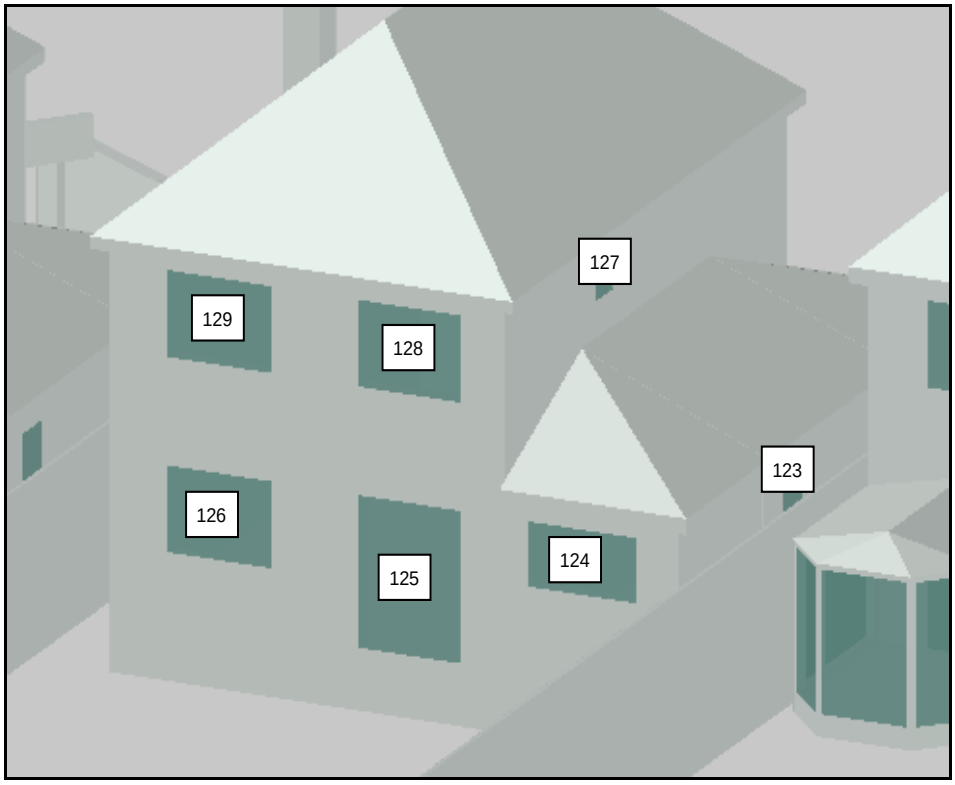


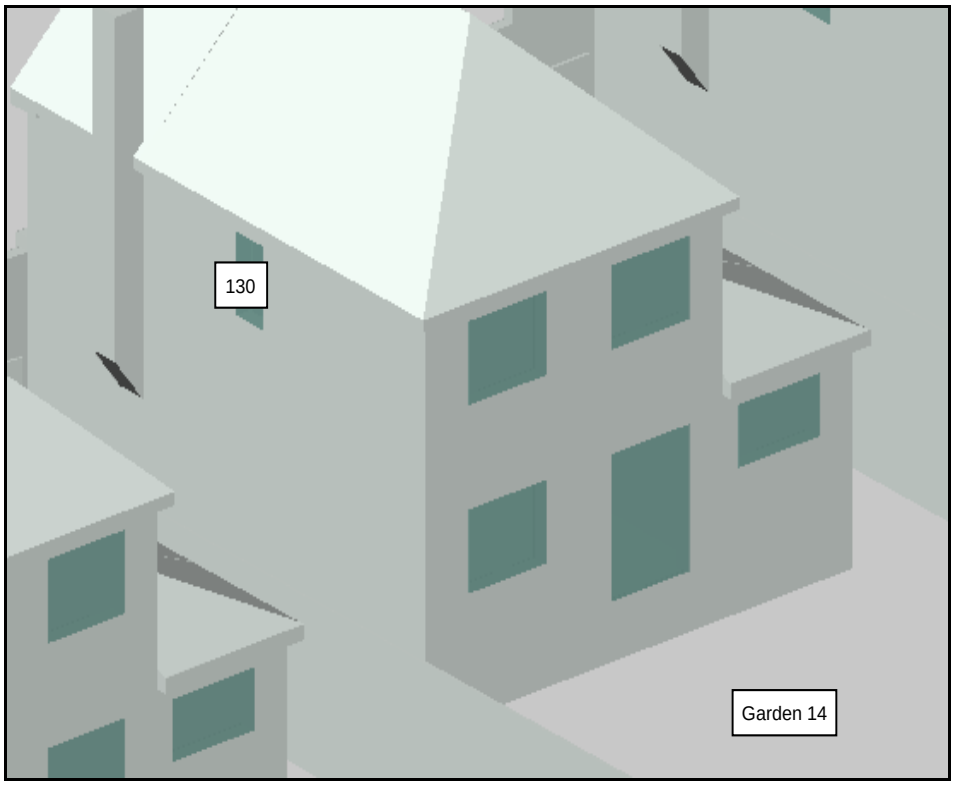
67 The Elms



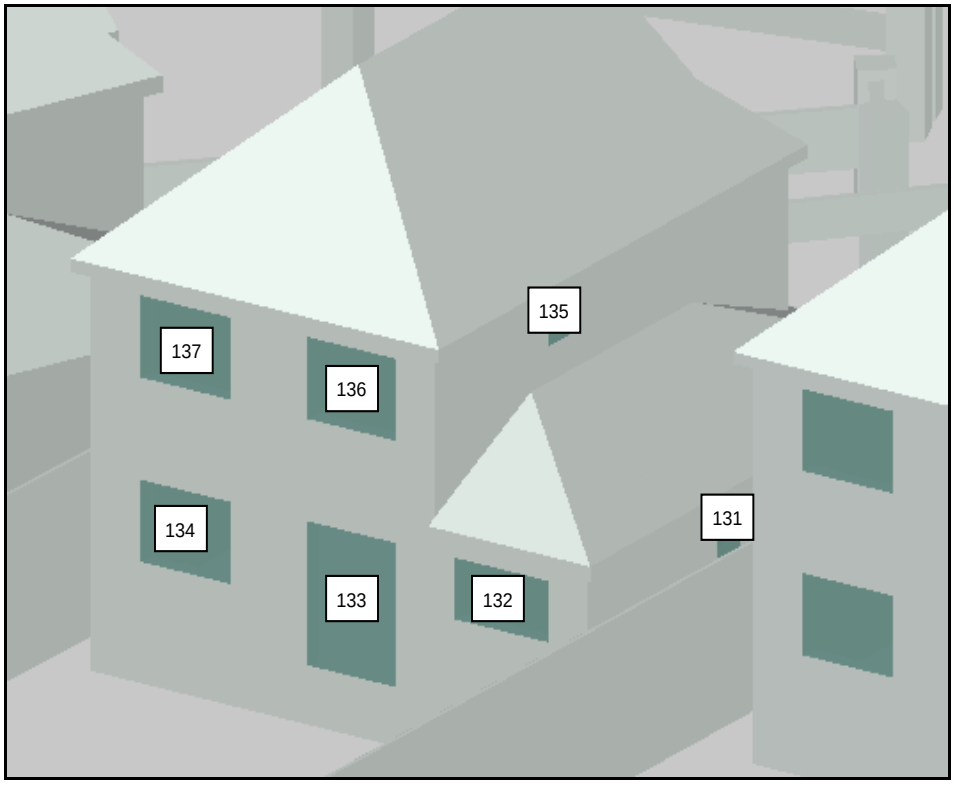
67 The Elms



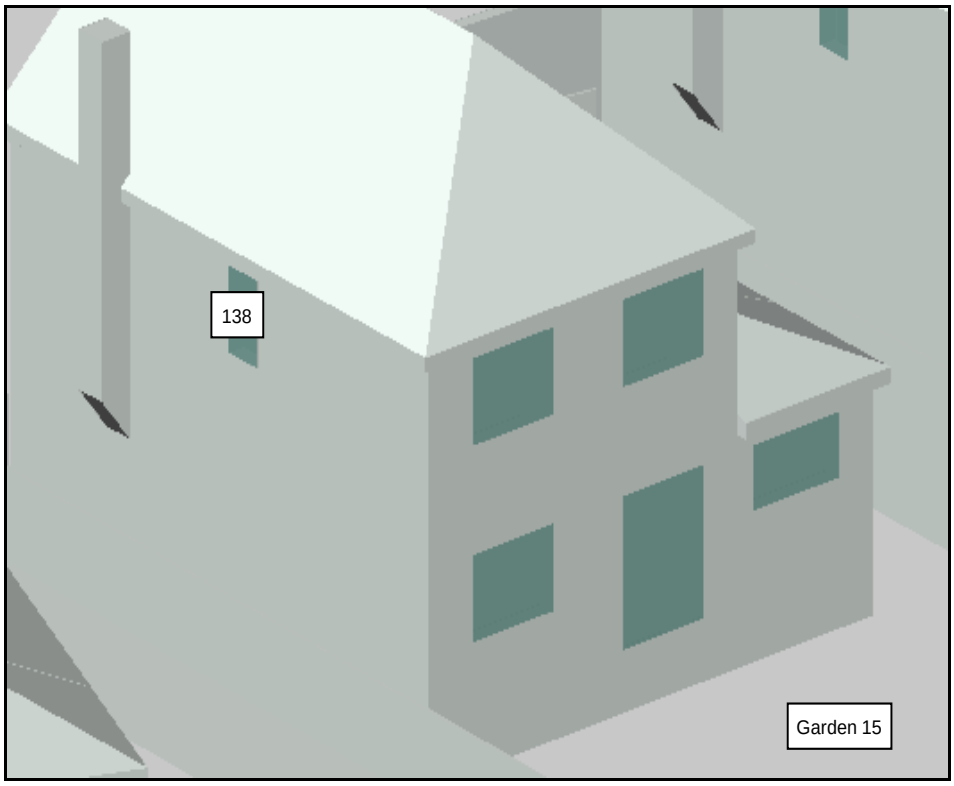
