



RIGHT OF LIGHT
CONSULTING
Chartered Surveyors

Daylight and Sunlight Report

(Neighbouring Properties)

14 May 2024

New Residential Units at
Sion Court
Sion Road
Twickenham
TW1 3DD

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1 EXECUTIVE SUMMARY

1.1 Overview

- 1.1.1 Right of Light Consulting has been commissioned by Moreland Residential (UK) to undertake a daylight and sunlight assessment of the proposed development at New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD.
- 1.1.2 The assessment 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, 3rd Edition' by P J Littlefair 2022.
- 1.1.3 The aim of the assessment is to consider the impact of the development on the light receivable by the neighbouring properties at:
- 2 to 36 Sion Court
 - 9, 11, 13 & 25 Ferry Road
 - 19 & 21 Lebanon Park
- 1.1.4 The images in Appendix 1 identify the windows we have assessed. Appendix 2 gives the numerical results of the various daylight and sunlight tests. Overshadowing to gardens and opens spaces data and contour drawings are provided in Appendix 3.
- 1.1.5 All neighbouring windows pass the relevant BRE diffuse daylight and direct sunlight tests. All neighbouring amenity areas also pass the BRE overshadowing to gardens and open spaces test.
- 1.1.6 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 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:

Tal Arc Ltd.

| | | |
|-----------|---|-------|
| SC-D1-01 | Land Registry Map, Block Plan Existing Ground Floor Plan | Rev - |
| SC-PP3-08 | Proposed Sections A & B Materials | Rev - |
| SC-PP1-01 | Existing Ground Floor Plan | Rev - |
| SC-PP1-02 | Existing First Floor Plan | Rev - |
| SC-PP1-03 | Existing Elevations | Rev - |
| SC-PP1-04 | Existing Street Elevation Existing South Elevation/Section | Rev - |
| SC-PP4-00 | Site Map, Block Plan | Rev - |
| SC-PP4-05 | Proposed Ground Floor Plan | Rev - |
| SC-PP4-06 | Proposed Roof Plan Proposed First Floor Plan | Rev - |
| SC-PP4-07 | Proposed West Elevation Proposed Rear Elevation | Rev - |
| SC-PP4-09 | Proposed Lebanon Park Street Elevation | Rev - |
| SC-PP4-10 | Proposed Section CC | Rev - |
| SC-PP4-11 | Proposed Section EE Proposed Section FF | Rev - |

Cadmap

| | | |
|----------|----------------------|-------|
| CM/21705 | Topographical Survey | Rev - |
|----------|----------------------|-------|

2.2 Daylight Distribution Room Layout Information

2.2.1 The daylight distribution test has been applied based on the following room layout information:

Online Local Authority planning records

| | | |
|-------------------------------------|--|----------------|
| 19 Lebanon Park: SO-376-07 04 | Proposed Rear Extension Proposed Plans | Rev - Rev - |
| 21 Lebanon Park: 01 03 | Existing Plans Existing Elevation and Roof plan | Rev - Rev - |

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| | | |
|----------------|-------------|-------|
| 13 Ferry Road: | Floor Plans | Rev - |
|----------------|-------------|-------|

3 METHODOLOGY OF THE ASSESSMENT

3.1 Local Planning Policy

- 3.1.1 We understand that the Local Authority takes 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. This report is based on the 3rd 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 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 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 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:

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

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

Test 1 Vertical Sky Component

3.4.6 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.

3.4.7 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. 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 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

3.4.8 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.

3.4.9 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 the daylight distribution calculation can only be carried out where room layouts are known. It states that using estimated room layouts is likely to give inaccurate results and is not recommended. Therefore, we don’t endorse the practice of applying the test based on assumed room layouts. However, we can provide additional daylight distribution data upon request by the local authority, if neighbouring room layout information is confirmed.

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 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.

3.6 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 assessment.
- 3.6.3 The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this assessment. 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 ASSESSMENT

4.1 Windows & Amenity Areas Considered

- 4.1.1 The aim of the assessment is to assess the impact of the development on the light receivable by the neighbouring properties at 2 to 36 Sion Court, 9, 11, 13 & 25 Ferry Road and 19 & 21 Lebanon Park
- 4.1.2 The images in Appendix 1 identify the windows we have assessed. Appendix 2 lists the detailed numerical daylight and sunlight test results. Overshadowing to gardens and opens spaces data and contour drawings are provided in Appendix 3.

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 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 All gardens and open spaces tested meet the BRE recommendations.

4.5 Conclusion

- 4.5.1 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 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 assessment is limited to assessing daylight, sunlight and overshadowing to neighbouring windows, gardens and open spaces as set out in section 2.2, 3.2 and 3.3 of the BRE Guide.
- 5.1.3 The assessment is based on the information listed in section 2 of this report and a site visit undertaken in April 2019. We have not had access to neighbouring properties.
- 5.1.4 This assessment 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 assessment 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 a reasonable assumption regarding the use based on external observations, or take the prudent approach of assuming the room is of domestic purposes.
- 5.1.6 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



