

# New Homes on Regent's Park Estate

SD9 Daylight and Sunlight Assessment

May 2015



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# Daylight and Sunlight Study (Neighbouring Properties) Regents Park Estate, London NW1 4BX

22 May 2015



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## **1 EXECUTIVE SUMMARY**

#### 1.1 Overview

- 1.1.1 Right of Light Consulting has been commissioned by London Borough of Camden to undertake a daylight and sunlight study of the proposed redevelopment at the Regents Park Estate, London NW1 4BX.
- 1.1.2 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring surrounding properties. 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' by P J Littlefair 2011.
- 1.1.3 The window keys in Appendix 1.1 to 8.1 identify the windows and gardens analysed in this study. Appendix 1.2 to 8.2 and 1.4 to 8.4 give the numerical results of the various daylight and sunlight tests.
- 1.1.4 The results confirm that the majority of the development sites at the Regents Park Estate will have a relatively low impact on the light receivable by its neighbouring properties. Although there are isolated areas which do not fully comply with the BRE numerical guidelines, the BRE guide makes clear that, in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. We are of the opinion that this principle applies to the Regents Park Estate re-development given the existing and planned high rise buildings in the area. The BRE guide explains that the numerical guidelines should be interpreted flexibly, since natural lighting is only one of many factors in site layout design. The local authority should therefore balance daylight and sunlight considerations against all other material planning considerations when deciding whether to grant planning permission.

## 2 INFORMATION SOURCES

## 2.1 Documents Considered

2.1.1 This report is based on drawings:

## Mae Architects

#### **Robert Street**

| S1-001 | Existing Site Plan | Rev – |
|--------|--------------------|-------|
| S1-100 | Proposed Site Plan | Rev – |
| S1-101 | Ground Floor Plan  | Rev – |
| S1-102 | First Floor Plan   | Rev – |
| S1-103 | Second Floor Plan  | Rev – |
| S1-104 | Third Floor Plan   | Rev – |
| S1-105 | Fourth Floor Plan  | Rev – |
| S1-106 | Roof Plan          | Rev – |
| S1-201 | Section AA         | Rev – |
| S1-202 | Section BB         | Rev – |
| S1-301 | South Elevation    | Rev – |
| S1-302 | North Elevation    | Rev – |
| S1-303 | East Elevation     | Rev – |
| S1-304 | West Elevation     | Rev – |

## Varndell Street

| S3-001 | Existing Site Plan | Rev – |
|--------|--------------------|-------|
| S3-100 | Proposed Site Plan | Rev – |
| S3-101 | Ground Floor Plan  | Rev – |
| S3-102 | First Floor Plan   | Rev – |
| S3-103 | Second Floor Plan  | Rev – |
| S3-104 | Third Floor Plan   | Rev – |
| S3-105 | Fourth Floor Plan  | Rev – |
| S3-106 | Fifth Floor Plan   | Rev – |
| S3-107 | Roof Plan          | Rev – |
| S3-201 | Section AA         | Rev – |
| S3-301 | East Elevation     | Rev – |
| S3-302 | North Elevation    | Rev – |
| S3-303 | South Elevation    | Rev – |
| S3-304 | West Elevation     | Rev – |

#### **Dick Collins TRA Hall Site**

| S5-001 | Existing Site Plan | Rev – |
|--------|--------------------|-------|
| S5-100 | Proposed Site Plan | Rev – |
| S5-101 | Ground Floor Plan  | Rev – |
| S5-102 | First Floor Plan   | Rev – |
| S5-103 | Second Floor Plan  | Rev – |
| S5-104 | Third Floor Plan   | Rev – |
| S5-105 | Fourth Floor Plan  | Rev – |

| S5-106 | Roof Plan       | Rev – |
|--------|-----------------|-------|
| S5-201 | Section AA      | Rev – |
| S5-202 | Section BB      | Rev – |
| S3-301 | East Elevation  | Rev – |
| S3-302 | North Elevation | Rev – |
| S3-303 | South Elevation | Rev – |
| S3-304 | West Elevation  | Rev – |

Matthew Lloyd Architects

## Former One Stop Shop

TBC

**Newlands Plot** 

TBC

## Cape of Good Hope

TBC

## Victory Pub

TBC

#### St Bede's Mews

TBC

## 3 METHODOLOGY OF THE STUDY

## 3.1 BRE Guide : Site Layout Planning for Daylight and Sunlight

- 3.1.1 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' by P J Littlefair 2011. In general, the BRE tests are based on the requirements of the British Standard, BS 8206 Part 2.
- 3.1.2 The standards set out in the BRE guide are intended to be used flexibly. The following statement is quoted directly from the BRE guide:
- 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 Daylight to Windows

3.2.1 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.

Diffuse daylight calculations should be undertaken to all rooms where daylight is required, including living rooms, kitchens and bedrooms. Usually, if a kitchen is less than 13m<sup>2</sup>, it is considered to be a non-habitable room and the daylight tests need not be applied. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

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

#### 3.2.3 Test 1 Vertical Sky Component

The percentage of the sky visible from the centre of a window is known as the Vertical Sky Component. 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.

#### 3.2.4 Test 2 Daylight Distribution

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. 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 Sunlight availability to Windows

- 3.3.1 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.
- 3.3.2 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.

#### 3.4 Overshadowing to Gardens and Open Spaces

- 3.4.1 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.

3.4.2 The BRE 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.

#### 3.5 Setting alternative Daylight and Sunlight targets

- 3.5.1 The BRE guide acknowledges that the numerical criteria outlined in section 3.2 to 3.4 above is purely advisory and in some circumstances different targets may be used based on special requirements of the proposed development or its location. Below are some examples of alternative target setting methodologies which have been considered for the purpose of the assessment at the Regents Park Estate.
- 3.5.2 Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction may result in a large relative impact on the VSC, and on the area receiving direct skylight. The guide notes that one way to demonstrate this would be to carry out an additional calculation of the VSC, for both the existing and proposed situations, without the balcony in place. If the proposed VSC with the balcony was under 0.8 times the existing value with the balcony, but the same ratio for the values without the balcony was over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of light.
- 3.5.3 A similar approach may be adopted in cases where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light. To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away from the other side of the boundary.

## 4 RESULTS OF THE STUDY

#### 4.1 Windows & Amenity Areas Considered

4.1.1 Appendices 1.1 to 8.1 provides plans and photographs to indicate the positions of the windows and gardens analysed in this study.

#### 4.2 Numerical Results

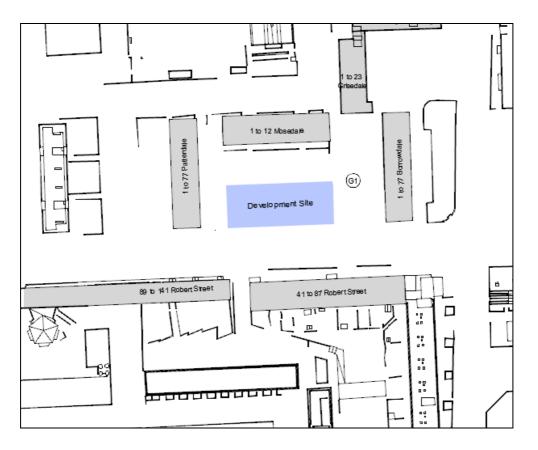
4.2.1 Appendix 1.2 to 8.2 and 1.4 to 8.4 lists the detailed numerical daylight and sunlight test results. The results for each site are interpreted below.

#### 4.3 Daylight to Windows

#### 4.3.1 Robert Street

4.3.1.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 1.1 for the window reference points analysed in this study.

#### 4.3.1.2 Robert Street Site Plan

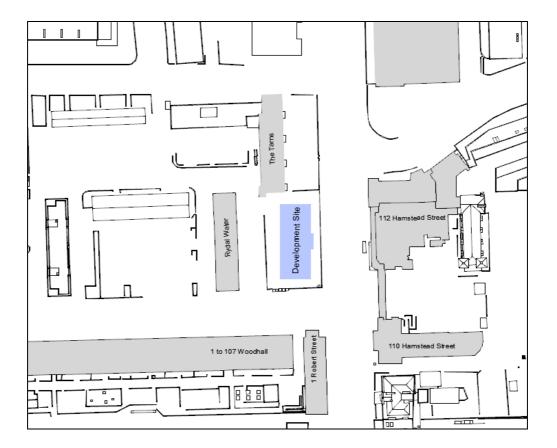


- 4.3.1.3 Refer to Appendix 1.2 for the daylight results pertaining to the neighbouring properties. 81% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. 19% of the windows fall short of the standard targets (106 windows out of 515 tested). Where windows do not meet the standard BRE targets it does not automatically follow that daylight will be adversely affected. As explained below with reference to the 19% of windows that do not meet the standard BRE targets, the BRE guide contains special provisions in certain situations. For example, in the case urban development sites or where neighbouring windows are already obstructed by balcony overhangs.
- 4.3.1.4 The analysis confirms that 64 of the 106 windows at the surrounding properties (41 to 87 Robert Street, Patterdale and Mosedale) are obstructed by overhanging balconies or deck access walkways. The BRE guide acknowledges that existing windows with balconies above them typically receive less daylight. This is because the balcony cuts out light from the top part of the sky. Therefore, even a modest obstruction opposite may result in a large relative impact on the VSC. The guide goes on to explain that an additional calculation may be carried out assuming that the balconies do not exist. If the windows meet the targets on this basis then this confirms that it is the overhanging obstruction that prevents the targets from being met as opposed to an unreasonable level of obstruction caused by the development. The majority of the windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 1.4). The results of the windows which do not pass the test without the overhangs in place are marginal.
- 4.3.1.5 The remaining areas (windows at 41 to 87 Robert Street and 1 to 12 Mosedale and 1 to 77 Patterdale) that do not achieve an ideal standard of daylight are either marginal or in very isolated areas (26 of the 42 windows in this category achieve a reduction ratio of below 0.7 results highlighted in bold in Appendix 1.2). Moreover, the guide acknowledges that in a historic city centre, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. We note that the proposed development block at Robert Street is to be of similar height and proportion to that of the existing surrounding buildings (e.g. Grisedale building and the Woodhall building on Robert Street). We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.2 Former One Stop Shop

4.3.2.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 2.1 for the window reference points analysed in this study.