68 The Elms



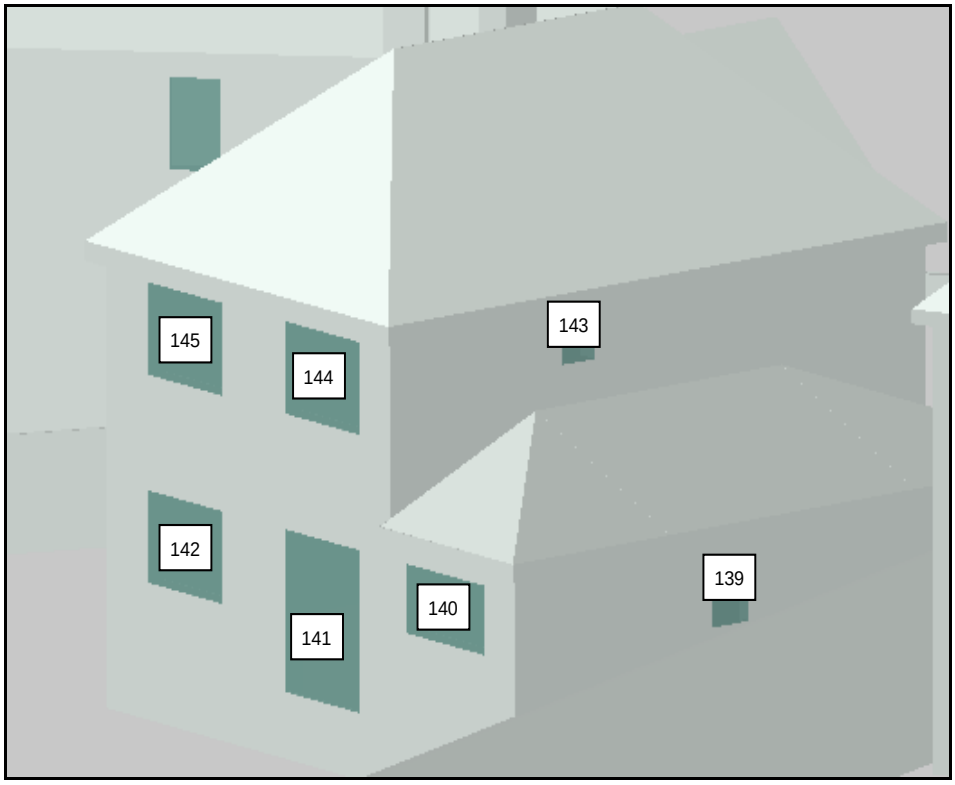
68 The Elms



69 The Elms



69 The Elms



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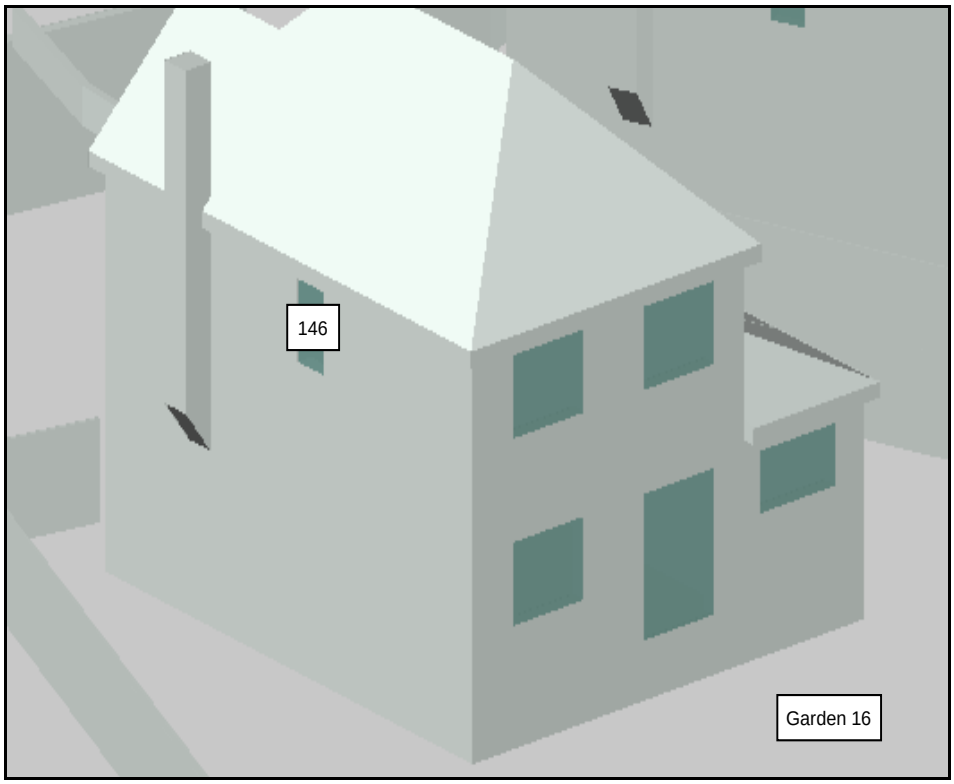