Lebanon Park

21 Lebanon Park

19 Lebanon Park

Proposed Development

2 to 36 Sion Court

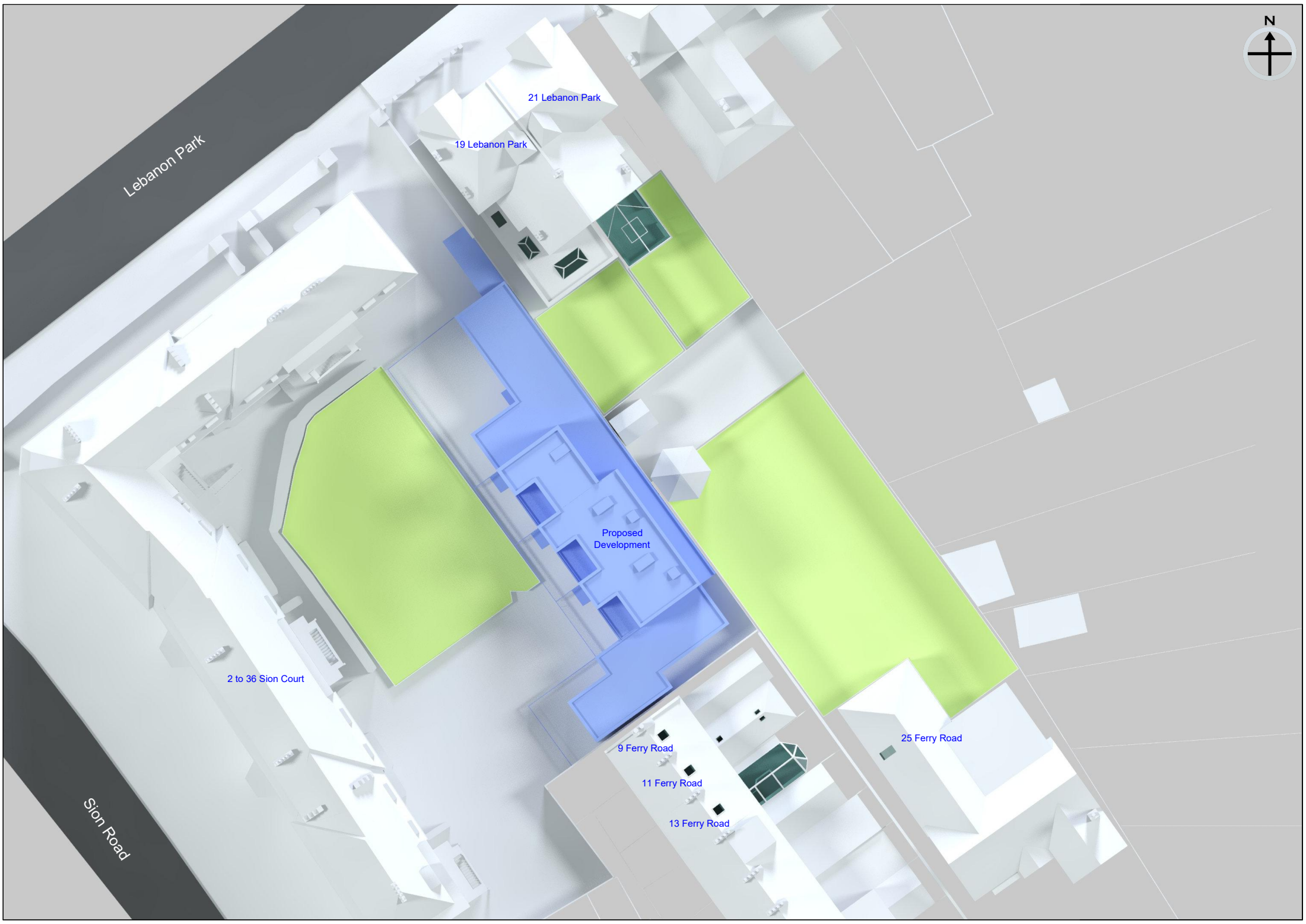
Sion Road

9 Ferry Road

11 Ferry Road

13 Ferry Road

25 Ferry Road





Sion Road

Lebanon Park

2 to 36 Sion Court

19 Lebanon Park

21 Lebanon Park

Proposed Development

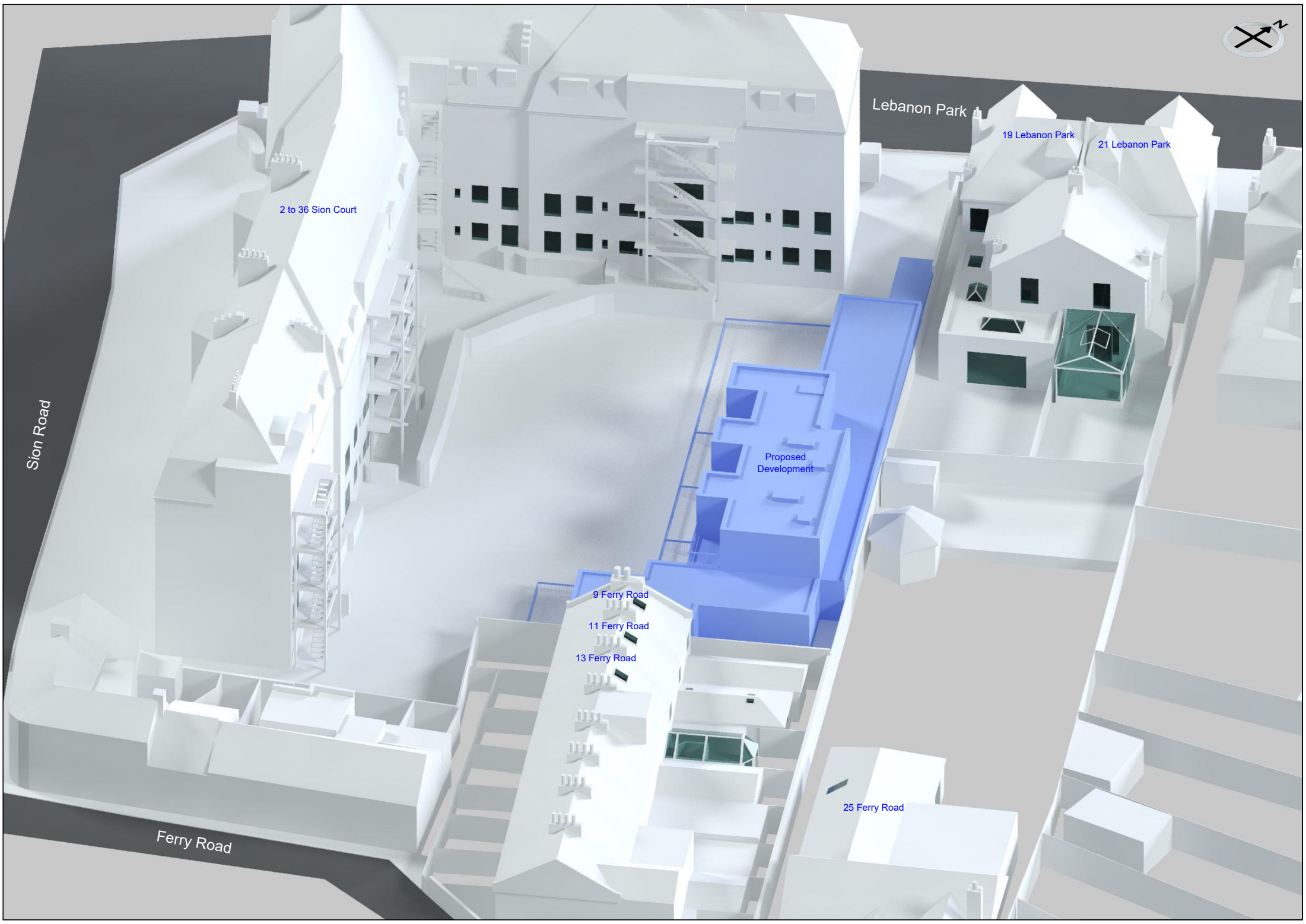
9 Ferry Road

11 Ferry Road

13 Ferry Road

25 Ferry Road

Ferry Road





Lebanon Park

21 Lebanon Park

19 Lebanon Park

Proposed
Development

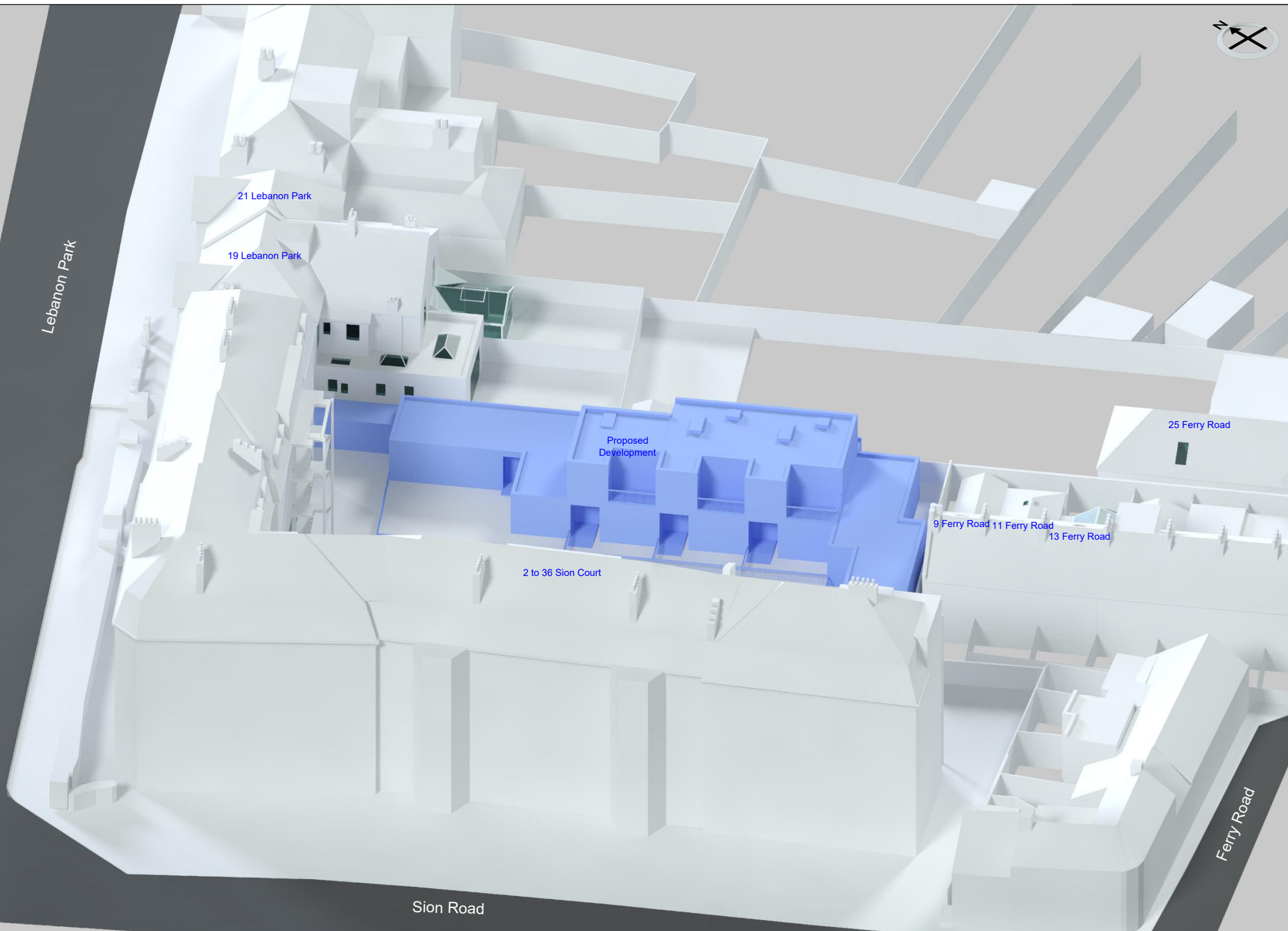
25 Ferry Road

9 Ferry Road 11 Ferry Road
13 Ferry Road

2 to 36 Sion Court

Sion Road

Ferry Road





Sion Road

Ferry Road

2 to 36 Sion Court

13 Ferry Road 11 Ferry Road 9 Ferry Road

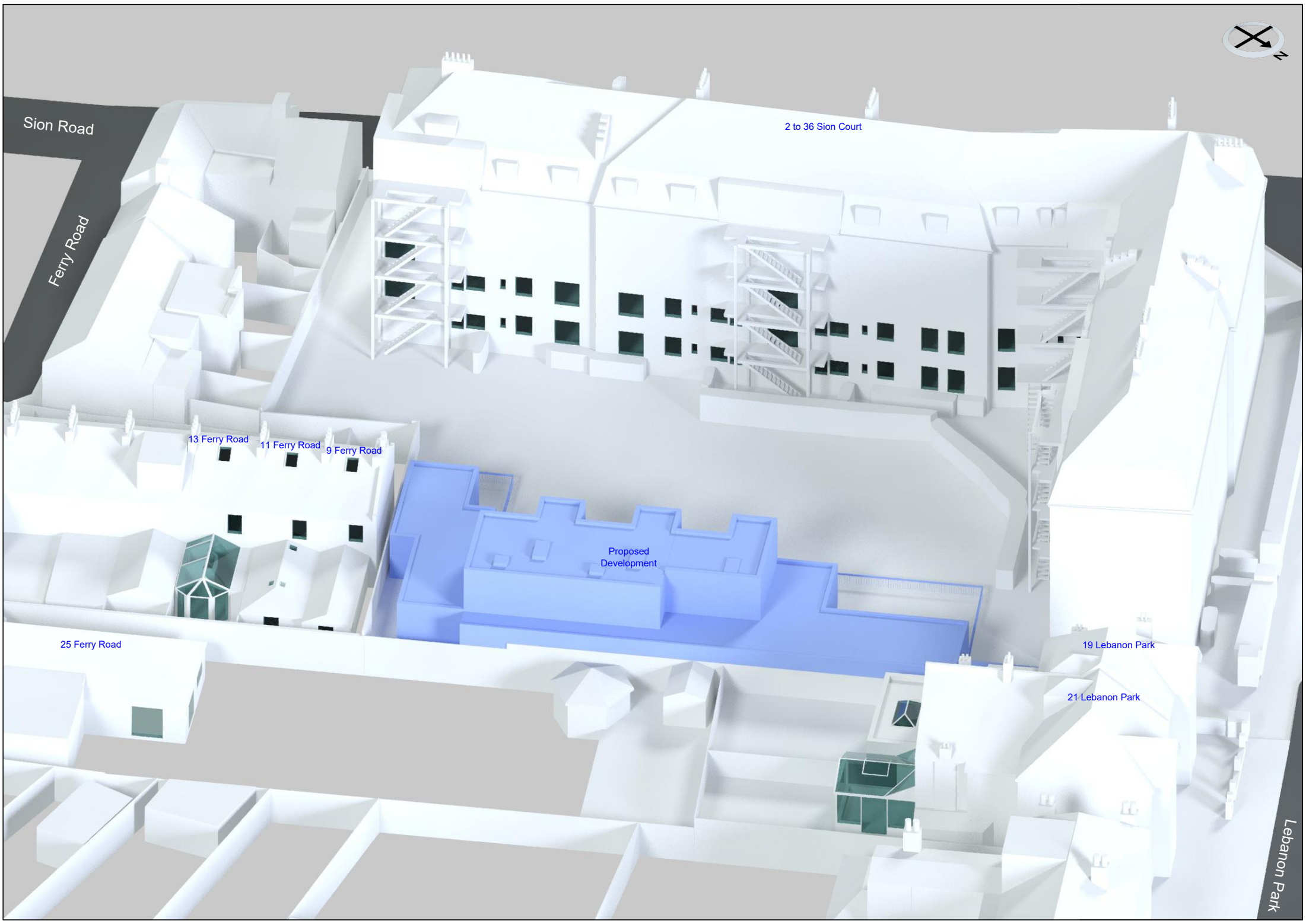
Proposed Development

25 Ferry Road

19 Lebanon Park

21 Lebanon Park

Lebanon Park





Ferry Road

25 Ferry Road

13 Ferry Road

11 Ferry Road

9 Ferry Road

Proposed
Development

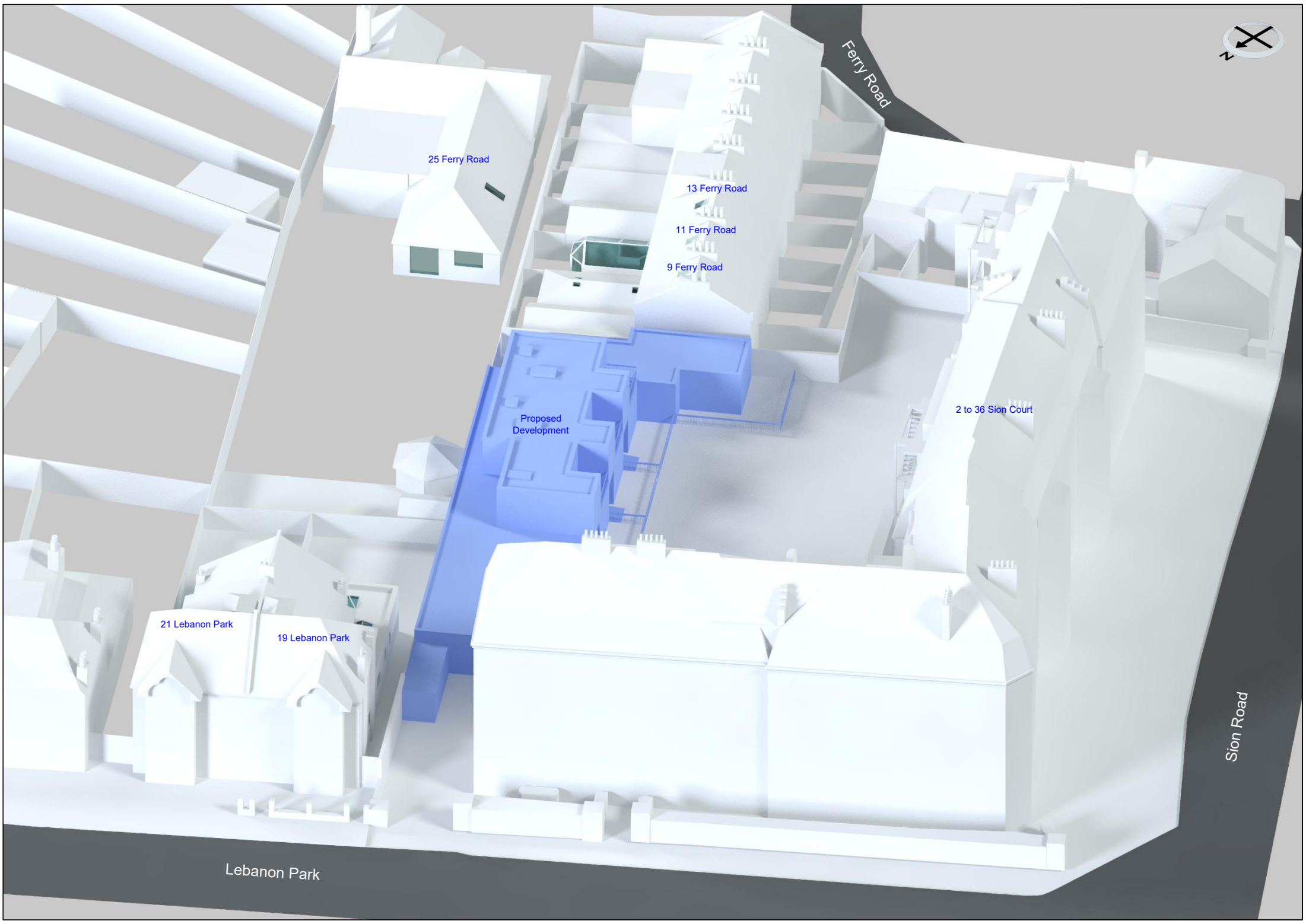
2 to 36 Sion Court

21 Lebanon Park

19 Lebanon Park

Sion Road

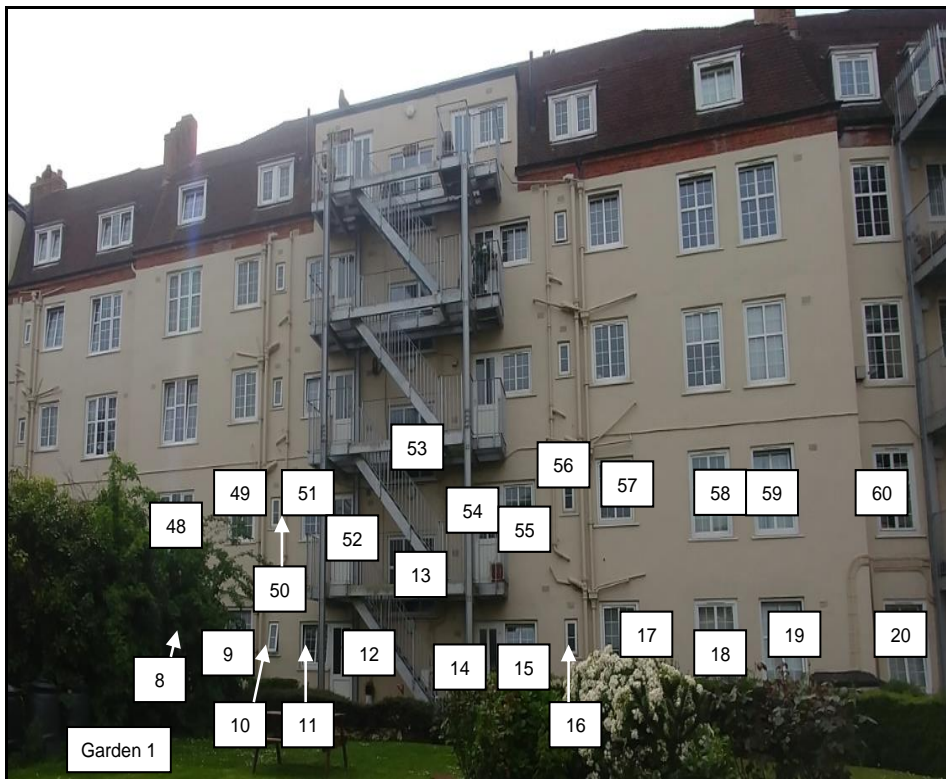
Lebanon Park



Neighbouring Windows



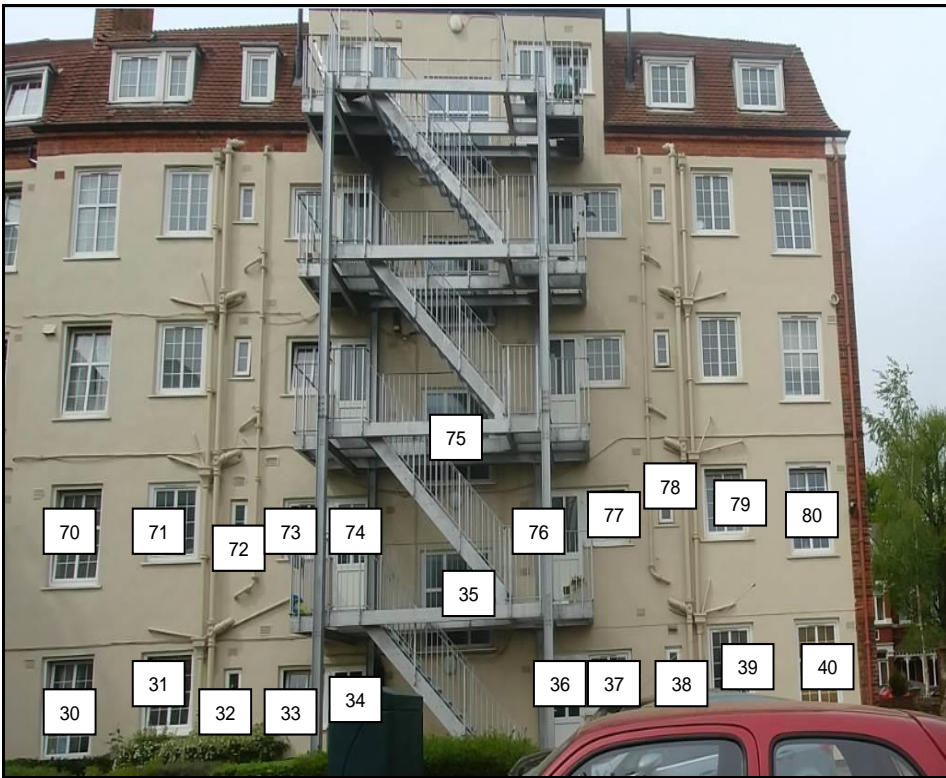
2 to 36 Sion Court



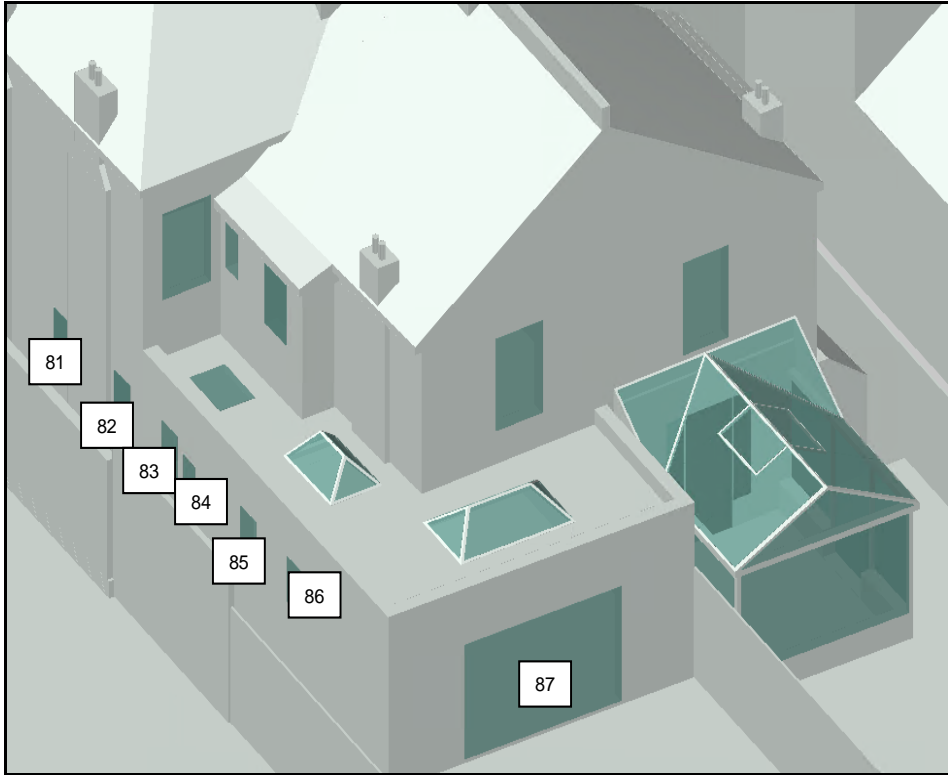
2 to 36 Sion Court



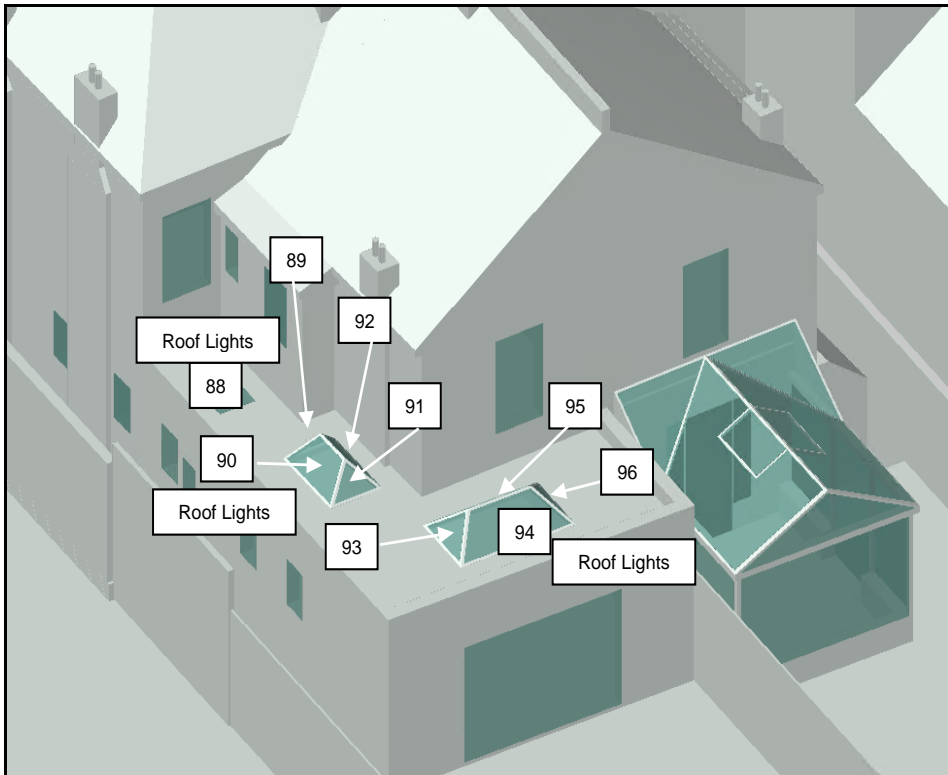
2 to 36 Sion Court



2 to 36 Sion Court



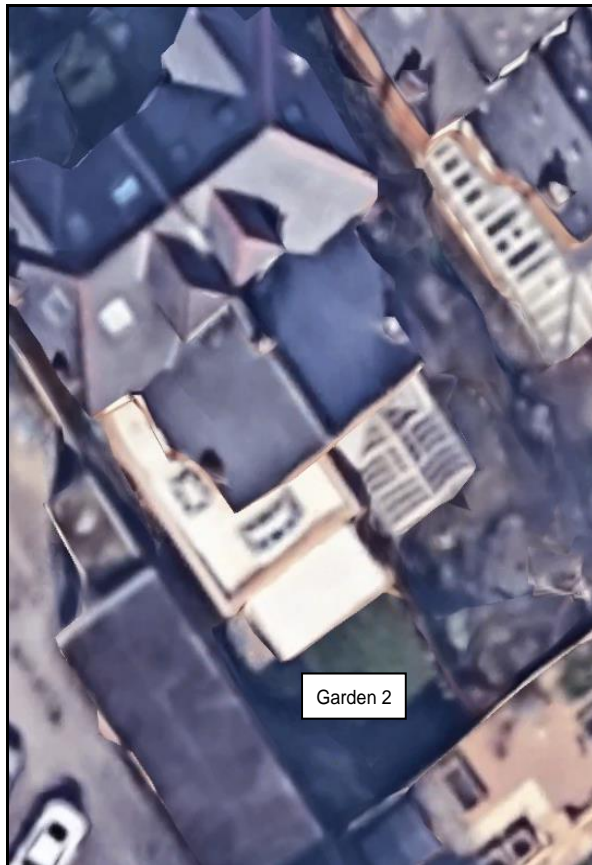
19 Lebanon Park



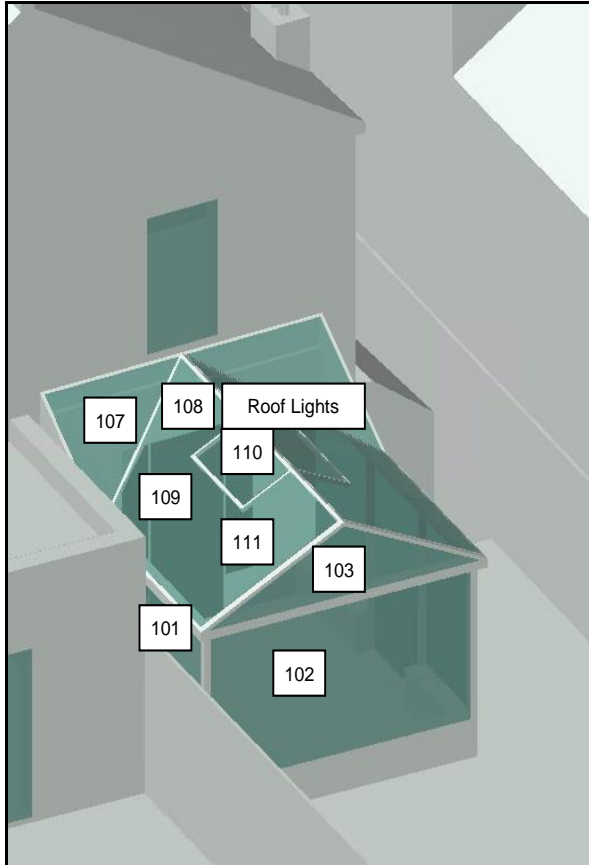
19 Lebanon Park



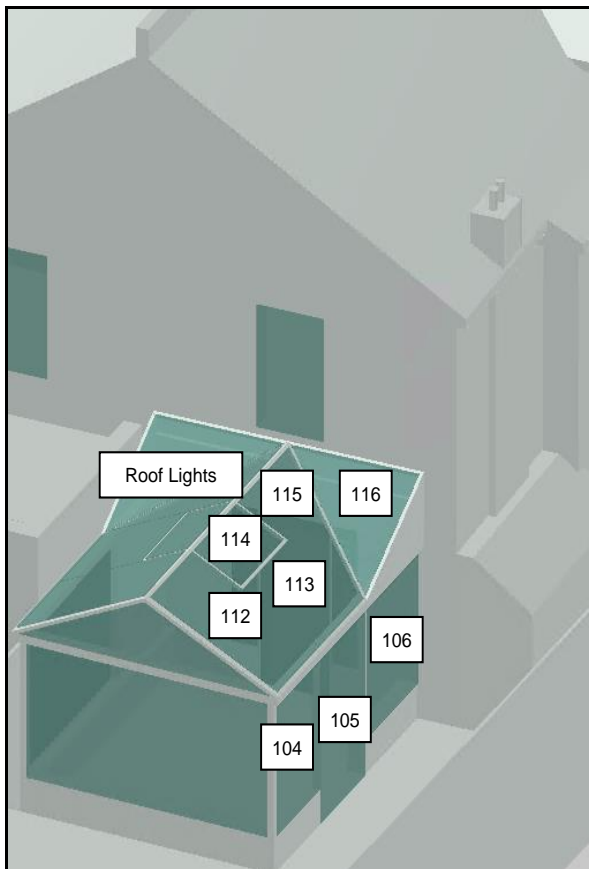
19 Lebanon Park



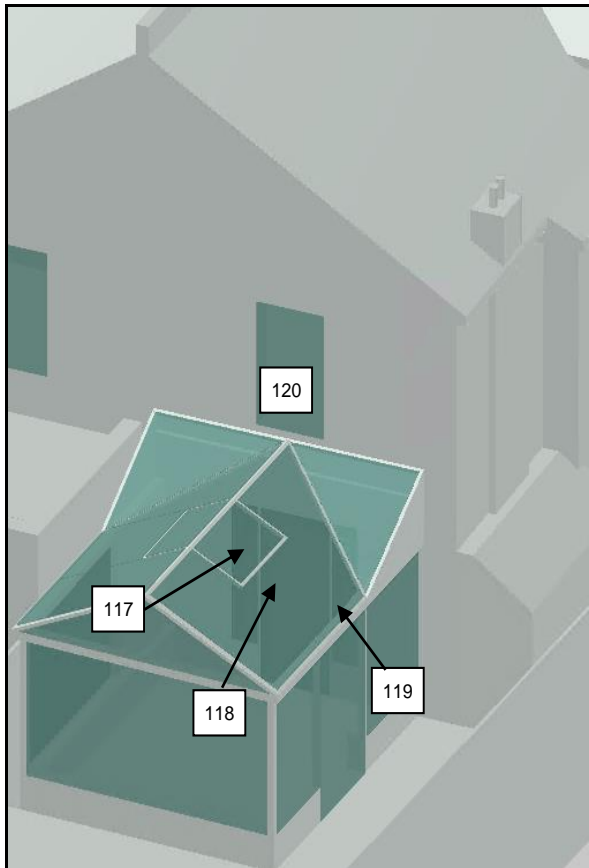
19 Lebanon Park



21 Lebanon Park



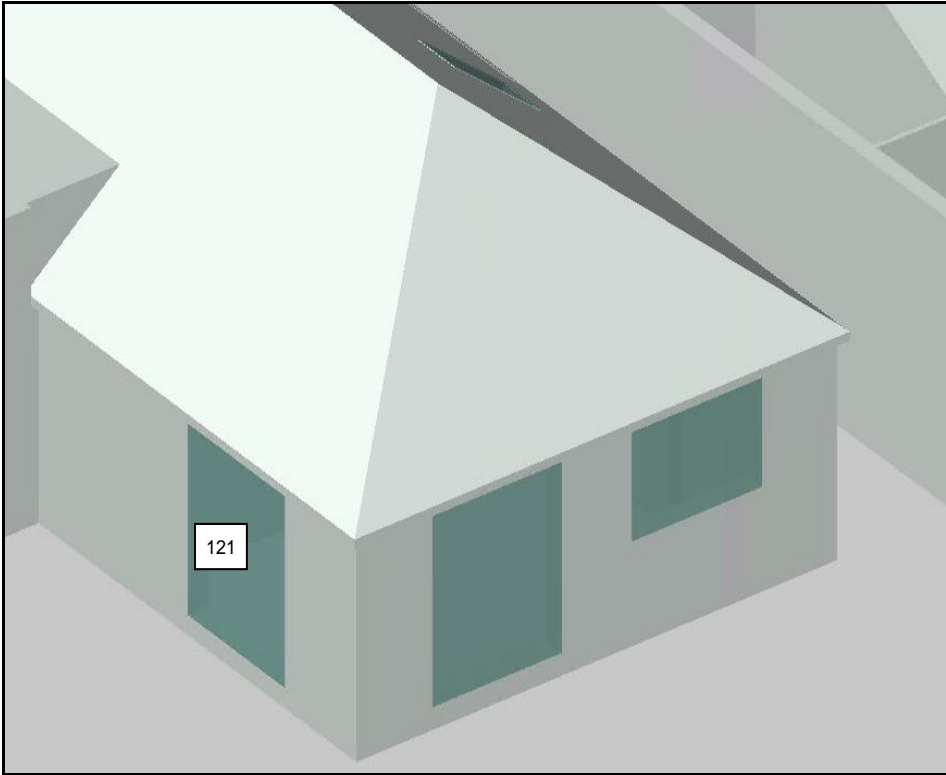
21 Lebanon Park



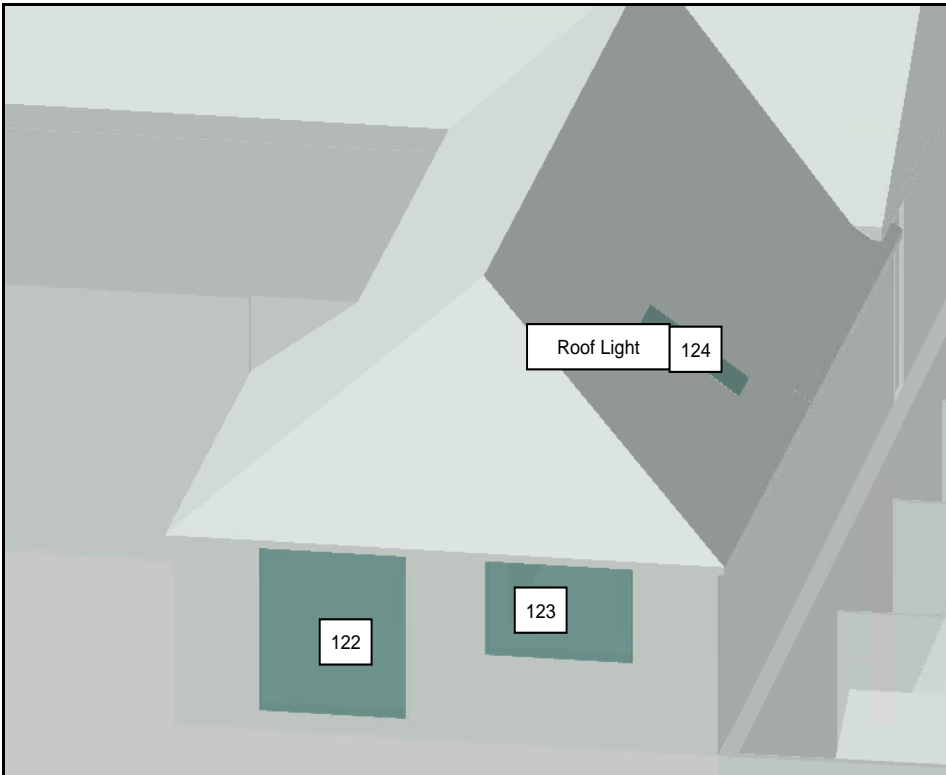
21 Lebanon Park



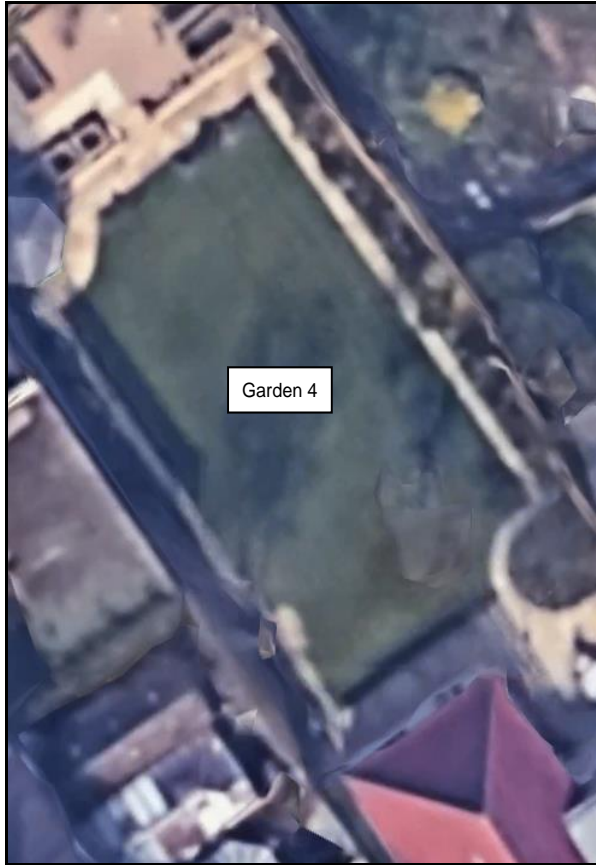
21 Lebanon Park



25 Ferry Road



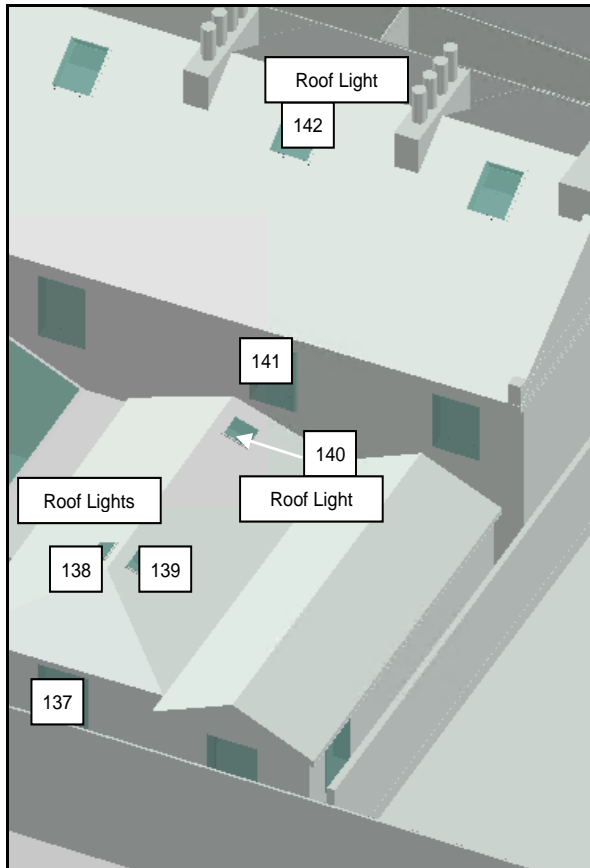
25 Ferry Road



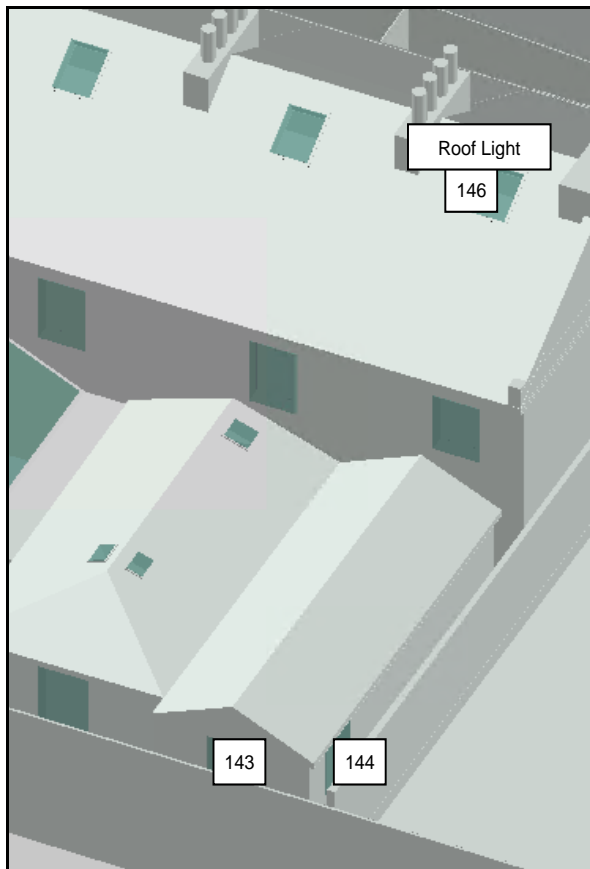