#### 4.3.2.2 Former One Stop Shop Site Plan

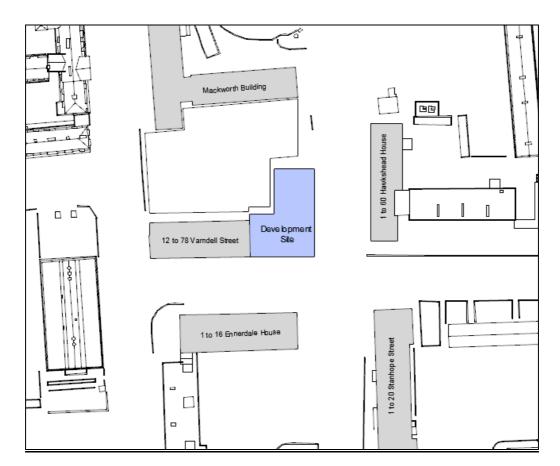


- 4.3.2.3 Refer to Appendix 2.2 for the daylight results pertaining to the neighbouring properties. Around 80% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 20% of the windows fall short of the standard targets (102 windows out of 524 tested).
- 4.3.2.4 The analysis confirms that 68 of the 102 windows at the surrounding properties (Rydal Water building and 1 to 107 Woodhall Street) are obstructed by overhanging balconies or deck access walkways. The majority of the windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 2.4). The results of the windows which do not pass the test without the overhangs in place are marginal.

4.3.2.5 The remaining areas (windows at Rydal Water and the Tarns building) that do not achieve an ideal standard of daylight are either marginal or in very isolated areas. (24 of the 34 windows in this category achieve a reduction ratio of below 0.7 – results highlighted in bold in Appendix 2.2). Moreover, the guide acknowledges that in a historic city centre, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. We note that the proposed development block at the Rydal Water Open Space is to be of similar height and proportion to that of the existing surrounding buildings (e.g. Tarns building and 110 Hampstead Street). We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.3 Varndell Street

4.3.3.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 3.1 for the window reference points analysed in this study.

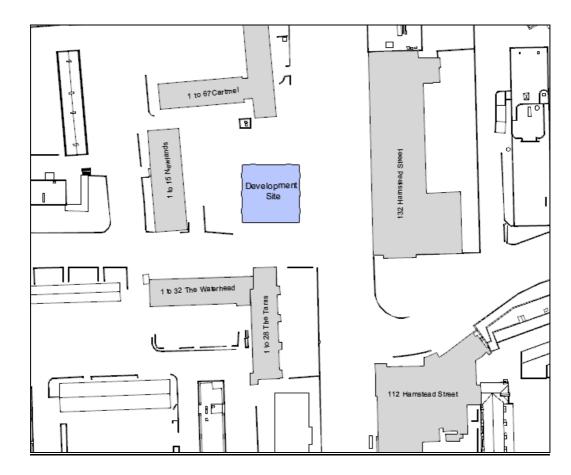


4.3.3.2 Varndell Street Site Plan

- 4.3.3.3 Refer to Appendix 3.2 for the daylight results pertaining to the neighbouring properties. Around 93% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 7% of the windows fall short of the standard targets (31 windows out of 404 tested).
- 4.3.3.4 The analysis confirms that 27 of the 31 windows at the surrounding properties (1 to 60 Hawkshead House & 1 to 16 Ennerdale House) are obstructed by overhanging balconies or deck access walkways. The results confirm that 24 of the 27 windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 3.4). The results of the windows which do not pass the test without the overhangs in place are very marginal (reduction ratio of 0.77 against the BRE target of 0.8).
- 4.3.3.5 The results for the remaining windows that do not achieve an ideal standard of daylight and are not already hampered by overhanging obstructions (windows 2 & 3 at 12 to 78 Varndell Street and windows 208 & 216 at 1 to 60 Hawkshead House), are very marginal (reduction ratios of 0.74 and above against the BRE target of 0.8). We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.4 Newlands Plot

4.3.4.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 4.1 for the window reference points analysed in this study.



#### 4.3.4.2 Newlands Plot Site Plan

- 4.3.4.3 Refer to Appendix 4.2 for the daylight results pertaining to the neighbouring properties. Around 83% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 17% of the windows fall short of the standard targets (102 windows out of 602 tested).
- 4.3.4.4 The analysis confirms that 67 of the 102 windows at the surrounding properties (Cartmel and Waterhead buildings) are obstructed by overhanging balconies or deck access walkways. The majority of the windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place

(see Appendix 4.4). The results of the windows which do not pass the test without the overhangs in place are marginal.

4.3.4.5 The remaining windows that do not achieve an ideal standard of daylight and are not already hampered by overhanging obstructions, are marginal (14 of the 35 windows in this category achieve a reduction ratio of below 0.7 – results highlighted in bold in Appendix 4.2). Furthermore, we note that the windows at the existing Newlands building which face the development are likely to serve non habitable rooms, small kitchens or bedrooms. The units at the Newlands building are dual aspect and the principle living room windows which serve the units are sited on the west elevation and will therefore remain unaffected by the proposed Newlands building.

#### 4.3.5 Dick Collins TRA Hall

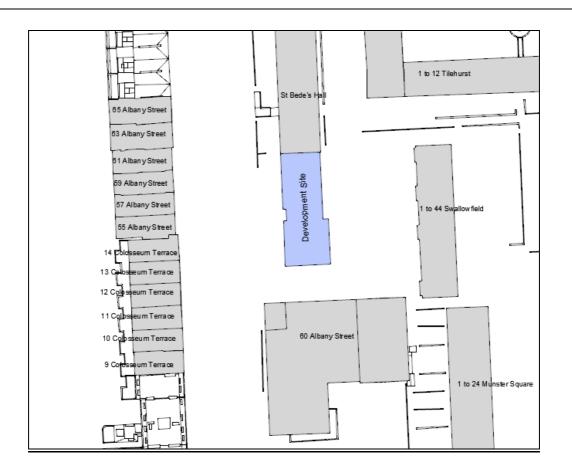
- 4.3.5.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 5.1 for the window reference points analysed in this study.
- 4.3.5.2 Dick Collins TRA Hall Site Plan



- 4.3.5.3 Refer to Appendix 5.2 for the daylight results pertaining to the neighbouring properties. Around 95% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 5% of the windows fall short of the standard targets (19 windows out of 340 tested).
- 4.3.5.4 The analysis confirms that 7 of the 19 windows at the surrounding properties (1 to 50 Rothay Red Hill Street) are obstructed by overhanging balconies or deck access walkways. All 7 of the windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 5.4).
- 4.3.5.5 The results for the remaining windows that do not achieve an ideal standard of daylight and are not already hampered by overhanging obstructions, are marginal (4 of the 12 windows in this category achieve a reduction ratio of below 0.7 results highlighted in bold in Appendix 5.2). We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.6 Cape of Good Hope

- 4.3.6.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 6.1 for the window reference points analysed in this study.
- 4.3.6.2 Cape of Good Hope Site Plan

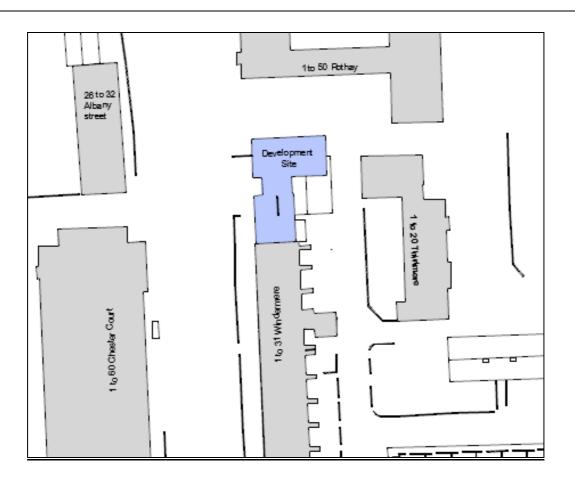


- 4.3.6.1 Refer to Appendix 6.2 for the daylight results pertaining to the neighbouring properties. Around 82% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 12% of the windows fall short of the standard targets (82 windows out of 453 tested).
- 4.3.6.2 The analysis confirms that 73 of the 82 windows at the surrounding property at the Swallowfield building are obstructed by overhanging balconies. The results confirm that 52 of the 73 windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 6.4). The results of the windows which do not pass the test without the overhangs in place are very marginal (reduction ratio of 0.71 against the BRE target of 0.8).
- 4.3.6.3 The majority of the results for the remaining windows that do not achieve an ideal standard of daylight and are not already hampered by overhanging obstructions, are marginal (with the exception of windows 267 & 331, the remaining windows achieve reduction ratios of 0.74 and above against the BRE target of 0.8). Windows 267 & 331 achieve a reduction ratio of 0.29. However, the results confirm that the existing daylight availability to these windows is already very low and therefore even a small

reduction in absolute terms results in a lower than normal before/after ratio. We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.7 Victory Pub

- 4.3.7.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 7.1 for the window reference points analysed in this study.
- 4.3.7.2 Victory Pub Site Plan



- 4.3.7.3 Refer to Appendix 7.2 for the daylight results pertaining to the neighbouring properties. Around 82% of the habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 12% of the windows fall short of the standard targets (57 windows out of 321 tested).
- 4.3.7.4 The analysis confirms that 32 of the 57 windows at the surrounding property at the Thirlmere building are obstructed by overhanging balconies. The results confirm that 29 of the 32 windows which are already obstructed pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 7.4). The results of the windows which do not pass the test without the overhangs in place are very marginal (reduction ratio of 0.78 against the BRE target of 0.8).
- 4.3.7.5 The majority of the results for the remaining windows that do not achieve an ideal standard of daylight and are not already hampered by overhanging obstructions, are fairly marginal (with the exception of windows 283, 286 & 289 at 1 to 31 Windermere and windows 107 to 111 at 1 to 20 Thirlmere, the remaining windows achieve reduction ratios of 0.6 and above against the BRE target of 0.8). Windows 107 to

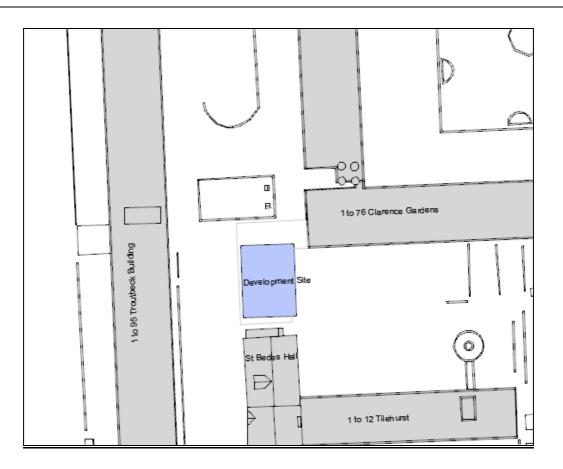
111 achieve reduction ratios of 0.45 and above. However, the guide acknowledges that in a historic city centre, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. We note that the proposed development block at the Victory Pub site is to be of similar height and proportion to that of the existing surrounding buildings. In particular, the development is matching the height of the existing Windermere building to which it adjoins.