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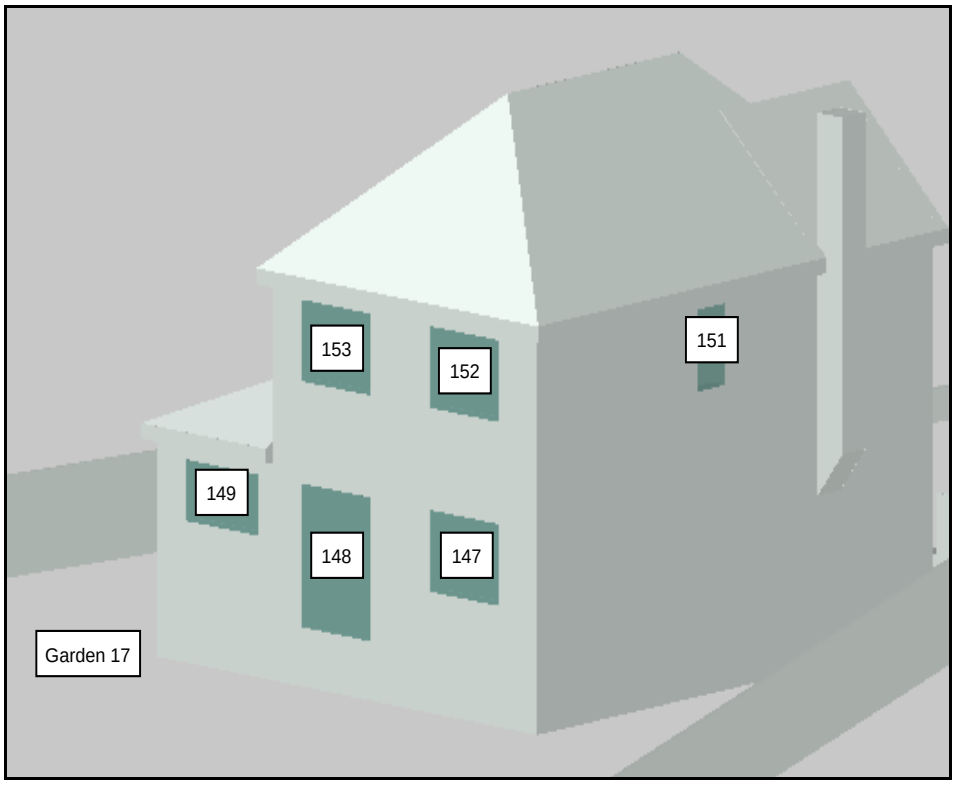
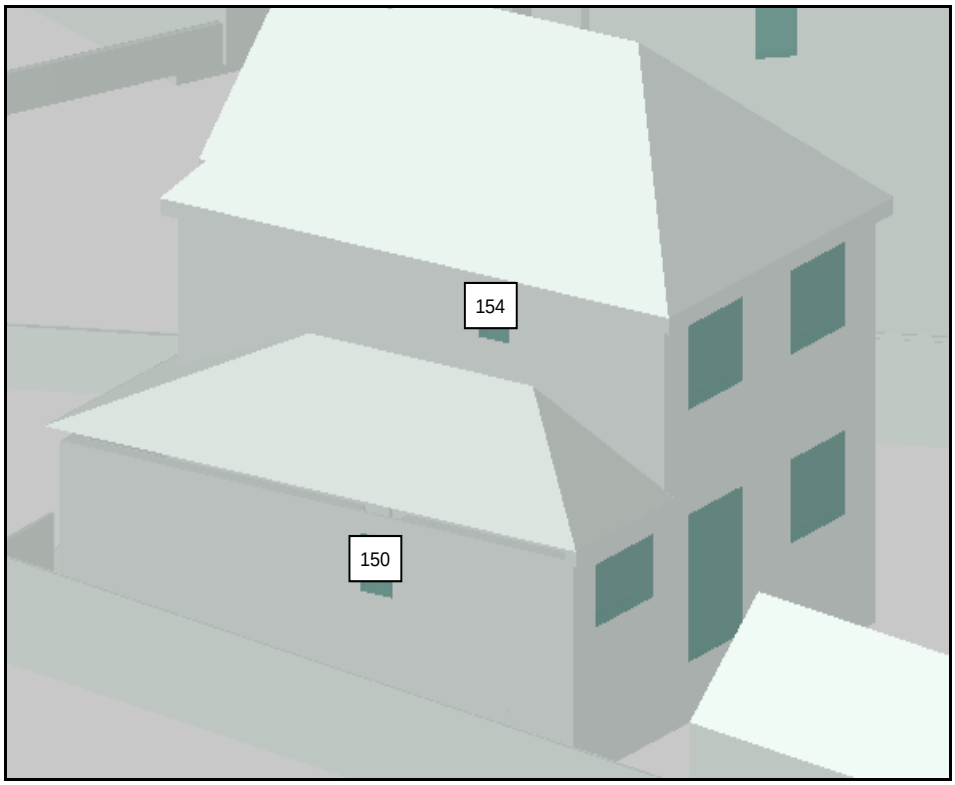
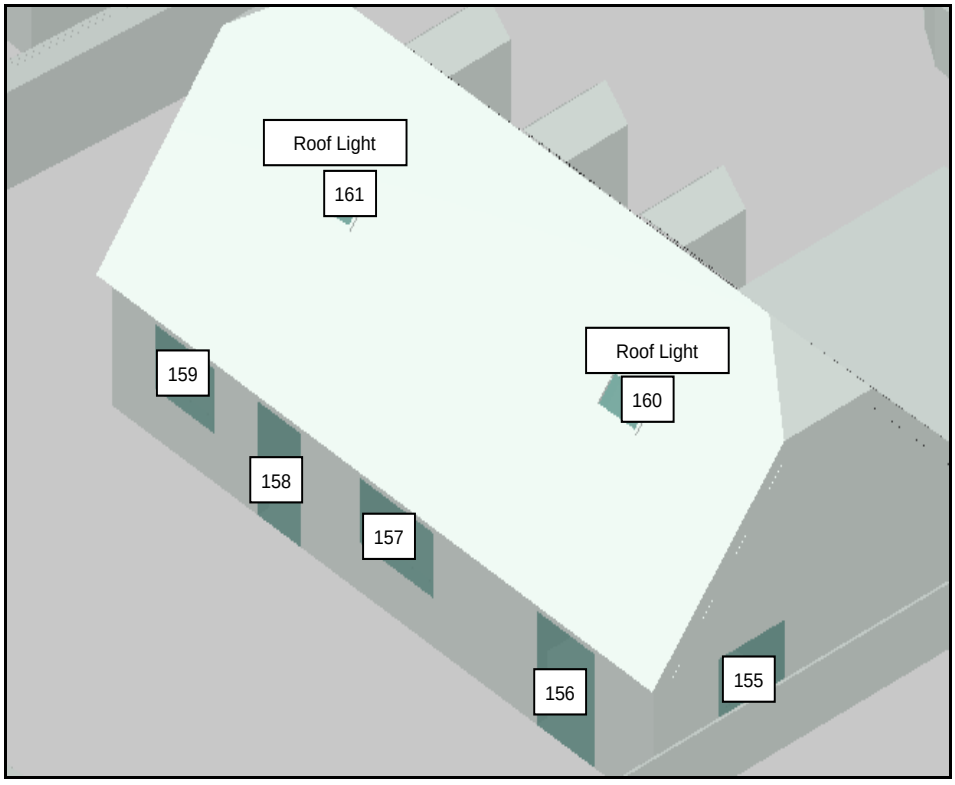