25 Ferry Road



13 Ferry Road



11 Ferry Road



9 Ferry Road



9 Ferry Road

APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Vertical Sky Component

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Vertical Sky Component | | | |
|---------------------------|----------|------------------------|-------|-------|-------|
| | | Before | After | Loss | Ratio |
| <u>2 to 36 Sion Court</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 1 | Domestic | 23.3% | 23.2% | 0.1% | 1.0 |
| Window 2 | Domestic | 6.5% | 6.2% | 0.3% | 0.95 |
| Window 3 | Domestic | 15.5% | 15.1% | 0.4% | 0.97 |
| Window 4 | Domestic | 26.5% | 26.1% | 0.4% | 0.98 |
| Window 5 | Domestic | 32.4% | 32.0% | 0.4% | 0.99 |
| Window 6 | Domestic | 33.5% | 33.1% | 0.4% | 0.99 |
| Window 7 | Domestic | 34.0% | 33.5% | 0.5% | 0.99 |
| Window 8 | Domestic | 32.6% | 33.6% | -1.0% | 1.03 |
| Window 9 | Domestic | 32.8% | 33.0% | -0.2% | 1.01 |
| Window 10 | Domestic | 32.2% | 32.2% | 0.0% | 1.0 |
| Window 11 | Domestic | 26.9% | 26.7% | 0.2% | 0.99 |
| Window 12 | Domestic | 16.5% | 16.4% | 0.1% | 0.99 |
| Window 13 | Domestic | 17.6% | 17.2% | 0.4% | 0.98 |
| Window 14 | Domestic | 15.9% | 15.4% | 0.5% | 0.97 |
| Window 15 | Domestic | 25.1% | 24.7% | 0.4% | 0.98 |
| Window 16 | Domestic | 30.0% | 29.6% | 0.4% | 0.99 |
| Window 17 | Domestic | 30.7% | 30.3% | 0.4% | 0.99 |
| Window 18 | Domestic | 30.0% | 29.7% | 0.3% | 0.99 |
| Window 19 | Domestic | 29.1% | 28.8% | 0.3% | 0.99 |
| Window 20 | Domestic | 20.3% | 20.1% | 0.2% | 0.99 |
| Window 21 | Domestic | 4.4% | 4.2% | 0.2% | 0.95 |
| Window 22 | Domestic | 0.5% | 0.5% | 0.0% | 1.0 |
| Window 23 | Domestic | 1.0% | 1.0% | 0.0% | 1.0 |
| Window 24 | Domestic | 2.8% | 2.9% | -0.1% | 1.04 |
| Window 25 | Domestic | 2.6% | 2.6% | 0.0% | 1.0 |
| Window 26 | Domestic | 9.8% | 9.6% | 0.2% | 0.98 |
| Window 27 | Domestic | 20.4% | 20.2% | 0.2% | 0.99 |