4.3.7.6 The visible sky to windows 283, 286 & 289 will be completely blocked by the proposed development. However, we note that the aforementioned windows are secondary windows into kitchens and bedrooms. The main windows into the rooms do not face directly onto the development and therefore pass the VSC test by a significant margin (main windows are 284, 287 & 290). The results confirm therefore that rooms will continue to receive adequate daylight after the development. We are therefore of the opinion that the VSC scores in this case are acceptable.

#### 4.3.8 St Bede's Mews

4.3.8.1 Please see below site plan indicating the proposed development and its relationship to the surrounding properties. Please refer to Appendix 8.1 for the window reference points analysed in this study.

#### 4.3.8.2 <u>St Bede's Mews Site Plan</u>



- 4.3.8.1 Refer to Appendix 8.2 for the daylight results pertaining to the neighbouring properties. Around 95% of all main habitable room windows tested meet or surpass the standard BRE Vertical Sky Component VSC) target. Around 5% of the windows fall short of the standard targets (9 windows out of 168 tested).
- 4.3.8.2 The analysis confirms that all 9 windows at the surrounding properties (1 to 95 Troutbeck) are obstructed by overhanging balconies. The results confirm that all 9 windows, which are already obstructed, pass the Vertical Sky Component test without the overhanging obstructions in place (see Appendix 2.4). The proposed development therefore satisfies the BRE daylight requirements.

#### 4.4 Sunlight to Windows

#### 4.4.1 Robert Street

4.4.1.1 Refer to Appendix 1.2 and 1.4 for the sunlight results pertaining to the neighbouring properties. 90% of the windows tested meet or surpass the total annual sunlight hours test and the winter sunlight hours test. The points made above in connection with the daylight results (paragraph 4.3.1.2 and 4.3.1.3) apply equally to the direct

sunlight results. Given the very high level of compliance, we are of the opinion that the proposed development has an acceptable impact on direct sunlight achievable by the neighbouring properties.

#### 4.4.2 Former One Stop Shop

4.4.2.1 Refer to Appendix 2.2 and 2.4 for the sunlight results pertaining to the neighbouring properties. 87% of the windows tested meet or surpass the total annual sunlight hours test and the winter sunlight hours test. The points made above in connection with the daylight results (paragraph 4.3.2.2 and 4.3.2.3) apply equally to the direct sunlight results. Given the very high level of compliance, we are of the opinion that the proposed development has an acceptable impact on direct sunlight achievable by the neighbouring properties.

#### 4.4.3 Varndell Street

4.4.3.1 Refer to Appendix 3.2 for the sunlight results pertaining to the neighbouring properties. All windows pass both the total annual sunlight hours test and the winter sunlight hours test (annual probable sunlight hours between 21 September and 21 March). The proposed development therefore satisfies the BRE direct sunlight to windows recommendations.

#### 4.4.4 Newlands Plot

4.4.4.1 Refer to Appendix 4.2 for the sunlight results pertaining to the neighbouring properties. All windows pass both the total annual sunlight hours test and the winter sunlight hours test with the exception of windows 53 & 56 at 1 to 67 Cartmel. However, from our external observations it appears unlikely that these windows serve a main living room and therefore would not be required to be tested under the BRE guidelines. The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

#### 4.4.5 Dick Collins TRA Hall

4.4.5.1 Refer to Appendix 5.2 for the sunlight results pertaining to the neighbouring properties. All windows pass both the total annual sunlight hours test and the winter sunlight hours test (annual probable sunlight hours between 21 September and 21

March). The proposed development therefore satisfies the BRE direct sunlight to windows recommendations.

#### 4.4.6 Cape of Good Hope

4.4.6.1 Refer to Appendix 6.2 and 6.4 for the sunlight results pertaining to the neighbouring properties. 82% of the windows tested meet or surpass the total annual sunlight hours test and the winter sunlight hours test. The points made above in connection with the daylight results (paragraph 4.3.6.2 and 4.3.6.3) apply equally to the direct sunlight results. The windows at Swallowfield building which are already obstructed by overhanging balconies and fail the standard direct sunlight numerical criteria, pass the direct sunlight hours test without the overhanging obstructions in place (see Appendix 6.4). We are of the opinion that the proposed development has an acceptable impact on direct sunlight achievable by the neighbouring properties.

#### 4.4.7 Victory Pub

4.4.7.1 Refer to Appendix 7.2 for the sunlight results pertaining to the neighbouring properties. 94% of the windows tested meet or surpass the total annual sunlight hours test and the winter sunlight hours test. Isolated windows (windows 56 to 58, 62 & 63, 67 and 107 at 1 to 20 Thirlmere and 124, 125, 128, 129, 132 & 133 at 1 to 50 Rothay) fall marginally short of the direct sunlight targets. However, from our external observations it appears unlikely that all of the aforementioned windows serve a main living room and therefore would not be required to be tested under the BRE guidelines. Given the very high level of compliance, we are of the opinion that the proposed development has an acceptable impact on direct sunlight achievable by the neighbouring properties.

#### 4.4.8 St Bede's Mews

4.4.8.1 Refer to Appendix 8.2 and 8.4 for the sunlight results pertaining to the neighbouring properties. All of the main habitable room windows tested (with the exception of window 21 at 1 to 76 Clarence Gardens) meet or surpass the total annual sunlight hours test and the winter sunlight hours test. However, window 21 which is already obstructed by overhanging balcony, passes the direct sunlight hours test without the overhanging obstruction in place (see Appendix 8.4). The proposed development therefore satisfies the BRE direct sunlight to windows recommendations.

#### 4.5 Overshadowing to Gardens and Open Spaces

#### 4.5.1 Robert Street

4.5.1.1 We note that the existing amenity space at the Robert Street site has been expanded as part of the re-development. The results show that 55% or more of the new amenity space will receive at least two hours of sunlight on 21 March. This is better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test. The overshadowing to gardens and open spaces contour is presented in Appendix 1.3.

#### 4.5.2 Former One Stop Shop

4.5.2.1 The results show that 84% of the amenity space will receive at least two hours of sunlight on 21 March. This is significantly better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test.

#### 4.5.3 Varndell Street

4.5.3.1 The results show that 74% or more of the amenity space will receive at least two hours of sunlight on 21 March. This is significantly better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test. The overshadowing to gardens and open spaces contour is presented in Appendix 3.3.

#### 4.5.4 Newlands Plot

4.5.4.1 The results show that 68% or more of the area of each amenity space will receive at least two hours of sunlight on 21 March. This is significantly better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open

spaces test. The overshadowing to gardens and open spaces contours are presented in Appendix 4.3.

## 4.5.5 Dick Collins TRA Hall

4.5.5.1 There are no nearby gardens or amenity areas directly to the north of the Dick Collins TRA Hall development. The existing courtyard at the site is situated to the south west of the proposal and will therefore remain unaffected. The proposed development will therefore not create any new areas which receive less than two hours of sunlight on 21 March. The proposed development therefore satisfies the BRE overshadowing to gardens and open spaces requirements.

#### 4.5.6 Cape of Good Hope

4.5.6.1 The results show that 88% or more of the area of each amenity space will receive at least two hours of sunlight on 21 March. This is significantly better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test. The overshadowing to gardens and open spaces contour is presented in Appendix 6.3

#### Victory Pub

4.5.6.2 The results of the overshadowing test show that sunlight availability after the development will be no less than 0.92 times the former value. This is better than the BRE minimum requirement which permits sunlight to be reduced by up to 0.8 times. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test. The overshadowing to gardens and open spaces contours are presented in Appendix 7.3. The overshadowing to gardens and open spaces contours are presented in Appendix 7.3.

#### 4.5.7 St Bede's Mews

4.5.7.1 The results show that 56% or more of the area of each amenity space will receive at least two hours of sunlight on 21 March. This is significantly better than the BRE recommendation which states that at least 50% of any garden or amenity area should receive at least two hours of sunlight on 21 March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test. The overshadowing to gardens and open spaces contours are presented in Appendix 8.3.

#### 4.6 Conclusion

4.6.1 The results confirm that the majority of the development sites at the Regents Park Estate will have a relatively low impact on the light receivable by its neighbouring properties. Although there are isolated areas which do not fully comply with the BRE numerical guidelines, the BRE guide makes clear that, in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. We are of the opinion that this principle applies to the Regents Park Estate re-development given the existing and planned high rise buildings in the area. The BRE guide explains that the numerical guidelines should be interpreted flexibly, since natural lighting is only one of many factors in site layout design. The local authority should therefore balance daylight and sunlight considerations against all other material planning considerations when deciding whether to grant planning permission.

## **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 We have undertaken the survey following the guidelines of the RICS publication "Surveying Safely".
- 5.1.3 We have used our best endeavours to ensure all relevant windows within the neighbouring properties have been identified.
- 5.1.4 Where limited access is available, reasonable assumptions will have been made.
- 5.1.5 We have adopted the conventional approach of assessing all habitable rooms within domestic properties.
- 5.1.6 Right of Light Consulting have endeavoured to include in the report those matters, which they have knowledge of or of which they have been made aware, that might adversely affect the validity of the opinion given.