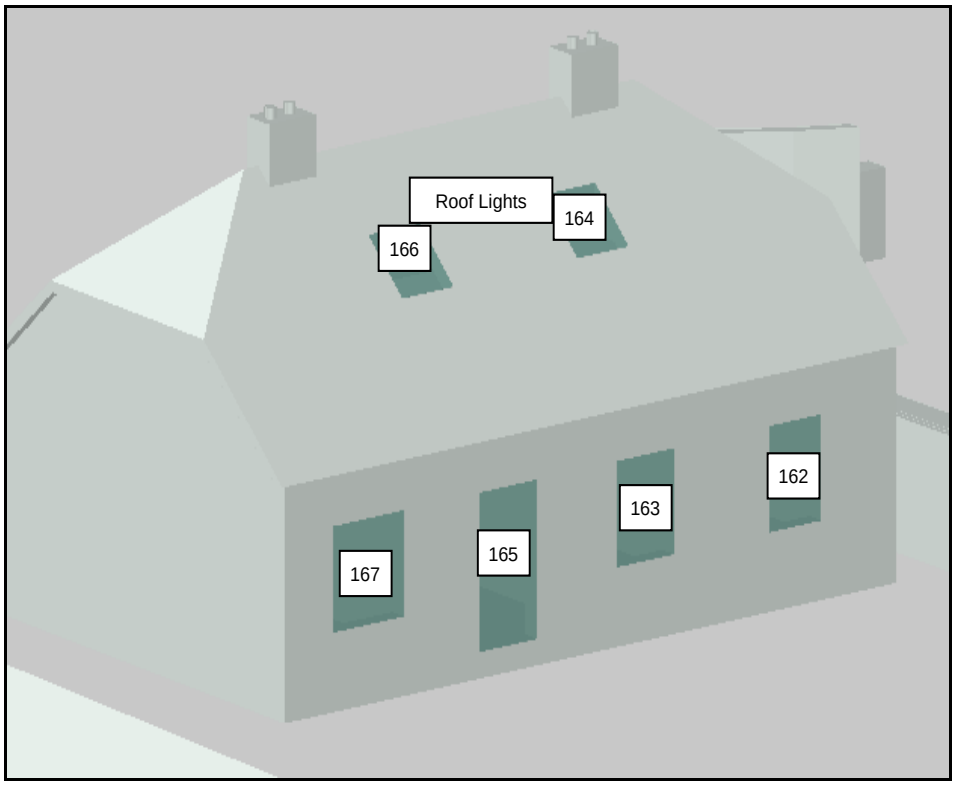
71 The Elms



71 The Elms



Laneview



Millfield

APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
41 The Elms					
Ground Floor					
Window 1	Domestic	36.7%	36.7%	0.0%	1.0
Window 2	Domestic	36.6%	36.6%	0.0%	1.0
Window 3	Domestic	38.6%	38.6%	0.0%	1.0
Window 4	Domestic	37.6%	37.6%	0.0%	1.0
First Floor					
Window 5	Domestic	34.8%	34.8%	0.0%	1.0
Window 6	Domestic	37.6%	37.5%	0.1%	1.0
Window 7	Domestic	37.5%	37.5%	0.0%	1.0
Window 8	Domestic	31.3%	31.2%	0.1%	1.0
42 The Elms					
Ground Floor					
Window 9	Domestic	25.0%	25.0%	0.0%	1.0
Window 10	Domestic	35.9%	35.9%	0.0%	1.0
Window 11	Domestic	37.9%	37.9%	0.0%	1.0
Window 12	Domestic	37.6%	37.6%	0.0%	1.0
First Floor					
Window 13	Domestic	31.7%	31.7%	0.0%	1.0
Window 14	Domestic	37.6%	37.5%	0.1%	1.0
Window 15	Domestic	37.6%	37.5%	0.1%	1.0
Window 16	Domestic	33.0%	32.8%	0.2%	0.99
43 The Elms					
Ground Floor					
Window 17	Domestic	27.4%	27.4%	0.0%	1.0
Window 18	Domestic	35.3%	35.3%	0.0%	1.0
Window 19	Domestic	37.3%	37.3%	0.0%	1.0
Window 20	Domestic	36.9%	36.9%	0.0%	1.0

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
First Floor					
Window 21	Domestic	31.6%	31.6%	0.0%	1.0
Window 22	Domestic	32.2%	32.2%	0.0%	1.0
Window 23	Domestic	37.7%	37.5%	0.2%	0.99
Window 24	Domestic	37.7%	37.5%	0.2%	0.99
Window 25	Domestic	34.5%	34.4%	0.1%	1.0
44 The Elms					
Ground Floor					
Window 26	Domestic	22.8%	22.8%	0.0%	1.0
Window 27	Domestic	35.2%	35.2%	0.0%	1.0
Window 28	Domestic	37.4%	37.4%	0.0%	1.0
Window 29	Domestic	36.8%	36.8%	0.0%	1.0
First Floor					
Window 30	Domestic	30.2%	30.2%	0.0%	1.0
Window 31	Domestic	30.5%	30.4%	0.1%	1.0
Window 32	Domestic	37.7%	37.6%	0.1%	1.0
Window 33	Domestic	37.7%	37.6%	0.1%	1.0
Window 34	Domestic	30.7%	30.7%	0.0%	1.0
45 The Elms					
Ground Floor					
Window 35	Domestic	11.8%	11.8%	0.0%	1.0
Window 36	Domestic	35.3%	35.2%	0.1%	1.0
Window 37	Domestic	37.4%	37.3%	0.1%	1.0
Window 38	Domestic	36.9%	36.9%	0.0%	1.0
First Floor					
Window 39	Domestic	27.5%	27.4%	0.1%	1.0
Window 40	Domestic	28.0%	27.9%	0.1%	1.0
Window 41	Domestic	37.7%	37.6%	0.1%	1.0
Window 42	Domestic	37.7%	37.6%	0.1%	1.0
Window 43	Domestic	30.8%	30.8%	0.0%	1.0

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
46 The Elms					
Ground Floor					
Window 44	Domestic	9.8%	9.8%	0.0%	1.0
Window 45	Domestic	34.4%	34.1%	0.3%	0.99
Window 46	Domestic	37.2%	36.9%	0.3%	0.99
Window 47	Domestic	37.3%	37.1%	0.2%	0.99
First Floor					
Window 48	Domestic	28.7%	28.7%	0.0%	1.0
Window 49	Domestic	29.2%	29.2%	0.0%	1.0
Window 50	Domestic	38.5%	38.3%	0.2%	0.99
Window 51	Domestic	38.5%	38.3%	0.2%	0.99
Window 52	Domestic	31.9%	31.8%	0.1%	1.0
47 The Elms					
Ground Floor					
Window 53	Domestic	9.0%	9.0%	0.0%	1.0
Window 54	Domestic	34.3%	33.6%	0.7%	0.98
Window 55	Domestic	38.0%	37.2%	0.8%	0.98
Window 56	Domestic	37.6%	37.0%	0.6%	0.98
First Floor					
Window 57	Domestic	28.9%	28.9%	0.0%	1.0
Window 58	Domestic	29.4%	29.4%	0.0%	1.0
Window 59	Domestic	38.4%	38.2%	0.2%	0.99
Window 60	Domestic	38.4%	38.2%	0.2%	0.99
Window 61	Domestic	30.6%	30.6%	0.0%	1.0
48 The Elms					
Ground Floor					
Window 62	Domestic	37.4%	36.6%	0.8%	0.98
Window 63	Domestic	37.8%	36.9%	0.9%	0.98
Window 64	Domestic	35.1%	34.2%	0.9%	0.97
Window 65	Domestic	27.6%	27.6%	0.0%	1.0