| Window 28 | Domestic | 23.0% | 22.8% | 0.2% | 0.99 |
| Window 29 | Domestic | 24.8% | 24.7% | 0.1% | 1.0 |
| Window 30 | Domestic | 27.5% | 27.3% | 0.2% | 0.99 |
| Window 31 | Domestic | 28.4% | 28.2% | 0.2% | 0.99 |
| Window 32 | Domestic | 27.7% | 27.4% | 0.3% | 0.99 |
| Window 33 | Domestic | 22.8% | 22.5% | 0.3% | 0.99 |
| Window 34 | Domestic | 7.5% | 7.1% | 0.4% | 0.95 |
| Window 35 | Domestic | 17.1% | 16.9% | 0.2% | 0.99 |
| Window 36 | Domestic | 16.8% | 16.4% | 0.4% | 0.98 |
| Window 37 | Domestic | 26.4% | 26.1% | 0.3% | 0.99 |
| Window 38 | Domestic | 31.5% | 31.3% | 0.2% | 0.99 |
| Window 39 | Domestic | 32.0% | 32.0% | 0.0% | 1.0 |
| Window 40 | Domestic | 31.3% | 31.6% | -0.3% | 1.01 |

Appendix 2 - Vertical Sky Component

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Vertical Sky Component | | | |
|--------------------|----------|------------------------|-------|------|-------|
| | | Before | After | Loss | Ratio |
| <u>First Floor</u> | | | | | |
| Window 41 | Domestic | 25.3% | 25.3% | 0.0% | 1.0 |
| Window 42 | Domestic | 8.2% | 8.2% | 0.0% | 1.0 |
| Window 43 | Domestic | 17.9% | 17.9% | 0.0% | 1.0 |
| Window 44 | Domestic | 29.0% | 29.0% | 0.0% | 1.0 |
| Window 45 | Domestic | 35.0% | 34.9% | 0.1% | 1.0 |
| Window 46 | Domestic | 36.1% | 36.1% | 0.0% | 1.0 |
| Window 47 | Domestic | 36.6% | 36.5% | 0.1% | 1.0 |
| Window 48 | Domestic | 36.7% | 36.6% | 0.1% | 1.0 |
| Window 49 | Domestic | 36.0% | 35.9% | 0.1% | 1.0 |
| Window 50 | Domestic | 35.0% | 34.9% | 0.1% | 1.0 |
| Window 51 | Domestic | 29.4% | 29.2% | 0.2% | 0.99 |
| Window 52 | Domestic | 18.9% | 18.8% | 0.1% | 0.99 |
| Window 53 | Domestic | 19.1% | 19.1% | 0.0% | 1.0 |
| Window 54 | Domestic | 18.1% | 18.0% | 0.1% | 0.99 |
| Window 55 | Domestic | 27.5% | 27.4% | 0.1% | 1.0 |
| Window 56 | Domestic | 32.5% | 32.4% | 0.1% | 1.0 |