#### 5.2 Project Specific

5.2.1 None

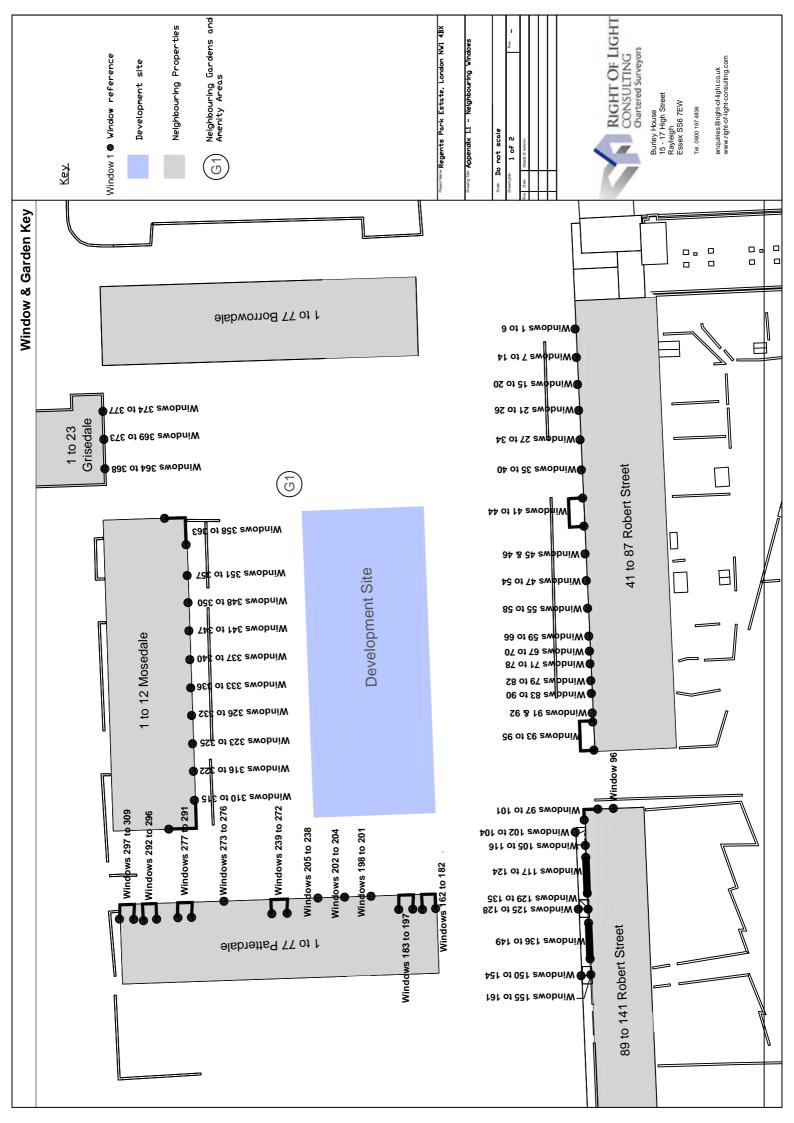
APPENDICES

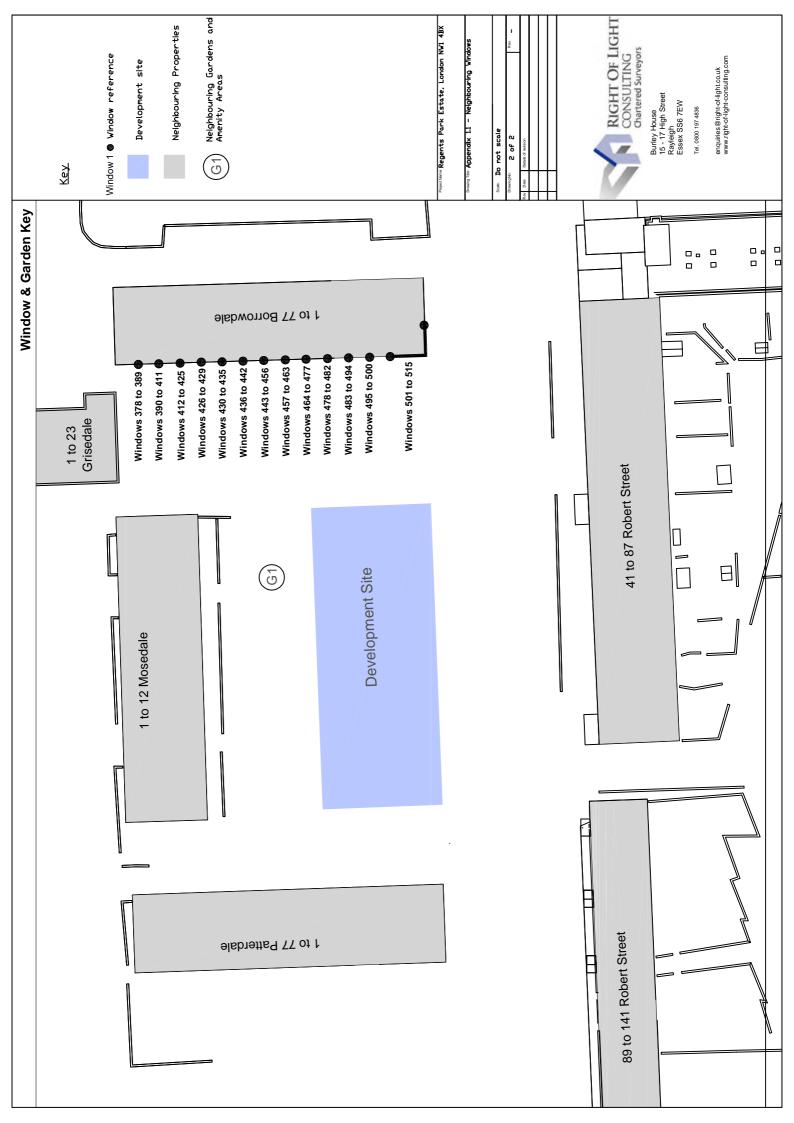
# **APPENDIX 1**

ROBERT STREET

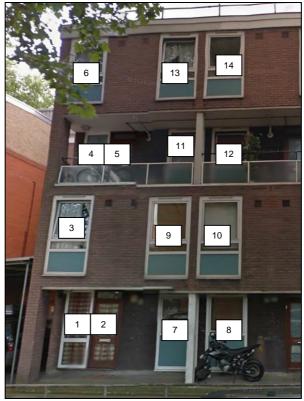
## **APPENDIX 1.1**

WINDOW & GARDEN KEY

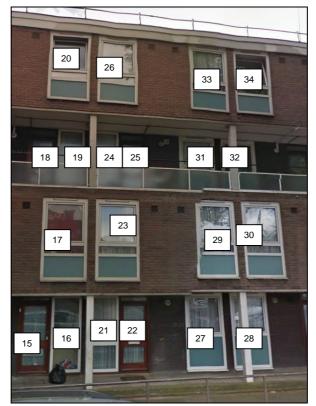




# **Neighbouring Windows**



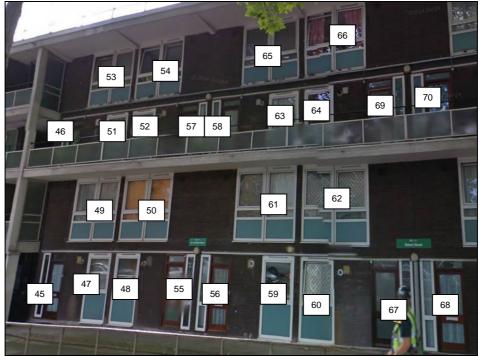
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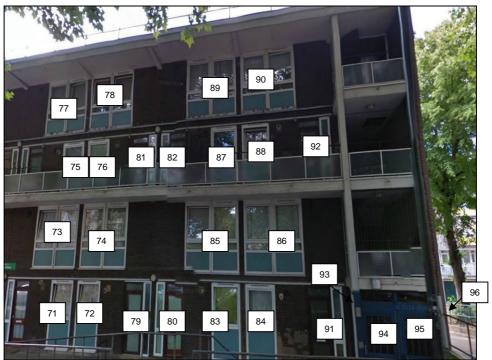
41 to 87 Robert Street