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
First Floor					
Window 66	Domestic	30.6%	30.4%	0.2%	0.99
Window 67	Domestic	38.5%	37.9%	0.6%	0.98
Window 68	Domestic	38.5%	37.9%	0.6%	0.98
Window 69	Domestic	35.0%	35.0%	0.0%	1.0
Window 70	Domestic	34.5%	34.5%	0.0%	1.0
49 The Elms					
Ground Floor					
Window 71	Domestic	31.5%	31.3%	0.2%	0.99
Window 72	Domestic	37.5%	37.1%	0.4%	0.99
Window 73	Domestic	33.3%	33.3%	0.0%	1.0
Window 74	Domestic	76.1%	76.0%	0.1%	1.0
Window 75	Domestic	31.3%	30.9%	0.4%	0.99
Window 76	Domestic	31.3%	31.0%	0.3%	0.99
Window 77	Domestic	35.8%	35.8%	0.0%	1.0
First Floor					
Window 78	Domestic	34.3%	33.7%	0.6%	0.98
Window 79	Domestic	38.2%	37.8%	0.4%	0.99
Window 80	Domestic	38.1%	37.8%	0.3%	0.99
Window 81	Domestic	36.9%	36.9%	0.0%	1.0
Window 82	Domestic	36.9%	36.9%	0.0%	1.0
64 The Elms					
Ground Floor					
Window 83	Domestic	37.3%	37.3%	0.0%	1.0
Window 84	Domestic	34.6%	34.1%	0.5%	0.99
Window 85	Domestic	36.7%	36.2%	0.5%	0.99
Window 86	Domestic	36.8%	36.1%	0.7%	0.98
First Floor					
Window 87	Domestic	33.3%	33.3%	0.0%	1.0
Window 88	Domestic	36.4%	35.9%	0.5%	0.99
Window 89	Domestic	36.5%	35.9%	0.6%	0.98
Window 90	Domestic	34.4%	33.7%	0.7%	0.98

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
65 The Elms					
Ground Floor					
Window 91	Domestic	27.7%	27.5%	0.2%	0.99
Window 92	Domestic	35.5%	33.6%	1.9%	0.95
Window 93	Domestic	37.6%	35.6%	2.0%	0.95
Window 94	Domestic	37.6%	35.4%	2.2%	0.94
Window 95	Domestic	86.3%	84.8%	1.5%	0.98
Window 96	Domestic	37.3%	35.3%	2.0%	0.95
Window 97	Domestic	32.1%	32.1%	0.0%	1.0
First Floor					
Window 98	Domestic	30.9%	30.7%	0.2%	0.99
Window 99	Domestic	37.4%	35.9%	1.5%	0.96
Window 100	Domestic	37.4%	35.9%	1.5%	0.96
Window 101	Domestic	34.8%	34.5%	0.3%	0.99
66 The Elms					
Ground Floor					
Window 102	Domestic	12.5%	12.5%	0.0%	1.0
Window 103	Domestic	35.2%	32.6%	2.6%	0.93
Window 104	Domestic	38.4%	35.3%	3.1%	0.92
Window 105	Domestic	38.8%	35.5%	3.3%	0.91
First Floor					
Window 106	Domestic	26.7%	26.2%	0.5%	0.98
Window 107	Domestic	37.4%	35.6%	1.8%	0.95
Window 108	Domestic	37.5%	35.7%	1.8%	0.95
Window 109	Domestic	32.4%	32.2%	0.2%	0.99
67 The Elms					
Ground Floor					
Window 110	Domestic	6.6%	6.6%	0.0%	1.0
Window 111	Domestic	35.2%	32.2%	3.0%	0.91
Window 112	Domestic	37.3%	33.9%	3.4%	0.91
Window 113	Domestic	23.2%	22.3%	0.9%	0.96
Window 114	Domestic	36.1%	33.2%	2.9%	0.92

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
Window 115	Domestic	39.2%	34.8%	4.4%	0.89
Window 116	Domestic	38.4%	35.5%	2.9%	0.92
Window 117	Domestic	33.8%	32.7%	1.1%	0.97
Window 118 (Secondary)	Domestic	5.5%	2.4%	3.1%	0.44
First Floor					
Window 119	Domestic	24.7%	24.2%	0.5%	0.98
Window 120	Domestic	37.6%	35.4%	2.2%	0.94
Window 121	Domestic	37.6%	35.5%	2.1%	0.94
Window 122	Domestic	33.3%	33.0%	0.3%	0.99
68 The Elms					
Ground Floor					
Window 123	Domestic	6.6%	6.6%	0.0%	1.0
Window 124	Domestic	34.8%	31.4%	3.4%	0.9
Window 125	Domestic	38.3%	34.3%	4.0%	0.9
Window 126	Domestic	38.8%	34.5%	4.3%	0.89
First Floor					
Window 127	Domestic	25.3%	24.6%	0.7%	0.97
Window 128	Domestic	37.8%	35.0%	2.8%	0.93
Window 129	Domestic	37.8%	35.1%	2.7%	0.93
Window 130	Domestic	33.0%	32.6%	0.4%	0.99
69 The Elms					
Ground Floor					
Window 131	Domestic	7.3%	7.2%	0.1%	0.99
Window 132	Domestic	35.5%	31.5%	4.0%	0.89
Window 133	Domestic	38.5%	33.9%	4.6%	0.88
Window 134	Domestic	38.9%	34.1%	4.8%	0.88

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
First Floor					
Window 135	Domestic	25.7%	24.9%	0.8%	0.97
Window 136	Domestic	37.7%	34.5%	3.2%	0.92
Window 137	Domestic	37.7%	34.6%	3.1%	0.92
Window 138	Domestic	34.4%	33.9%	0.5%	0.99
70 The Elms					
Ground Floor					
Window 139	Domestic	19.0%	18.0%	1.0%	0.95
Window 140	Domestic	36.8%	32.0%	4.8%	0.87
Window 141	Domestic	39.2%	34.4%	4.8%	0.88
Window 142	Domestic	39.3%	34.6%	4.7%	0.88
First Floor					
Window 143	Domestic	27.9%	26.1%	1.8%	0.94
Window 144	Domestic	37.5%	34.3%	3.2%	0.91
Window 145	Domestic	37.5%	34.5%	3.0%	0.92
Window 146	Domestic	33.7%	33.4%	0.3%	0.99
71 The Elms					
Ground Floor					
Window 147	Domestic	38.8%	37.1%	1.7%	0.96
Window 148	Domestic	38.4%	36.9%	1.5%	0.96
Window 149	Domestic	36.0%	34.6%	1.4%	0.96
Window 150	Domestic	38.2%	38.2%	0.0%	1.0
First Floor					
Window 151	Domestic	33.3%	31.9%	1.4%	0.96
Window 152	Domestic	37.6%	36.6%	1.0%	0.97
Window 153	Domestic	37.6%	36.7%	0.9%	0.98
Window 154	Domestic	34.6%	34.6%	0.0%	1.0

Appendix 2 - Vertical Sky Component

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Vertical Sky Component			
		Before	After	Loss	Ratio
Laneview					
Ground Floor					
Window 155	Domestic	37.9%	37.3%	0.6%	0.98
Window 156	Domestic	36.6%	32.8%	3.8%	0.9
Window 157	Domestic	36.6%	33.0%	3.6%	0.9
Window 158	Domestic	35.8%	32.4%	3.4%	0.91
Window 159	Domestic	35.2%	32.2%	3.0%	0.91
First Floor					
Window 160	Domestic	76.3%	75.6%	0.7%	0.99
Window 161	Domestic	74.1%	73.3%	0.8%	0.99
Millfield					
Ground Floor					
Window 162	Domestic	37.8%	34.2%	3.6%	0.9
Window 163	Domestic	37.9%	34.3%	3.6%	0.91
Window 164	Domestic	83.7%	83.1%	0.6%	0.99
Window 165	Domestic	38.0%	34.4%	3.6%	0.91
Window 166	Domestic	83.9%	83.3%	0.6%	0.99
Window 167	Domestic	37.9%	34.3%	3.6%	0.91