| Window 57 | Domestic | 33.3% | 33.2% | 0.1% | 1.0 |
| Window 58 | Domestic | 32.7% | 32.7% | 0.0% | 1.0 |
| Window 59 | Domestic | 31.9% | 31.8% | 0.1% | 1.0 |
| Window 60 | Domestic | 22.5% | 22.5% | 0.0% | 1.0 |
| Window 61 | Domestic | 5.9% | 5.9% | 0.0% | 1.0 |
| Window 62 | Domestic | 6.8% | 6.8% | 0.0% | 1.0 |
| Window 63 | Domestic | 7.5% | 7.4% | 0.1% | 0.99 |
| Window 64 | Domestic | 3.7% | 3.7% | 0.0% | 1.0 |
| Window 65 | Domestic | 3.9% | 3.9% | 0.0% | 1.0 |
| Window 66 | Domestic | 11.3% | 11.3% | 0.0% | 1.0 |
| Window 67 | Domestic | 21.9% | 21.9% | 0.0% | 1.0 |
| Window 68 | Domestic | 25.2% | 25.2% | 0.0% | 1.0 |
| Window 69 | Domestic | 27.3% | 27.3% | 0.0% | 1.0 |
| Window 70 | Domestic | 30.4% | 30.3% | 0.1% | 1.0 |
| Window 71 | Domestic | 31.1% | 31.1% | 0.0% | 1.0 |
| Window 72 | Domestic | 30.2% | 30.2% | 0.0% | 1.0 |
| Window 73 | Domestic | 25.2% | 25.2% | 0.0% | 1.0 |
| Window 74 | Domestic | 15.1% | 15.1% | 0.0% | 1.0 |
| Window 75 | Domestic | 18.1% | 18.1% | 0.0% | 1.0 |
| Window 76 | Domestic | 19.0% | 18.9% | 0.1% | 0.99 |
| Window 77 | Domestic | 28.6% | 28.6% | 0.0% | 1.0 |
| Window 78 | Domestic | 34.3% | 34.3% | 0.0% | 1.0 |
| Window 79 | Domestic | 35.3% | 35.3% | 0.0% | 1.0 |
| Window 80 | Domestic | 35.8% | 35.8% | 0.0% | 1.0 |

Appendix 2 - Vertical Sky Component

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Vertical Sky Component | | | |
|------------------------|--------------|------------------------|-------|-------|-------|
| | | Before | After | Loss | Ratio |
| <u>19 Lebanon Park</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 81 | Kitchen | 17.4% | 17.4% | 0.0% | 1.0 |
| Window 82 | Kitchen | 18.2% | 18.6% | -0.4% | 1.02 |
| Window 83 | Domestic | 18.2% | 20.3% | -2.1% | 1.12 |
| Window 84 | Domestic | 16.9% | 20.3% | -3.4% | 1.2 |
| Window 85 | Domestic | 18.3% | 21.5% | -3.2% | 1.17 |
| Window 86 | Domestic | 16.2% | 20.6% | -4.4% | 1.27 |