41 to 87 Robert Street



41 to 87 Robert Street



41 to 87 Robert Street



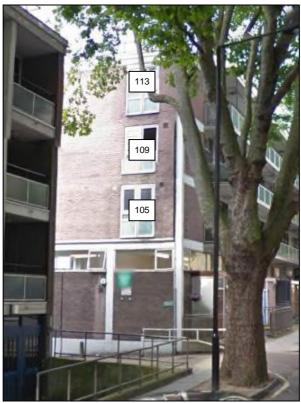
89 to 141 Robert Street



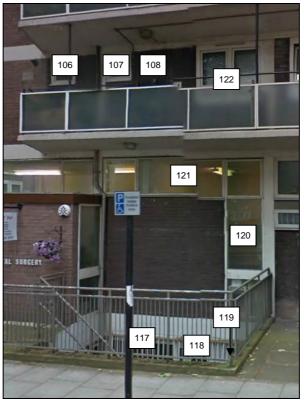
89 to 141 Robert Street



89 to 141 Robert Street



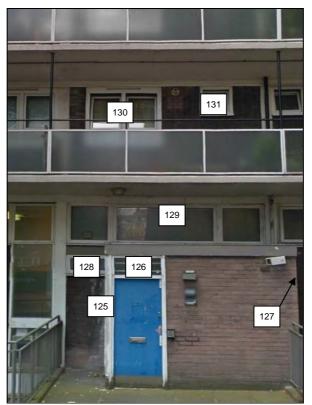
89 to 141 Robert Street



89 to 141 Robert Street



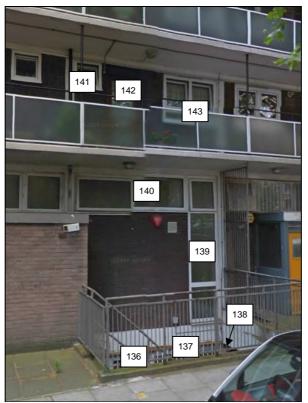
89 to 141 Robert Street



89 to 141 Robert Street



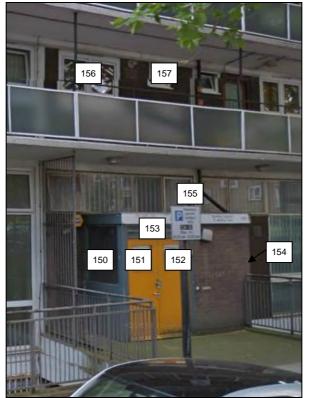
89 to 141 Robert Street



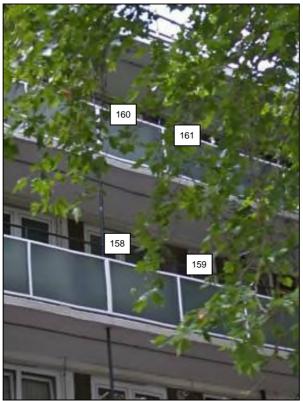
89 to 141 Robert Street



89 to 141 Robert Street



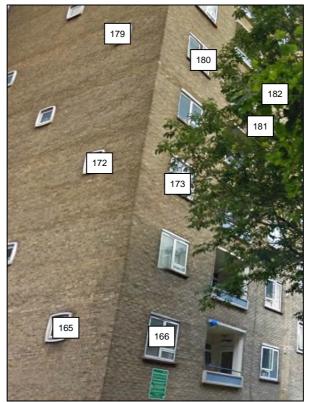
89 to 141 Robert Street



89 to 141 Robert Street



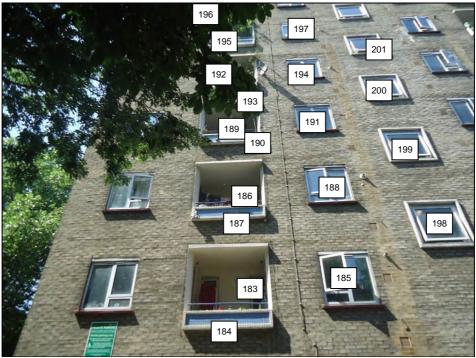
1 to 77 Patterdale



1 to 77 Patterdale



1 to 77 Patterdale



1 to 77 Patterdale



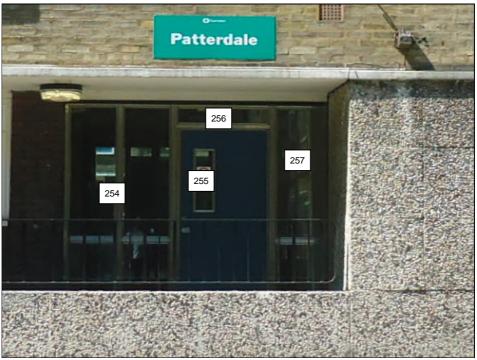
1 to 77 Patterdale



1 to 77 Patterdale



1 to 77 Patterdale



1 to 77 Patterdale



1 to 77 Patterdale



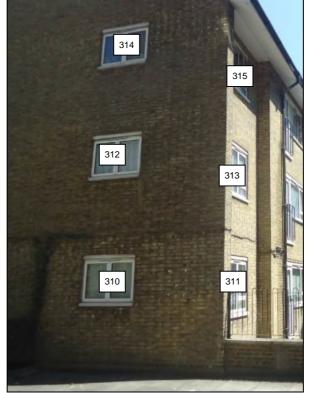
1 to 77 Patterdale



1 to 77 Patterdale



1 to 12 Mosedale



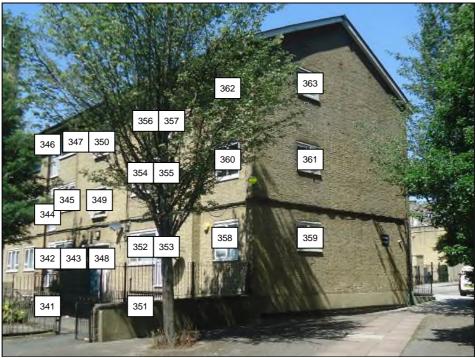
1 to 12 Mosedale



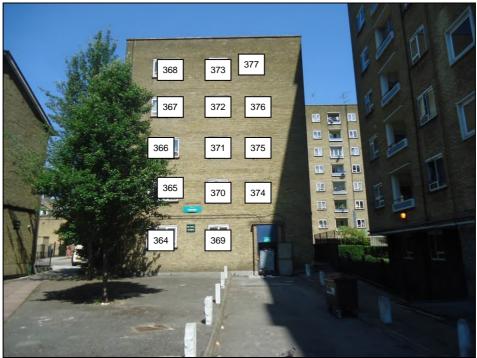
1 to 12 Mosedale



1 to 12 Mosedale



1 to 12 Mosedale



1 to 23 Grisedale



1 to 44 Borrowdale



1 to 44 Borrowdale



1 to 44 Borrowdale



1 to 44 Borrowdale



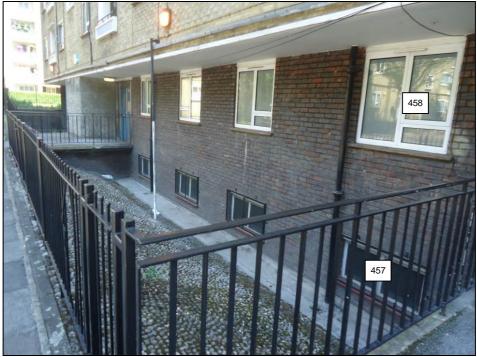
1 to 44 Borrowdale



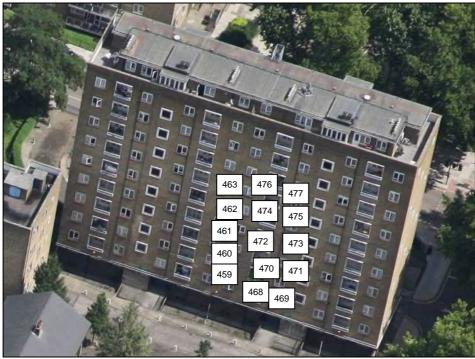
1 to 44 Borrowdale



1 to 44 Borrowdale



1 to 44 Borrowdale



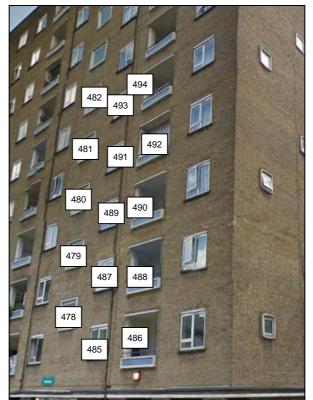
1 to 44 Borrowdale



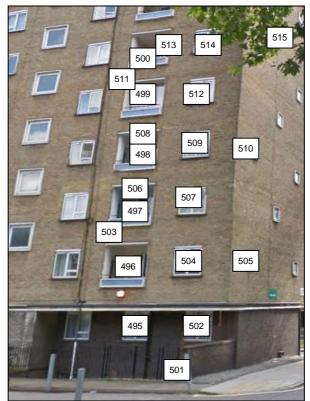
1 to 44 Borrowdale



1 to 44 Borrowdale



1 to 44 Borrowdale



1 to 44 Borrowdale



Amenity Area

**APPENDIX 1.2** 

DAYLIGHT AND SUNLIGHT RESULTS

| Reference              | Use Class     | Vertical Sky Component |       |      |       |
|------------------------|---------------|------------------------|-------|------|-------|
|                        |               | Before                 | After | Loss | Ratio |
| 41 to 87 Robert Street |               |                        |       |      |       |
|                        |               |                        |       |      |       |
| Window 1               | Non Habitable | 15.3%                  | 14.1% | 1.2% | 0.92  |
| Window 2               | Non Habitable | 14.0%                  | 12.8% | 1.2% | 0.91  |
| Window 3               | Habitable     | 29.1%                  | 28.1% | 1.0% | 0.97  |
| Window 4               | Non Habitable | 10.3%                  | 9.5%  | 0.8% | 0.92  |
| Window 5               | Non Habitable | 13.4%                  | 12.6% | 0.8% | 0.94  |
| Window 6               | Habitable     | 29.4%                  | 28.8% | 0.6% | 0.98  |
| Window 7               | Habitable     | 13.9%                  | 12.4% | 1.5% | 0.89  |
| Window 8               | Habitable     | 13.9%                  | 12.2% | 1.7% | 0.88  |
| Window 9               | Habitable     | 28.9%                  | 27.6% | 1.3% | 0.96  |
| Window 10              | Habitable     | 29.0%                  | 27.6% | 1.4% | 0.95  |
| Window 11              | Habitable     | 14.8%                  | 13.8% | 1.0% | 0.93  |
| Window 12              | Habitable     | 15.0%                  | 13.8% | 1.2% | 0.92  |
| Window 13              | Habitable     | 29.3%                  | 28.5% | 0.8% | 0.97  |
| Window 14              | Habitable     | 29.5%                  | 28.6% | 0.9% | 0.97  |
| Window 15              | Non Habitable | 13.4%                  | 11.5% | 1.9% | 0.86  |
| Window 16              | Non Habitable | 13.2%                  | 11.2% | 2.0% | 0.85  |
| Window 17              | Habitable     | 28.7%                  | 26.9% | 1.8% | 0.94  |
| Window 18              | Non Habitable | 14.6%                  | 13.3% | 1.3% | 0.91  |
| Window 19              | Non Habitable | 14.5%                  | 13.1% | 1.4% | 0.9   |
| Window 20              | Habitable     | 29.4%                  | 28.3% | 1.1% | 0.96  |
| Window 21              | Non Habitable | 13.1%                  | 10.9% | 2.2% | 0.83  |
| Window 22              | Non Habitable | 12.9%                  | 10.5% | 2.4% | 0.81  |
| Window 23              | Habitable     | 28.5%                  | 26.5% | 2.0% | 0.93  |
| Window 24              | Non Habitable | 14.5%                  | 12.9% | 1.6% | 0.89  |
| Window 25              | Non Habitable | 14.4%                  | 12.7% | 1.7% | 0.88  |
| Window 26              | Habitable     | 29.3%                  | 28.0% | 1.3% | 0.96  |
| Window 27              | Habitable     | 12.8%                  | 10.1% | 2.7% | 0.79  |
| Window 28              | Habitable     | 12.8%                  | 9.8%  | 3.0% | 0.77  |
| Window 29              | Habitable     | 28.4%                  | 25.9% | 2.5% | 0.91  |
| Window 30              | Habitable     | 28.4%                  | 25.6% | 2.8% | 0.9   |
| Window 31              | Habitable     | 14.4%                  | 12.5% | 1.9% | 0.87  |
| Window 32              | Habitable     | 14.5%                  | 12.3% | 2.2% | 0.85  |
| Window 33              | Habitable     | 29.3%                  | 27.7% | 1.6% | 0.95  |