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
41 The Elms									
Ground Floor									
Window 2	Domestic	78%	78%	0%	1.0	29%	29%	0%	1.0
Window 3	Domestic	81%	81%	0%	1.0	28%	28%	0%	1.0
Window 4	Domestic	77%	77%	0%	1.0	24%	24%	0%	1.0
First Floor									
Window 6	Domestic	76%	76%	0%	1.0	28%	28%	0%	1.0
Window 7	Domestic	77%	77%	0%	1.0	29%	29%	0%	1.0
Window 8	Domestic	55%	55%	0%	1.0	21%	21%	0%	1.0
42 The Elms									
Ground Floor									
Window 10	Domestic	84%	84%	0%	1.0	29%	29%	0%	1.0
Window 11	Domestic	87%	87%	0%	1.0	29%	29%	0%	1.0
Window 12	Domestic	86%	86%	0%	1.0	28%	28%	0%	1.0
First Floor									
Window 14	Domestic	84%	84%	0%	1.0	29%	29%	0%	1.0
Window 15	Domestic	83%	83%	0%	1.0	29%	29%	0%	1.0
Window 16	Domestic	40%	40%	0%	1.0	12%	12%	0%	1.0
43 The Elms									
Ground Floor									
Window 17	Domestic	47%	47%	0%	1.0	19%	19%	0%	1.0
Window 18	Domestic	72%	72%	0%	1.0	26%	26%	0%	1.0
Window 19	Domestic	76%	76%	0%	1.0	25%	25%	0%	1.0
Window 20	Domestic	76%	76%	0%	1.0	25%	25%	0%	1.0
First Floor									
Window 21	Domestic	56%	56%	0%	1.0	21%	21%	0%	1.0
Window 22	Domestic	56%	56%	0%	1.0	22%	22%	0%	1.0
Window 23	Domestic	73%	73%	0%	1.0	26%	26%	0%	1.0
Window 24	Domestic	72%	72%	0%	1.0	25%	25%	0%	1.0

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
44 The Elms									
Ground Floor									
Window 26	Domestic	56%	56%	0%	1.0	15%	15%	0%	1.0
Window 27	Domestic	61%	61%	0%	1.0	22%	22%	0%	1.0
Window 28	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0
Window 29	Domestic	66%	66%	0%	1.0	22%	22%	0%	1.0
First Floor									
Window 30	Domestic	66%	66%	0%	1.0	23%	23%	0%	1.0
Window 31	Domestic	68%	68%	0%	1.0	25%	25%	0%	1.0
Window 32	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
Window 33	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
45 The Elms									
Ground Floor									
Window 35	Domestic	30%	30%	0%	1.0	7%	7%	0%	1.0
Window 36	Domestic	61%	61%	0%	1.0	22%	22%	0%	1.0
Window 37	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0
Window 38	Domestic	66%	66%	0%	1.0	22%	22%	0%	1.0
First Floor									
Window 39	Domestic	64%	64%	0%	1.0	21%	21%	0%	1.0
Window 40	Domestic	63%	63%	0%	1.0	21%	21%	0%	1.0
Window 41	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
Window 42	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
46 The Elms									
Ground Floor									
Window 44	Domestic	26%	26%	0%	1.0	5%	5%	0%	1.0
Window 45	Domestic	60%	60%	0%	1.0	21%	21%	0%	1.0
Window 46	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0
Window 47	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
First Floor									
Window 48	Domestic	65%	65%	0%	1.0	18%	18%	0%	1.0
Window 49	Domestic	66%	66%	0%	1.0	20%	20%	0%	1.0
Window 50	Domestic	63%	63%	0%	1.0	22%	22%	0%	1.0
Window 51	Domestic	63%	63%	0%	1.0	22%	22%	0%	1.0
47 The Elms									
Ground Floor									
Window 53	Domestic	22%	22%	0%	1.0	4%	4%	0%	1.0
Window 54	Domestic	57%	57%	0%	1.0	18%	18%	0%	1.0
Window 55	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0
Window 56	Domestic	67%	67%	0%	1.0	22%	22%	0%	1.0
First Floor									
Window 57	Domestic	65%	65%	0%	1.0	18%	18%	0%	1.0
Window 58	Domestic	67%	67%	0%	1.0	20%	20%	0%	1.0
Window 59	Domestic	63%	63%	0%	1.0	22%	22%	0%	1.0
Window 60	Domestic	63%	63%	0%	1.0	22%	22%	0%	1.0
48 The Elms									
Ground Floor									
Window 62	Domestic	55%	53%	2%	0.96	16%	14%	2%	0.88
Window 63	Domestic	54%	53%	1%	0.98	16%	15%	1%	0.94
Window 64	Domestic	49%	48%	1%	0.98	16%	15%	1%	0.94
First Floor									
Window 66	Domestic	69%	69%	0%	1.0	19%	19%	0%	1.0
Window 67	Domestic	52%	52%	0%	1.0	16%	16%	0%	1.0
Window 68	Domestic	52%	52%	0%	1.0	16%	16%	0%	1.0
49 The Elms									
Ground Floor									
Window 71	Domestic	62%	62%	0%	1.0	14%	14%	0%	1.0
Window 74	Domestic	47%	47%	0%	1.0	10%	10%	0%	1.0

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
First Floor									
Window 78	Domestic	70%	70%	0%	1.0	20%	20%	0%	1.0
64 The Elms									
Ground Floor									
Window 84	Domestic	83%	82%	1%	0.99	28%	27%	1%	0.96
Window 85	Domestic	84%	83%	1%	0.99	29%	28%	1%	0.97
Window 86	Domestic	86%	85%	1%	0.99	29%	28%	1%	0.97
First Floor									
Window 88	Domestic	83%	83%	0%	1.0	29%	29%	0%	1.0
Window 89	Domestic	82%	82%	0%	1.0	29%	29%	0%	1.0
Window 90	Domestic	44%	44%	0%	1.0	15%	15%	0%	1.0
65 The Elms									
Ground Floor									
Window 91	Domestic	50%	50%	0%	1.0	20%	20%	0%	1.0
Window 92	Domestic	70%	69%	1%	0.99	24%	23%	1%	0.96
Window 93	Domestic	74%	74%	0%	1.0	23%	23%	0%	1.0
Window 94	Domestic	74%	74%	0%	1.0	23%	23%	0%	1.0
Window 95	Domestic	86%	84%	2%	0.98	26%	24%	2%	0.92
Window 96	Domestic	80%	77%	3%	0.96	28%	25%	3%	0.89
First Floor									
Window 98	Domestic	57%	57%	0%	1.0	22%	22%	0%	1.0
Window 99	Domestic	71%	71%	0%	1.0	25%	25%	0%	1.0
Window 100	Domestic	71%	71%	0%	1.0	25%	25%	0%	1.0
66 The Elms									
Ground Floor									
Window 102	Domestic	33%	33%	0%	1.0	5%	5%	0%	1.0
Window 103	Domestic	57%	54%	3%	0.95	17%	14%	3%	0.82
Window 104	Domestic	65%	62%	3%	0.95	20%	17%	3%	0.85