| Window 87 | Domestic | 35.0% | 35.4% | -0.4% | 1.01 |
| Window 88 | Domestic | 46.0% | 46.0% | 0.0% | 1.0 |
| Window 89 | Domestic | 37.4% | 37.4% | 0.0% | 1.0 |
| Window 90 | Domestic | 56.3% | 56.2% | 0.1% | 1.0 |
| Window 91 | Domestic | 57.1% | 57.1% | 0.0% | 1.0 |
| Window 92 | Domestic | 40.8% | 40.8% | 0.0% | 1.0 |
| Window 93 | Domestic | 65.3% | 65.3% | 0.0% | 1.0 |
| Window 94 | Domestic | 70.6% | 70.7% | -0.1% | 1.0 |
| Window 95 | Domestic | 58.6% | 58.6% | 0.0% | 1.0 |
| Window 96 | Domestic | 54.0% | 54.0% | 0.0% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 97 | Bedroom | 28.8% | 28.9% | -0.1% | 1.0 |
| Window 98 | WC | 16.6% | 16.6% | 0.0% | 1.0 |
| Window 99 | Bathroom | 23.1% | 23.1% | 0.0% | 1.0 |
| Window 100 | Bedroom | 38.0% | 38.2% | -0.2% | 1.01 |
| <u>21 Lebanon Park</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 101 | Conservation | 2.8% | 2.8% | 0.0% | 1.0 |
| Window 102 | Conservation | 36.1% | 36.4% | -0.3% | 1.01 |
| Window 103 | Conservation | 37.5% | 37.8% | -0.3% | 1.01 |
| Window 104 | Conservation | 32.4% | 32.4% | 0.0% | 1.0 |
| Window 105 | Conservation | 30.6% | 30.6% | 0.0% | 1.0 |
| Window 106 | Conservation | 26.3% | 26.3% | 0.0% | 1.0 |
| Window 107 | Conservation | 53.2% | 53.3% | -0.1% | 1.0 |
| Window 108 | Conservation | 60.9% | 61.0% | -0.1% | 1.0 |
| Window 109 | Conservation | 66.7% | 66.7% | 0.0% | 1.0 |
| Window 110 | Conservation | 73.8% | 73.9% | -0.1% | 1.0 |
| Window 111 | Conservation | 79.5% | 79.6% | -0.1% | 1.0 |
| Window 112 | Conservation | 83.6% | 83.6% | 0.0% | 1.0 |
| Window 113 | Conservation | 77.2% | 77.2% | 0.0% | 1.0 |
| Window 114 | Conservation | 76.9% | 76.9% | 0.0% | 1.0 |
| Window 115 | Conservation | 65.4% | 65.4% | 0.0% | 1.0 |
| Window 116 | Conservation | 57.8% | 57.8% | 0.0% | 1.0 |
| Window 117 | Reception | 27.3% | 27.3% | 0.0% | 1.0 |