| Reference | Use Class     | s Vertical Sky Component |       |      |       |
|-----------|---------------|--------------------------|-------|------|-------|
|           |               | Before                   | After | Loss | Ratio |
| Window 34 | Habitable     | 29.4%                    | 27.5% | 1.9% | 0.94  |
| Window 35 | Non Habitable | 12.1%                    | 8.7%  | 3.4% | 0.72  |
| Window 36 | Non Habitable | 9.5%                     | 7.7%  | 1.8% | 0.81  |
| Window 37 | Habitable     | 28.5%                    | 25.1% | 3.4% | 0.88  |
| Window 38 | Non Habitable | 14.0%                    | 11.5% | 2.5% | 0.82  |
| Window 39 | Non Habitable | 13.1%                    | 11.1% | 2.0% | 0.85  |
| Window 40 | Habitable     | 29.6%                    | 27.3% | 2.3% | 0.92  |
| Window 41 | Non Habitable | 7.1%                     | 7.1%  | 0.0% | 1.0   |
| Window 42 | Non Habitable | 27.4%                    | 23.1% | 4.3% | 0.84  |
| Window 43 | Non Habitable | 27.4%                    | 22.9% | 4.5% | 0.84  |
| Window 44 | Non Habitable | 11.7%                    | 9.7%  | 2.0% | 0.83  |
| Window 45 | Non Habitable | 20.6%                    | 16.0% | 4.6% | 0.78  |
| Window 46 | Non Habitable | 22.7%                    | 19.3% | 3.4% | 0.85  |
| Window 47 | Habitable     | 23.2%                    | 18.0% | 5.2% | 0.78  |
| Window 48 | Habitable     | 23.6%                    | 18.0% | 5.6% | 0.76  |
| Window 49 | Habitable     | 10.1%                    | 5.6%  | 4.5% | 0.55  |
| Window 50 | Habitable     | 10.3%                    | 5.1%  | 5.2% | 0.5   |
| Window 51 | Habitable     | 24.8%                    | 20.9% | 3.9% | 0.84  |
| Window 52 | Habitable     | 25.1%                    | 20.9% | 4.2% | 0.83  |
| Window 53 | Habitable     | 10.1%                    | 7.1%  | 3.0% | 0.7   |
| Window 54 | Habitable     | 10.3%                    | 6.8%  | 3.5% | 0.66  |
| Window 55 | Non Habitable | 23.8%                    | 17.4% | 6.4% | 0.73  |
| Window 56 | Non Habitable | 23.9%                    | 17.1% | 6.8% | 0.72  |
| Window 57 | Non Habitable | 25.3%                    | 20.5% | 4.8% | 0.81  |
| Window 58 | Non Habitable | 25.4%                    | 20.2% | 5.2% | 0.8   |
| Window 59 | Habitable     | 24.1%                    | 16.6% | 7.5% | 0.69  |
| Window 60 | Habitable     | 24.1%                    | 16.3% | 7.8% | 0.68  |
| Window 61 | Habitable     | 10.0%                    | 3.5%  | 6.5% | 0.35  |
| Window 62 | Habitable     | 10.1%                    | 3.1%  | 7.0% | 0.31  |
| Window 63 | Habitable     | 25.6%                    | 19.9% | 5.7% | 0.78  |
| Window 64 | Habitable     | 25.6%                    | 19.7% | 5.9% | 0.77  |
| Window 65 | Habitable     | 10.1%                    | 5.8%  | 4.3% | 0.57  |
| Window 66 | Habitable     | 10.2%                    | 5.5%  | 4.7% | 0.54  |

| Reference               | Use Class     | Vertical Sky Component |       |      |       |
|-------------------------|---------------|------------------------|-------|------|-------|
|                         |               | Before                 | After | Loss | Ratio |
| Window 67               | Non Habitable | 24.0%                  | 15.8% | 8.2% | 0.66  |
| Window 68               | Non Habitable | 24.0%                  | 15.7% | 8.3% | 0.65  |
| Window 69               | Non Habitable | 25.5%                  | 19.4% | 6.1% | 0.76  |
| Window 70               | Non Habitable | 25.5%                  | 19.3% | 6.2% | 0.76  |
| Window 71               | Habitable     | 24.0%                  | 15.6% | 8.4% | 0.65  |
| Window 72               | Habitable     | 24.0%                  | 15.5% | 8.5% | 0.65  |
| Window 73               | Habitable     | 10.0%                  | 2.5%  | 7.5% | 0.25  |
| Window 74               | Habitable     | 9.9%                   | 2.5%  | 7.4% | 0.25  |
| Window 75               | Habitable     | 25.5%                  | 19.3% | 6.2% | 0.76  |
| Window 76               | Habitable     | 25.4%                  | 19.2% | 6.2% | 0.76  |
| Window 77               | Habitable     | 10.0%                  | 5.1%  | 4.9% | 0.51  |
| Window 78               | Habitable     | 10.0%                  | 5.1%  | 4.9% | 0.51  |
| Window 79               | Non Habitable | 23.8%                  | 15.4% | 8.4% | 0.65  |
| Window 80               | Non Habitable | 23.7%                  | 15.3% | 8.4% | 0.65  |
| Window 81               | Non Habitable | 25.3%                  | 19.1% | 6.2% | 0.75  |
| Window 82               | Non Habitable | 25.1%                  | 19.0% | 6.1% | 0.76  |
| Window 83               | Habitable     | 23.4%                  | 15.1% | 8.3% | 0.65  |
| Window 84               | Habitable     | 23.2%                  | 14.9% | 8.3% | 0.64  |
| Window 85               | Habitable     | 9.8%                   | 2.5%  | 7.3% | 0.26  |
| Window 86               | Habitable     | 9.6%                   | 2.4%  | 7.2% | 0.25  |
| Window 87               | Habitable     | 24.9%                  | 18.8% | 6.1% | 0.76  |
| Window 88               | Habitable     | 24.6%                  | 18.6% | 6.0% | 0.76  |
| Window 89               | Habitable     | 9.8%                   | 5.0%  | 4.8% | 0.51  |
| Window 90               | Habitable     | 9.7%                   | 5.0%  | 4.7% | 0.52  |
| Window 91               | Non Habitable | 21.5%                  | 13.4% | 8.1% | 0.62  |
| Window 92               | Non Habitable | 22.7%                  | 16.8% | 5.9% | 0.74  |
| Window 93               | Non Habitable | 12.3%                  | 10.2% | 2.1% | 0.83  |
| Window 94               | Non Habitable | 24.8%                  | 16.2% | 8.6% | 0.65  |
| Window 95               | Non Habitable | 24.9%                  | 16.4% | 8.5% | 0.66  |
| Window 96               | Non Habitable | 17.1%                  | 16.8% | 0.3% | 0.98  |
| 89 to 141 Robert Street |               |                        |       |      |       |
| Window 97               | Non Habitable | 21.2%                  | 19.7% | 1.5% | 0.93  |
| Window 98               | Non Habitable | 24.5%                  | 22.5% | 2.0% | 0.92  |

| Reference  | Use Class     | s Vertical Sky Component |       |      |       |
|------------|---------------|--------------------------|-------|------|-------|
|            |               | Before                   | After | Loss | Ratio |
| Window 99  | Non Habitable | 26.8%                    | 21.8% | 5.0% | 0.81  |
| Window 100 | Non Habitable | 18.7%                    | 15.8% | 2.9% | 0.84  |
| Window 101 | Non Habitable | 25.9%                    | 20.2% | 5.7% | 0.78  |
| Window 102 | Non Habitable | 25.7%                    | 19.6% | 6.1% | 0.76  |
| Window 103 | Non Habitable | 25.6%                    | 19.6% | 6.0% | 0.77  |
| Window 104 | Non Habitable | 12.6%                    | 12.6% | 0.0% | 1.0   |
| Window 105 | Habitable     | 27.0%                    | 25.3% | 1.7% | 0.94  |
| Window 106 | Non Habitable | 28.0%                    | 24.0% | 4.0% | 0.86  |
| Window 107 | Non Habitable | 27.9%                    | 24.3% | 3.6% | 0.87  |
| Window 108 | Non Habitable | 27.5%                    | 23.9% | 3.6% | 0.87  |
| Window 109 | Habitable     | 32.9%                    | 31.6% | 1.3% | 0.96  |
| Window 110 | Non Habitable | 29.3%                    | 26.2% | 3.1% | 0.89  |
| Window 111 | Non Habitable | 29.2%                    | 26.4% | 2.8% | 0.9   |
| Window 112 | Non Habitable | 28.8%                    | 25.9% | 2.9% | 0.9   |
| Window 113 | Habitable     | 37.3%                    | 36.4% | 0.9% | 0.98  |
| Window 114 | Non Habitable | 30.7%                    | 28.5% | 2.2% | 0.93  |
| Window 115 | Non Habitable | 30.5%                    | 28.6% | 1.9% | 0.94  |
| Window 116 | Non Habitable | 30.1%                    | 28.0% | 2.1% | 0.93  |
| Window 117 | Habitable     | 14.0%                    | 13.0% | 1.0% | 0.93  |
| Window 118 | Habitable     | 17.1%                    | 14.9% | 2.2% | 0.87  |
| Window 119 | Habitable     | 14.1%                    | 12.0% | 2.1% | 0.85  |
| Window 120 | Non Habitable | 25.2%                    | 21.2% | 4.0% | 0.84  |
| Window 121 | Non Habitable | 26.6%                    | 22.7% | 3.9% | 0.85  |
| Window 122 | Habitable     | 27.6%                    | 24.5% | 3.1% | 0.89  |
| Window 123 | Habitable     | 28.8%                    | 26.4% | 2.4% | 0.92  |
| Window 124 | Habitable     | 30.1%                    | 28.3% | 1.8% | 0.94  |
| Window 125 | Non Habitable | 16.3%                    | 13.6% | 2.7% | 0.83  |
| Window 126 | Non Habitable | 26.0%                    | 22.5% | 3.5% | 0.87  |
| Window 127 | Non Habitable | 12.5%                    | 12.5% | 0.0% | 1.0   |
| Window 128 | Non Habitable | 23.7%                    | 20.2% | 3.5% | 0.85  |
| Window 129 | Non Habitable | 26.9%                    | 23.9% | 3.0% | 0.89  |
| Window 130 | Habitable     | 27.8%                    | 25.1% | 2.7% | 0.9   |
| Window 131 | Non Habitable | 27.6%                    | 25.4% | 2.2% | 0.92  |