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
Window 105	Domestic	67%	65%	2%	0.97	22%	20%	2%	0.91
First Floor									
Window 106	Domestic	62%	62%	0%	1.0	20%	20%	0%	1.0
Window 107	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
Window 108	Domestic	62%	62%	0%	1.0	22%	22%	0%	1.0
67 The Elms									
Ground Floor									
Window 110	Domestic	16%	16%	0%	1.0	4%	4%	0%	1.0
Window 111	Domestic	60%	56%	4%	0.93	20%	17%	3%	0.85
Window 112	Domestic	65%	61%	4%	0.94	22%	19%	3%	0.86
Window 113	Domestic	56%	53%	3%	0.95	22%	19%	3%	0.86
Window 114	Domestic	79%	76%	3%	0.96	25%	22%	3%	0.88
Window 115	Domestic	67%	63%	4%	0.94	22%	19%	3%	0.86
Window 118	Domestic	10%	7%	3%	0.7	8%	6%	2%	0.75
First Floor									
Window 119	Domestic	59%	58%	1%	0.98	17%	16%	1%	0.94
Window 120	Domestic	62%	61%	1%	0.98	22%	21%	1%	0.95
Window 121	Domestic	62%	61%	1%	0.98	22%	21%	1%	0.95
68 The Elms									
Ground Floor									
Window 123	Domestic	15%	15%	0%	1.0	3%	3%	0%	1.0
Window 124	Domestic	56%	53%	3%	0.95	16%	14%	2%	0.88
Window 125	Domestic	65%	61%	4%	0.94	20%	17%	3%	0.85
Window 126	Domestic	67%	63%	4%	0.94	22%	19%	3%	0.86
First Floor									
Window 127	Domestic	59%	58%	1%	0.98	17%	16%	1%	0.94
Window 128	Domestic	62%	60%	2%	0.97	22%	20%	2%	0.91
Window 129	Domestic	62%	60%	2%	0.97	22%	20%	2%	0.91

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
69 The Elms									
Ground Floor									
Window 131	Domestic	18%	17%	1%	0.94	4%	3%	1%	0.75
Window 132	Domestic	60%	57%	3%	0.95	20%	18%	2%	0.9
Window 133	Domestic	67%	64%	3%	0.96	22%	20%	2%	0.91
Window 134	Domestic	67%	63%	4%	0.94	22%	19%	3%	0.86
First Floor									
Window 135	Domestic	59%	57%	2%	0.97	17%	15%	2%	0.88
Window 136	Domestic	62%	61%	1%	0.98	22%	21%	1%	0.95
Window 137	Domestic	62%	60%	2%	0.97	22%	20%	2%	0.91
70 The Elms									
Ground Floor									
Window 139	Domestic	43%	41%	2%	0.95	10%	8%	2%	0.8
Window 140	Domestic	49%	46%	3%	0.94	16%	14%	2%	0.88
Window 141	Domestic	55%	52%	3%	0.95	16%	14%	2%	0.88
Window 142	Domestic	54%	50%	4%	0.93	16%	13%	3%	0.81
First Floor									
Window 143	Domestic	66%	64%	2%	0.97	20%	18%	2%	0.9
Window 144	Domestic	49%	48%	1%	0.98	16%	15%	1%	0.94
Window 145	Domestic	49%	47%	2%	0.96	16%	14%	2%	0.88
71 The Elms									
First Floor									
Window 151	Domestic	67%	67%	0%	1.0	21%	21%	0%	1.0
Laneview									
Ground Floor									
Window 156	Domestic	77%	75%	2%	0.97	28%	26%	2%	0.93
Window 157	Domestic	76%	73%	3%	0.96	26%	23%	3%	0.88
Window 158	Domestic	75%	72%	3%	0.96	26%	23%	3%	0.88
Window 159	Domestic	75%	71%	4%	0.95	25%	21%	4%	0.84

Appendix 2 - Sunlight to Windows

Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Room Use	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
First Floor									
Window 160	Domestic	92%	92%	0%	1.0	29%	29%	0%	1.0
Window 161	Domestic	89%	89%	0%	1.0	29%	29%	0%	1.0
Millfield									
Ground Floor									
Window 162	Domestic	79%	77%	2%	0.97	28%	26%	2%	0.93
Window 163	Domestic	80%	79%	1%	0.99	27%	26%	1%	0.96
Window 164	Domestic	94%	94%	0%	1.0	29%	29%	0%	1.0
Window 165	Domestic	79%	78%	1%	0.99	26%	25%	1%	0.96
Window 166	Domestic	95%	95%	0%	1.0	29%	29%	0%	1.0
Window 167	Domestic	80%	78%	2%	0.98	26%	24%	2%	0.92

Appendix 2 - Overshadowing to Gardens and Open Spaces
Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

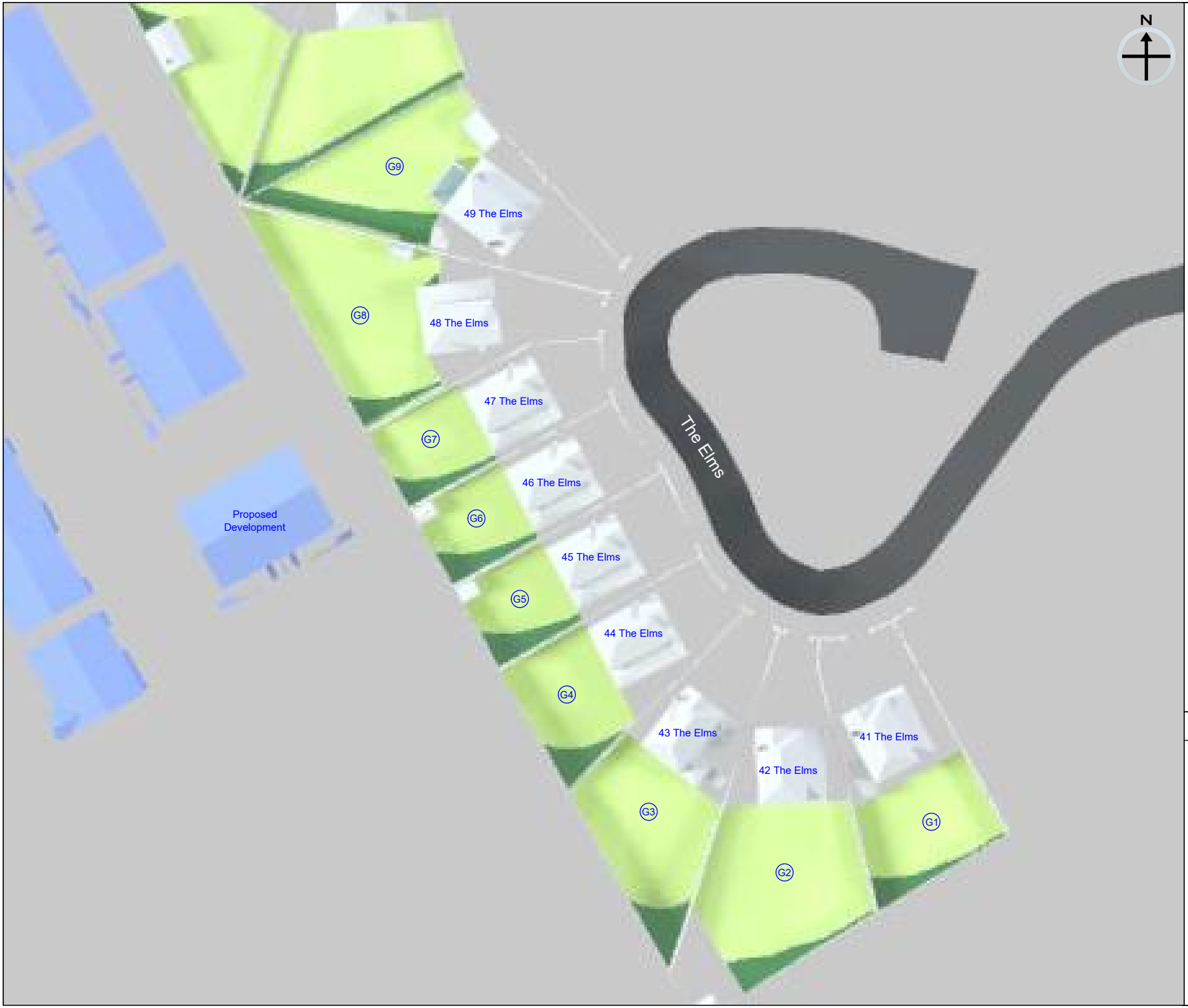
Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
		Before		After		Loss		Ratio
41 The Elms								
Ground Floor Garden 1	233.14 m2	204.25 m2	88%	204.25 m2	88%	0.0 m2	0%	1.0
42 The Elms								
Ground Floor Garden 2	418.12 m2	381.38 m2	91%	381.38 m2	91%	0.0 m2	0%	1.0
43 The Elms								
Ground Floor Garden 3	305.91 m2	273.48 m2	89%	273.48 m2	89%	0.0 m2	0%	1.0
44 The Elms								
Ground Floor Garden 4	203.45 m2	175.05 m2	86%	175.05 m2	86%	0.0 m2	0%	1.0
45 The Elms								
Ground Floor Garden 5	144.79 m2	112.17 m2	77%	112.17 m2	77%	0.0 m2	0%	1.0
46 The Elms								
Ground Floor Garden 6	141.71 m2	111.59 m2	79%	111.59 m2	79%	0.0 m2	0%	1.0
47 The Elms								
Ground Floor Garden 7	152.22 m2	127.69 m2	84%	127.52 m2	84%	0.17 m2	0%	1.0
48 The Elms								
Ground Floor Garden 8	394.86 m2	370.76 m2	94%	370.76 m2	94%	0.0 m2	0%	1.0
49 The Elms								
Ground Floor Garden 9	310.09 m2	238.68 m2	77%	238.61 m2	77%	0.07 m2	0%	1.0