Appendix 2 - Vertical Sky Component

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Vertical Sky Component | | | |
|----------------------|------------------------|------------------------|-------|-------|-------|
| | | Before | After | Loss | Ratio |
| Window 118 | Reception | 29.1% | 29.2% | -0.1% | 1.0 |
| Window 119 | Reception | 29.2% | 29.3% | -0.1% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 120 | Bedroom | 38.3% | 38.5% | -0.2% | 1.01 |
| <u>25 Ferry Road</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 121 | Bedroom | 34.1% | 34.1% | 0.0% | 1.0 |
| Window 122 | Bedroom | 32.8% | 32.7% | 0.1% | 1.0 |
| Window 123 | Bedroom | 32.5% | 32.4% | 0.1% | 1.0 |
| Window 124 | Bathroom/WC | 83.1% | 83.1% | 0.0% | 1.0 |
| <u>13 Ferry Road</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 125 | Kitchen/Breakfast Room | 23.1% | 23.1% | 0.0% | 1.0 |
| Window 126 | Kitchen/Breakfast Room | 30.9% | 30.9% | 0.0% | 1.0 |
| Window 127 | Kitchen/Breakfast Room | 29.9% | 29.9% | 0.0% | 1.0 |
| Window 128 | Kitchen/Breakfast Room | 83.1% | 83.1% | 0.0% | 1.0 |
| Window 129 | Kitchen/Breakfast Room | 82.1% | 82.1% | 0.0% | 1.0 |
| Window 130 | Kitchen/Breakfast Room | 77.7% | 77.7% | 0.0% | 1.0 |
| Window 131 | Kitchen/Breakfast Room | 81.3% | 81.3% | 0.0% | 1.0 |
| Window 132 | Kitchen/Breakfast Room | 81.1% | 81.1% | 0.0% | 1.0 |
| Window 133 | Bathroom/WC | 71.2% | 71.2% | 0.0% | 1.0 |
| Window 134 | Domestic | 50.7% | 50.7% | 0.0% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 135 | Bedroom | 38.0% | 37.9% | 0.1% | 1.0 |
| <u>Second Floor</u> | | | | | |
| Window 136 | Loft area | 85.6% | 85.6% | 0.0% | 1.0 |
| <u>11 Ferry Road</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Window 137 | Domestic | 22.9% | 22.9% | 0.0% | 1.0 |
| Window 138 | Domestic | 89.9% | 89.9% | 0.0% | 1.0 |
| Window 139 | Domestic | 89.3% | 89.2% | 0.1% | 1.0 |
| Window 140 | Domestic | 61.5% | 61.3% | 0.2% | 1.0 |

Appendix 2 - Vertical Sky Component

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Vertical Sky Component | | | | |
|---------------------|----------|------------------------|-------|-------|-------|--|
| | | Before | After | Loss | Ratio | |
| <u>First Floor</u> | | | | | | |
| Window 141 | Domestic | 37.9% | 37.8% | 0.1% | 1.0 | |
| <u>Second Floor</u> | | | | | | |
| Window 142 | Domestic | 85.6% | 85.6% | 0.0% | 1.0 | |
| <u>9 Ferry Road</u> | | | | | | |
| <u>Ground Floor</u> | | | | | | |
| Window 143 | Domestic | 17.6% | 18.1% | -0.5% | 1.03 | |
| Window 144 | Domestic | 3.9% | 8.2% | -4.3% | 2.1 | |
| <u>First Floor</u> | | | | | | |
| Window 145 | Domestic | 37.6% | 37.1% | 0.5% | 0.99 | |
| <u>Second Floor</u> | | | | | | |
| Window 146 | Domestic | 84.2% | 84.2% | 0.0% | 1.0 | |

Appendix 2 - Daylight Distribution

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Daylight Distribution | | | |
|------------------------|------------------------|-----------------------|-------|------|-------|
| | | Before | After | Loss | Ratio |
| <u>19 Lebanon Park</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Windows 81 & 82 | Kitchen | 72% | 72% | 0% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 97 | Bedroom | 91% | 91% | 0% | 1.0 |
| Window 98 | WC | 83% | 83% | 0% | 1.0 |
| Window 99 | Bathroom | 95% | 95% | 0% | 1.0 |
| Window 100 | Bedroom | 95% | 95% | 0% | 1.0 |
| <u>21 Lebanon Park</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Windows 101 to 116 | Conservation | 100% | 100% | 0% | 1.0 |
| Windows 117 to 119 | Reception | 95% | 95% | 0% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 120 | Bedroom | 94% | 94% | 0% | 1.0 |
| <u>25 Ferry Road</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Windows 121 to 123 | Bedroom | 100% | 100% | 0% | 1.0 |
| Window 124 | Bathroom/WC | 82% | 82% | 0% | 1.0 |
| <u>13 Ferry Road</u> | | | | | |
| <u>Ground Floor</u> | | | | | |
| Windows 125 to 132 | Kitchen/Breakfast Room | 95% | 95% | 0% | 1.0 |
| Window 133 | Bathroom/WC | 100% | 100% | 0% | 1.0 |
| Window 134 | Domestic | 70% | 70% | 0% | 1.0 |
| <u>First Floor</u> | | | | | |
| Window 135 | Bedroom | 96% | 96% | 0% | 1.0 |
| <u>Second Floor</u> | | | | | |
| Window 136 | Loft area | 81% | 81% | 0% | 1.0 |

Appendix 2 - Sunlight to Windows

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Sunlight to Windows | | | | | | | |
|---------------------------|----------|----------------------|-------|------|-------|-----------------------|-------|------|-------|
| | | Total Sunlight Hours | | | | Winter Sunlight Hours | | | |
| | | Before | After | Loss | Ratio | Before | After | Loss | Ratio |
| <u>2 to 36 Sion Court</u> | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | |
| Window 25 | Domestic | 6% | 6% | 0% | 1.0 | 0% | 0% | 0% | 1.0 |
| Window 26 | Domestic | 19% | 19% | 0% | 1.0 | 2% | 2% | 0% | 1.0 |
| Window 27 | Domestic | 33% | 33% | 0% | 1.0 | 6% | 6% | 0% | 1.0 |
| Window 28 | Domestic | 38% | 38% | 0% | 1.0 | 7% | 7% | 0% | 1.0 |
| Window 29 | Domestic | 41% | 41% | 0% | 1.0 | 7% | 7% | 0% | 1.0 |
| Window 30 | Domestic | 48% | 48% | 0% | 1.0 | 9% | 9% | 0% | 1.0 |
| Window 31 | Domestic | 53% | 53% | 0% | 1.0 | 10% | 10% | 0% | 1.0 |
| Window 32 | Domestic | 54% | 52% | 2% | 0.96 | 12% | 10% | 2% | 0.83 |
| Window 33 | Domestic | 46% | 45% | 1% | 0.98 | 12% | 11% | 1% | 0.92 |
| Window 34 | Domestic | 27% | 26% | 1% | 0.96 | 6% | 5% | 1% | 0.83 |
| Window 35 | Domestic | 33% | 32% | 1% | 0.97 | 9% | 8% | 1% | 0.89 |
| Window 36 | Domestic | 28% | 29% | -1% | 1.04 | 10% | 11% | -1% | 1.1 |
| Window 37 | Domestic | 43% | 43% | 0% | 1.0 | 11% | 11% | 0% | 1.0 |
| Window 38 | Domestic | 56% | 56% | 0% | 1.0 | 17% | 17% | 0% | 1.0 |
| Window 39 | Domestic | 61% | 62% | -1% | 1.02 | 19% | 20% | -1% | 1.05 |
| Window 40 | Domestic | 59% | 60% | -1% | 1.02 | 17% | 18% | -1% | 1.06 |
| <u>First Floor</u> | | | | | | | | | |
| Window 65 | Domestic | 7% | 7% | 0% | 1.0 | 1% | 1% | 0% | 1.0 |
| Window 66 | Domestic | 22% | 22% | 0% | 1.0 | 5% | 5% | 0% | 1.0 |
| Window 67 | Domestic | 33% | 33% | 0% | 1.0 | 6% | 6% | 0% | 1.0 |
| Window 68 | Domestic | 39% | 39% | 0% | 1.0 | 7% | 7% | 0% | 1.0 |
| Window 69 | Domestic | 46% | 46% | 0% | 1.0 | 9% | 9% | 0% | 1.0 |
| Window 70 | Domestic | 54% | 54% | 0% | 1.0 | 11% | 11% | 0% | 1.0 |
| Window 71 | Domestic | 62% | 62% | 0% | 1.0 | 14% | 14% | 0% | 1.0 |
| Window 72 | Domestic | 58% | 58% | 0% | 1.0 | 14% | 14% | 0% | 1.0 |
| Window 73 | Domestic | 52% | 52% | 0% | 1.0 | 15% | 15% | 0% | 1.0 |
| Window 74 | Domestic | 37% | 37% | 0% | 1.0 | 14% | 14% | 0% | 1.0 |
| Window 75 | Domestic | 34% | 34% | 0% | 1.0 | 12% | 12% | 0% | 1.0 |
| Window 76 | Domestic | 32% | 32% | 0% | 1.0 | 14% | 14% | 0% | 1.0 |
| Window 77 | Domestic | 44% | 44% | 0% | 1.0 | 12% | 12% | 0% | 1.0 |
| Window 78 | Domestic | 58% | 58% | 0% | 1.0 | 19% | 19% | 0% | 1.0 |
| Window 79 | Domestic | 63% | 63% | 0% | 1.0 | 20% | 20% | 0% | 1.0 |
| Window 80 | Domestic | 66% | 66% | 0% | 1.0 | 21% | 21% | 0% | 1.0 |
| <u>19 Lebanon Park</u> | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | |
| Window 81 | Kitchen | 26% | 26% | 0% | 1.0 | 10% | 10% | 0% | 1.0 |
| Window 82 | Kitchen | 37% | 38% | -1% | 1.03 | 14% | 15% | -1% | 1.07 |
| Window 83 | Domestic | 36% | 41% | -5% | 1.14 | 10% | 15% | -5% | 1.5 |
| Window 84 | Domestic | 36% | 42% | -6% | 1.17 | 10% | 15% | -5% | 1.5 |
| Window 85 | Domestic | 38% | 44% | -6% | 1.16 | 10% | 15% | -5% | 1.5 |