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| Reference                 | Use Class     | Vertical Sky Component |       |      |       |
|---------------------------|---------------|------------------------|-------|------|-------|
|                           |               | Before                 | After | Loss | Ratio |
| Window 132                | Habitable     | 29.0%                  | 26.9% | 2.1% | 0.93  |
| Window 133                | Non Habitable | 28.8%                  | 27.1% | 1.7% | 0.94  |
| Window 134                | Habitable     | 30.2%                  | 28.7% | 1.5% | 0.95  |
| Window 135                | Non Habitable | 30.0%                  | 28.8% | 1.2% | 0.96  |
| Window 136                | Habitable     | 13.4%                  | 13.4% | 0.0% | 1.0   |
| Window 137                | Habitable     | 16.8%                  | 15.6% | 1.2% | 0.93  |
| Window 138                | Habitable     | 12.9%                  | 11.7% | 1.2% | 0.91  |
| Window 139                | Non Habitable | 24.8%                  | 22.6% | 2.2% | 0.91  |
| Window 140                | Non Habitable | 26.3%                  | 24.0% | 2.3% | 0.91  |
| Window 141                | Non Habitable | 27.3%                  | 25.3% | 2.0% | 0.93  |
| Window 142                | Non Habitable | 26.9%                  | 24.9% | 2.0% | 0.93  |
| Window 143                | Habitable     | 27.0%                  | 25.3% | 1.7% | 0.94  |
| Window 144                | Non Habitable | 28.5%                  | 27.0% | 1.5% | 0.95  |
| Window 145                | Non Habitable | 28.0%                  | 26.5% | 1.5% | 0.95  |
| Window 146                | Habitable     | 28.1%                  | 26.8% | 1.3% | 0.95  |
| Window 147                | Non Habitable | 29.7%                  | 28.7% | 1.0% | 0.97  |
| Window 148                | Non Habitable | 29.3%                  | 28.2% | 1.1% | 0.96  |
| Window 149                | Habitable     | 29.3%                  | 28.4% | 0.9% | 0.97  |
| Window 150                | Non Habitable | 16.1%                  | 14.3% | 1.8% | 0.89  |
| Window 151                | Non Habitable | 25.6%                  | 23.7% | 1.9% | 0.93  |
| Window 152                | Non Habitable | 25.8%                  | 24.1% | 1.7% | 0.93  |
| Window 153                | Non Habitable | 25.9%                  | 24.1% | 1.8% | 0.93  |
| Window 154                | Non Habitable | 12.9%                  | 12.9% | 0.0% | 1.0   |
| Window 155                | Non Habitable | 26.7%                  | 25.1% | 1.6% | 0.94  |
| Window 156                | Habitable     | 27.3%                  | 25.9% | 1.4% | 0.95  |
| Window 157                | Non Habitable | 27.7%                  | 26.6% | 1.1% | 0.96  |
| Window 158                | Habitable     | 28.3%                  | 27.3% | 1.0% | 0.96  |
| Window 159                | Non Habitable | 28.7%                  | 27.9% | 0.8% | 0.97  |
| Window 160                | Habitable     | 29.4%                  | 28.7% | 0.7% | 0.98  |
| Window 161                | Non Habitable | 29.9%                  | 29.3% | 0.6% | 0.98  |
| <u>1 to 77 Patterdale</u> |               |                        |       |      |       |
| Window 162                | Non Habitable | 9.6%                   | 4.8%  | 4.8% | 0.5   |
| Window 163                | Non Habitable | 9.5%                   | 3.8%  | 5.7% | 0.4   |

| Reference  | Use Class     | s Vertical Sky Component |       |       |       |
|------------|---------------|--------------------------|-------|-------|-------|
|            |               | Before                   | After | Loss  | Ratio |
| Window 164 | Non Habitable | 9.0%                     | 3.0%  | 6.0%  | 0.33  |
| Window 165 | Habitable     | 30.6%                    | 30.6% | 0.0%  | 1.0   |
| Window 166 | Habitable     | 33.5%                    | 23.7% | 9.8%  | 0.71  |
| Window 167 | Habitable     | 7.5%                     | 5.2%  | 2.3%  | 0.69  |
| Window 168 | Habitable     | 12.1%                    | 2.9%  | 9.2%  | 0.24  |
| Window 169 | Habitable     | 35.2%                    | 27.2% | 8.0%  | 0.77  |
| Window 170 | Habitable     | 8.2%                     | 6.4%  | 1.8%  | 0.78  |
| Window 171 | Habitable     | 13.0%                    | 4.9%  | 8.1%  | 0.38  |
| Window 172 | Habitable     | 37.7%                    | 37.7% | 0.0%  | 1.0   |
| Window 173 | Habitable     | 36.6%                    | 31.3% | 5.3%  | 0.86  |
| Window 174 | Habitable     | 8.8%                     | 7.7%  | 1.1%  | 0.88  |
| Window 175 | Habitable     | 13.8%                    | 8.4%  | 5.4%  | 0.61  |
| Window 176 | Habitable     | 37.4%                    | 35.3% | 2.1%  | 0.94  |
| Window 177 | Habitable     | 9.1%                     | 8.7%  | 0.4%  | 0.96  |
| Window 178 | Habitable     | 14.5%                    | 12.2% | 2.3%  | 0.84  |
| Window 179 | Habitable     | 39.5%                    | 39.5% | 0.0%  | 1.0   |
| Window 180 | Habitable     | 37.9%                    | 37.7% | 0.2%  | 0.99  |
| Window 181 | Habitable     | 9.3%                     | 9.3%  | 0.0%  | 1.0   |
| Window 182 | Habitable     | 15.0%                    | 14.8% | 0.2%  | 0.99  |
| Window 183 | Habitable     | 13.1%                    | 4.5%  | 8.6%  | 0.34  |
| Window 184 | Habitable     | 8.0%                     | 6.4%  | 1.6%  | 0.8   |
| Window 185 | Habitable     | 33.4%                    | 21.6% | 11.8% | 0.65  |
| Window 186 | Habitable     | 14.1%                    | 6.3%  | 7.8%  | 0.45  |
| Window 187 | Habitable     | 8.8%                     | 7.5%  | 1.3%  | 0.85  |
| Window 188 | Habitable     | 35.1%                    | 25.2% | 9.9%  | 0.72  |
| Window 189 | Habitable     | 14.9%                    | 9.5%  | 5.4%  | 0.64  |
| Window 190 | Habitable     | 9.4%                     | 8.5%  | 0.9%  | 0.9   |
| Window 191 | Habitable     | 36.5%                    | 29.8% | 6.7%  | 0.82  |
| Window 192 | Habitable     | 15.4%                    | 12.8% | 2.6%  | 0.83  |
| Window 193 | Habitable     | 9.6%                     | 9.2%  | 0.4%  | 0.96  |
| Window 194 | Habitable     | 37.3%                    | 33.9% | 3.4%  | 0.91  |
| Window 195 | Habitable     | 15.8%                    | 15.5% | 0.3%  | 0.98  |
| Window 196 | Habitable     | 9.6%                     | 9.5%  | 0.1%  | 0.99  |

| Reference  | Use Class     | Vertical Sky Component |       |      |       |
|------------|---------------|------------------------|-------|------|-------|
|            |               | Before                 | After | Loss | Ratio |
| Window 197 | Habitable     | 37.9%                  | 37.3% | 0.6% | 0.98  |
| Window 198 | Non Habitable | 34.2%                  | 24.4% | 9.8% | 0.71  |
| Window 199 | Non Habitable | 35.8%                  | 28.3% | 7.5% | 0.79  |
| Window 200 | Non Habitable | 36.9%                  | 32.2% | 4.7% | 0.87  |
| Window 201 | Non Habitable | 37.6%                  | 35.7% | 1.9% | 0.95  |
| Window 202 | Non Habitable | 12.9%                  | 6.1%  | 6.8% | 0.47  |
| Window 203 | Non Habitable | 9.1%                   | 4.4%  | 4.7% | 0.48  |
| Window 204 | Non Habitable | 9.0%                   | 4.5%  | 4.5% | 0.5   |
| Window 205 | Non Habitable | 8.5%                   | 4.6%  | 3.9% | 0.54  |
| Window 206 | Habitable     | 33.3%                  | 24.2% | 9.1% | 0.73  |
| Window 207 | Habitable     | 7.9%                   | 7.9%  | 0.0% | 1.0   |
| Window 208 | Habitable     | 12.5%                  | 10.5% | 2.0% | 0.84  |
| Window 209 | Habitable     | 35.0%                  | 27.5% | 7.5% | 0.79  |
| Window 210 | Habitable     | 8.6%                   | 8.6%  | 0.0% | 1.0   |
| Window 211 | Habitable     | 13.3%                  | 11.9% | 1.4% | 0.89  |
| Window 212 | Habitable     | 36.4%                  | 31.1% | 5.3% | 0.85  |
| Window 213 | Habitable     | 9.5%                   | 9.5%  | 0.0% | 1.0   |
| Window 214 | Habitable     | 14.5%                  | 13.7% | 0.8% | 0.94  |
| Window 215 | Habitable     | 37.2%                  | 34.2% | 3.0% | 0.92  |
| Window 216 | Habitable     | 9.8%                   | 9.8%  | 0.0% | 1.0   |
| Window 217 | Habitable     | 15.3%                  | 14.8% | 0.5% | 0.97  |
| Window 218 | Habitable     | 37.8%                  | 37.0% | 0.8% | 0.98  |
| Window 219 | Habitable     | 9.5%                   | 9.5%  | 0.0% | 1.0   |
| Window 220 | Habitable     | 14.9%                  | 14.7% | 0.2% | 0.99  |
| Window 221 | Non Habitable | 8.0%                   | 4.5%  | 3.5% | 0.56  |
| Window 222 | Non Habitable | 7.4%                   | 4.2%  | 3.2% | 0.57  |
| Window 223 | Non Habitable | 6.9%                   | 3.9%  | 3.0% | 0.57  |
| Window 224 | Habitable     | 14.0%                  | 7.4%  | 6.6% | 0.53  |
| Window 225 | Habitable     | 9.0%                   | 4.3%  | 4.7% | 0.48  |
| Window 226 | Habitable     | 32.9%                  | 26.9% | 6.0% | 0.82  |
| Window 227 | Habitable     | 14.4%                  | 9.0%  | 5.4% | 0.63  |
| Window 228 | Habitable     | 9.3%                   | 5.4%  | 3.9% | 0.58  |
| Window 229 | Habitable     | 34.8%                  | 29.8% | 5.0% | 0.86  |