Appendix 2 - Overshadowing to Gardens and Open Spaces
Site at BallyMany, Ballymany Road, Newbridge, Kildare, Ireland W12 T925

Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
64 The Elms								
Ground Floor Garden 10	349.35 m2	303.44 m2	87%	301.62 m2	86%	1.82 m2	1%	0.99
65 The Elms								
Ground Floor Garden 11	336.84 m2	320.61 m2	95%	320.61 m2	95%	0.0 m2	0%	1.0
66 The Elms								
Ground Floor Garden 12	146.91 m2	117.6 m2	80%	115.9 m2	79%	1.7 m2	1%	0.99
67 The Elms								
Ground Floor Garden 13	119.3 m2	101.64 m2	85%	99.32 m2	83%	2.32 m2	2%	0.98
68 The Elms								
Ground Floor Garden 14	152.48 m2	124.63 m2	82%	118.29 m2	78%	6.34 m2	4%	0.95
69 The Elms								
Ground Floor Garden 15	154.61 m2	126.3 m2	82%	121.69 m2	79%	4.61 m2	3%	0.96
70 The Elms								
Ground Floor Garden 16	479.03 m2	457.21 m2	95%	448.84 m2	94%	8.37 m2	1%	0.98
71 The Elms								
Ground Floor Garden 17	429.26 m2	394.85 m2	92%	394.85 m2	92%	0.0 m2	0%	1.0

APPENDIX 3

OVERSHADOWING TO GARDENS AND OPEN SPACES



Key

- 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.
- G1 Neighbouring Gardens and Amenity Areas

Drawing Title: Appendix 3 - Overshadowing to Gardens and Open Spaces

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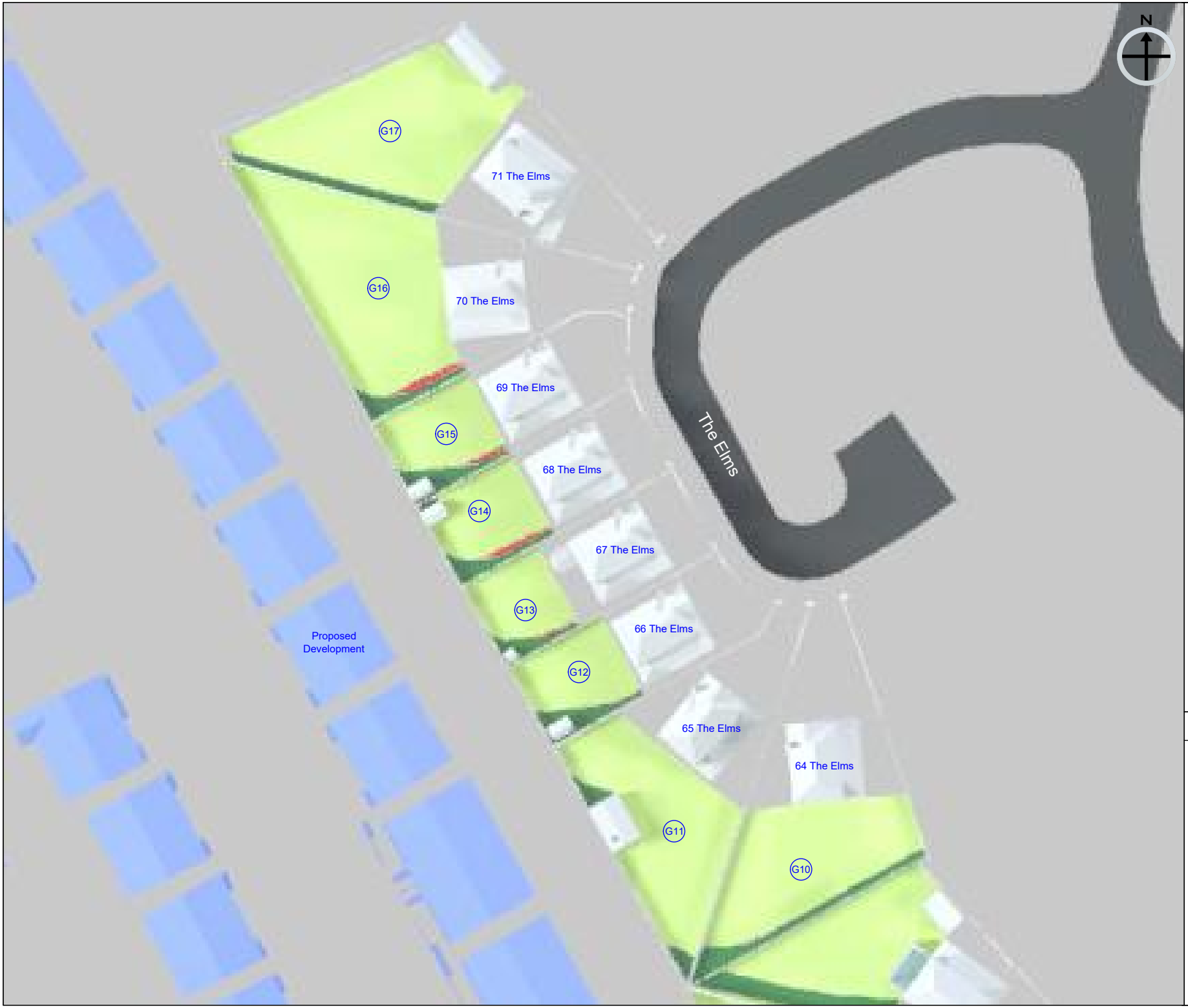

Key

- 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.
- G1 Neighbouring Gardens and Amenity Areas

Drawing Title: Appendix 3 - Overshadowing to Gardens and Open Spaces

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