Appendix 2 - Sunlight to Windows

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Room Use | Sunlight to Windows | | | | | | | | |
|------------------------|------------------------|----------------------|-------|------|-------|-----------------------|-------|------|-------|--|
| | | Total Sunlight Hours | | | | Winter Sunlight Hours | | | | |
| | | Before | After | Loss | Ratio | Before | After | Loss | Ratio | |
| Window 86 | Domestic | 34% | 44% | -10% | 1.29 | 8% | 13% | -5% | 1.63 | |
| Window 87 | Domestic | 73% | 73% | 0% | 1.0 | 22% | 22% | 0% | 1.0 | |
| Window 88 | Domestic | 54% | 54% | 0% | 1.0 | 19% | 19% | 0% | 1.0 | |
| Window 90 | Domestic | 66% | 66% | 0% | 1.0 | 21% | 21% | 0% | 1.0 | |
| Window 91 | Domestic | 76% | 76% | 0% | 1.0 | 24% | 24% | 0% | 1.0 | |
| Window 93 | Domestic | 70% | 70% | 0% | 1.0 | 21% | 21% | 0% | 1.0 | |
| Window 94 | Domestic | 84% | 84% | 0% | 1.0 | 25% | 25% | 0% | 1.0 | |
| <u>First Floor</u> | | | | | | | | | | |
| Window 97 | Bedroom | 57% | 57% | 0% | 1.0 | 20% | 20% | 0% | 1.0 | |
| Window 98 | WC | 38% | 38% | 0% | 1.0 | 18% | 18% | 0% | 1.0 | |
| Window 99 | Bathroom | 46% | 46% | 0% | 1.0 | 19% | 19% | 0% | 1.0 | |
| Window 100 | Bedroom | 76% | 76% | 0% | 1.0 | 25% | 25% | 0% | 1.0 | |
| <u>21 Lebanon Park</u> | | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | | |
| Window 101 | Conservation | 14% | 14% | 0% | 1.0 | 7% | 7% | 0% | 1.0 | |
| Window 102 | Conservation | 73% | 75% | -2% | 1.03 | 23% | 25% | -2% | 1.09 | |
| Window 103 | Conservation | 76% | 76% | 0% | 1.0 | 25% | 25% | 0% | 1.0 | |
| Window 107 | Conservation | 79% | 79% | 0% | 1.0 | 25% | 25% | 0% | 1.0 | |
| Window 108 | Conservation | 74% | 74% | 0% | 1.0 | 23% | 23% | 0% | 1.0 | |
| Window 109 | Conservation | 68% | 68% | 0% | 1.0 | 16% | 16% | 0% | 1.0 | |
| Window 110 | Conservation | 77% | 77% | 0% | 1.0 | 23% | 23% | 0% | 1.0 | |
| Window 111 | Conservation | 80% | 80% | 0% | 1.0 | 23% | 23% | 0% | 1.0 | |
| Window 116 | Conservation | 80% | 80% | 0% | 1.0 | 26% | 26% | 0% | 1.0 | |
| Window 117 | Reception | 47% | 47% | 0% | 1.0 | 11% | 11% | 0% | 1.0 | |
| Window 118 | Reception | 58% | 58% | 0% | 1.0 | 15% | 15% | 0% | 1.0 | |
| Window 119 | Reception | 61% | 61% | 0% | 1.0 | 17% | 17% | 0% | 1.0 | |
| <u>First Floor</u> | | | | | | | | | | |
| Window 120 | Bedroom | 77% | 77% | 0% | 1.0 | 26% | 26% | 0% | 1.0 | |
| <u>25 Ferry Road</u> | | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | | |
| Window 124 | Bathroom/WC | 81% | 81% | 0% | 1.0 | 22% | 22% | 0% | 1.0 | |
| <u>13 Ferry Road</u> | | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | | |
| Window 125 | Kitchen/Breakfast Room | 27% | 27% | 0% | 1.0 | 1% | 1% | 0% | 1.0 | |
| Window 128 | Kitchen/Breakfast Room | 68% | 68% | 0% | 1.0 | 14% | 14% | 0% | 1.0 | |
| Window 129 | Kitchen/Breakfast Room | 70% | 70% | 0% | 1.0 | 16% | 16% | 0% | 1.0 | |
| Window 133 | Bathroom/WC | 44% | 44% | 0% | 1.0 | 8% | 8% | 0% | 1.0 | |
| Window 134 | Domestic | 32% | 32% | 0% | 1.0 | 5% | 5% | 0% | 1.0 | |

Appendix 2 - Sunlight to Windows

New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

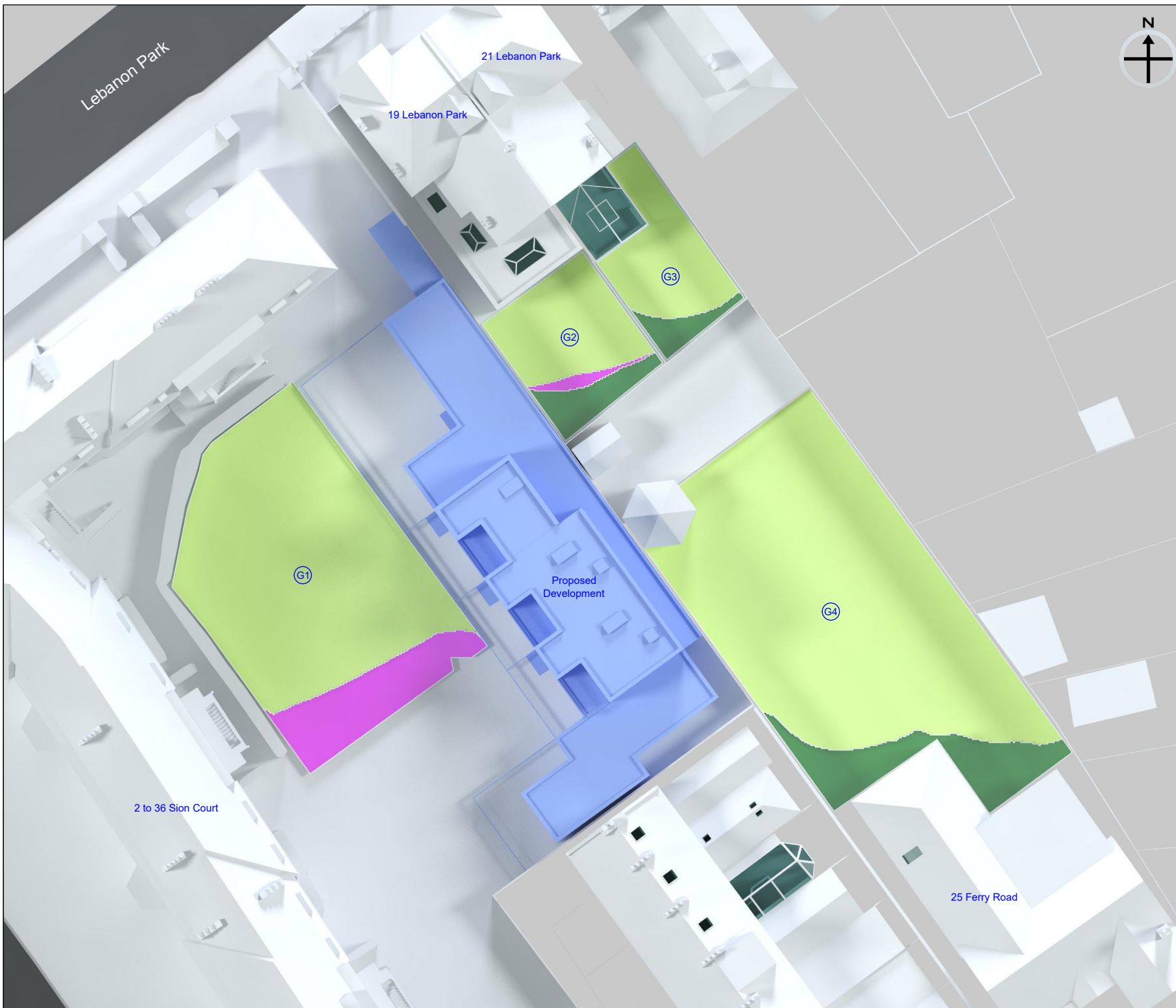
| Reference | Room Use | Sunlight to Windows | | | | | | | |
|----------------------|----------|----------------------|-------|------|-------|-----------------------|-------|------|-------|
| | | Total Sunlight Hours | | | | Winter Sunlight Hours | | | |
| | | Before | After | Loss | Ratio | Before | After | Loss | Ratio |
| <u>11 Ferry Road</u> | | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | | |
| Window 138 | Domestic | 80% | 80% | 0% | 1.0 | 17% | 17% | 0% | 1.0 |

APPENDIX 3

OVERSHADOWING TO GARDENS AND OPEN SPACES

Appendix 3 - Overshadowing to Gardens and Open Spaces
New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

| Reference | Total Area | Area receiving at least two hours of sunlight on 21st March | | | | | | Ratio |
|---------------------------|------------|---|-----|-----------|------|-----------|------|-------|
| | | Before | | After | | Loss | | |
| <u>2 to 36 Sion Court</u> | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | |
| Garden 1 | 288.81 m2 | 242.03 m2 | 84% | 288.79 m2 | 100% | -46.76 m2 | -16% | 1.19 |
| <u>19 Lebanon Park</u> | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | |
| Garden 2 | 75.98 m2 | 55.48 m2 | 73% | 59.7 m2 | 79% | -4.22 m2 | -6% | 1.08 |
| <u>21 Lebanon Park</u> | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | |
| Garden 3 | 61.87 m2 | 52.21 m2 | 84% | 52.21 m2 | 84% | 0.0 m2 | 0% | 1.0 |
| <u>25 Ferry Road</u> | | | | | | | | |
| <u>Ground Floor</u> | | | | | | | | |
| Garden 4 | 384.52 m2 | 337.29 m2 | 88% | 337.29 m2 | 88% | 0.0 m2 | 0% | 1.0 |



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

Project Name: New Residential Units at Sion Court, Sion Road, Twickenham TW1 3DD

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



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