| Reference  | Use Class     | Vertical Sky Component |       |      |       |
|------------|---------------|------------------------|-------|------|-------|
|            |               | Before                 | After | Loss | Ratio |
| Window 230 | Habitable     | 15.5%                  | 11.5% | 4.0% | 0.74  |
| Window 231 | Habitable     | 9.9%                   | 6.9%  | 3.0% | 0.7   |
| Window 232 | Habitable     | 36.3%                  | 32.7% | 3.6% | 0.9   |
| Window 233 | Habitable     | 16.1%                  | 13.7% | 2.4% | 0.85  |
| Window 234 | Habitable     | 10.0%                  | 8.3%  | 1.7% | 0.83  |
| Window 235 | Habitable     | 37.1%                  | 35.1% | 2.0% | 0.95  |
| Window 236 | Habitable     | 15.5%                  | 14.8% | 0.7% | 0.95  |
| Window 237 | Habitable     | 9.4%                   | 9.0%  | 0.4% | 0.96  |
| Window 238 | Habitable     | 37.8%                  | 37.2% | 0.6% | 0.98  |
| Window 239 | Habitable     | 32.6%                  | 27.6% | 5.0% | 0.85  |
| Window 240 | Habitable     | 7.7%                   | 7.7%  | 0.0% | 1.0   |
| Window 241 | Habitable     | 11.5%                  | 11.4% | 0.1% | 0.99  |
| Window 242 | Habitable     | 34.7%                  | 30.5% | 4.2% | 0.88  |
| Window 243 | Habitable     | 8.7%                   | 8.7%  | 0.0% | 1.0   |
| Window 244 | Habitable     | 12.8%                  | 12.7% | 0.1% | 0.99  |
| Window 245 | Habitable     | 36.3%                  | 33.3% | 3.0% | 0.92  |
| Window 246 | Habitable     | 9.7%                   | 9.7%  | 0.0% | 1.0   |
| Window 247 | Habitable     | 14.4%                  | 14.3% | 0.1% | 0.99  |
| Window 248 | Habitable     | 37.2%                  | 35.4% | 1.8% | 0.95  |
| Window 249 | Habitable     | 9.9%                   | 9.9%  | 0.0% | 1.0   |
| Window 250 | Habitable     | 15.1%                  | 15.1% | 0.0% | 1.0   |
| Window 251 | Habitable     | 37.8%                  | 37.3% | 0.5% | 0.99  |
| Window 252 | Habitable     | 9.6%                   | 9.6%  | 0.0% | 1.0   |
| Window 253 | Habitable     | 14.7%                  | 14.7% | 0.0% | 1.0   |
| Window 254 | Non Habitable | 13.9%                  | 9.9%  | 4.0% | 0.71  |
| Window 255 | Non Habitable | 9.6%                   | 6.1%  | 3.5% | 0.64  |
| Window 256 | Non Habitable | 0.4%                   | 0.1%  | 0.3% | 0.25  |
| Window 257 | Non Habitable | 10.6%                  | 7.0%  | 3.6% | 0.66  |
| Window 258 | Habitable     | 13.9%                  | 10.2% | 3.7% | 0.73  |
| Window 259 | Habitable     | 8.9%                   | 4.9%  | 4.0% | 0.55  |
| Window 260 | Habitable     | 31.4%                  | 27.8% | 3.6% | 0.89  |
| Window 261 | Habitable     | 14.4%                  | 11.4% | 3.0% | 0.79  |
| Window 262 | Habitable     | 9.2%                   | 5.9%  | 3.3% | 0.64  |

| Reference  | Use Class     | S Vertical Sky Component |       |      |       |
|------------|---------------|--------------------------|-------|------|-------|
|            |               | Before                   | After | Loss | Ratio |
| Window 263 | Habitable     | 34.5%                    | 31.6% | 2.9% | 0.92  |
| Window 264 | Habitable     | 15.4%                    | 13.2% | 2.2% | 0.86  |
| Window 265 | Habitable     | 9.7%                     | 7.2%  | 2.5% | 0.74  |
| Window 266 | Habitable     | 36.4%                    | 34.3% | 2.1% | 0.94  |
| Window 267 | Habitable     | 16.1%                    | 14.8% | 1.3% | 0.92  |
| Window 268 | Habitable     | 9.9%                     | 8.5%  | 1.4% | 0.86  |
| Window 269 | Habitable     | 37.2%                    | 36.0% | 1.2% | 0.97  |
| Window 270 | Habitable     | 15.5%                    | 15.1% | 0.4% | 0.97  |
| Window 271 | Habitable     | 9.5%                     | 9.0%  | 0.5% | 0.95  |
| Window 272 | Habitable     | 37.8%                    | 37.5% | 0.3% | 0.99  |
| Window 273 | Habitable     | 32.7%                    | 29.9% | 2.8% | 0.91  |
| Window 274 | Habitable     | 35.7%                    | 33.5% | 2.2% | 0.94  |
| Window 275 | Habitable     | 36.8%                    | 35.4% | 1.4% | 0.96  |
| Window 276 | Habitable     | 37.6%                    | 36.9% | 0.7% | 0.98  |
| Window 277 | Habitable     | 30.4%                    | 27.8% | 2.6% | 0.91  |
| Window 278 | Habitable     | 8.6%                     | 8.6%  | 0.0% | 1.0   |
| Window 279 | Habitable     | 10.6%                    | 10.4% | 0.2% | 0.98  |
| Window 280 | Habitable     | 34.4%                    | 32.2% | 2.2% | 0.94  |
| Window 281 | Habitable     | 9.8%                     | 9.8%  | 0.0% | 1.0   |
| Window 282 | Habitable     | 14.2%                    | 14.0% | 0.2% | 0.99  |
| Window 283 | Habitable     | 36.4%                    | 34.8% | 1.6% | 0.96  |
| Window 284 | Habitable     | 10.2%                    | 10.2% | 0.0% | 1.0   |
| Window 285 | Habitable     | 15.7%                    | 15.5% | 0.2% | 0.99  |
| Window 286 | Habitable     | 37.2%                    | 36.3% | 0.9% | 0.98  |
| Window 287 | Habitable     | 10.4%                    | 10.4% | 0.0% | 1.0   |
| Window 288 | Habitable     | 16.3%                    | 16.2% | 0.1% | 0.99  |
| Window 289 | Habitable     | 37.9%                    | 37.6% | 0.3% | 0.99  |
| Window 290 | Habitable     | 9.6%                     | 9.6%  | 0.0% | 1.0   |
| Window 291 | Habitable     | 15.0%                    | 15.0% | 0.0% | 1.0   |
| Window 292 | Non Habitable | 4.5%                     | 3.4%  | 1.1% | 0.76  |
| Window 293 | Non Habitable | 5.7%                     | 3.8%  | 1.9% | 0.67  |
| Window 294 | Non Habitable | 6.9%                     | 5.3%  | 1.6% | 0.77  |
| Window 295 | Habitable     | 11.3%                    | 9.6%  | 1.7% | 0.85  |

| Reference               | Use Class     | Vertical Sky Component |       |       |       |
|-------------------------|---------------|------------------------|-------|-------|-------|
|                         |               | Before                 | After | Loss  | Ratio |
| Window 296              | Habitable     | 8.6%                   | 5.7%  | 2.9%  | 0.66  |
| Window 297              | Habitable     | 31.0%                  | 29.5% | 1.5%  | 0.95  |
| Window 298              | Habitable     | 14.9%                  | 13.5% | 1.4%  | 0.91  |
| Window 299              | Habitable     | 9.5%                   | 7.1%  | 2.4%  | 0.75  |
| Window 300              | Habitable     | 35.2%                  | 33.8% | 1.4%  | 0.96  |
| Window 301              | Habitable     | 16.1%                  | 15.1% | 1.0%  | 0.94  |
| Window 302              | Habitable     | 10.0%                  | 8.2%  | 1.8%  | 0.82  |
| Window 303              | Habitable     | 36.5%                  | 35.3% | 1.2%  | 0.97  |
| Window 304              | Habitable     | 16.8%                  | 16.2% | 0.6%  | 0.96  |
| Window 305              | Habitable     | 10.1%                  | 9.1%  | 1.0%  | 0.9   |
| Window 306              | Habitable     | 37.3%                  | 36.6% | 0.7%  | 0.98  |
| Window 307              | Habitable     | 15.4%                  | 15.2% | 0.2%  | 0.99  |
| Window 308              | Habitable     | 9.3%                   | 9.0%  | 0.3%  | 0.97  |
| Window 309              | Habitable     | 38.0%                  | 37.8% | 0.2%  | 0.99  |
| <u>1 to 12 Mosedale</u> |               |                        |       |       |       |
| Window 310              | Habitable     | 10.4%                  | 10.4% | 0.0%  | 1.0   |
| Window 311              | Habitable     | 24.3%                  | 16.1% | 8.2%  | 0.66  |
| Window 312              | Habitable     | 10.7%                  | 10.7% | 0.0%  | 1.0   |
| Window 313              | Habitable     | 25.2%                  | 18.0% | 7.2%  | 0.71  |
| Window 314              | Habitable     | 11.3%                  | 11.3% | 0.0%  | 1.0   |
| Window 315              | Habitable     | 18.1%                  | 12.2% | 5.9%  | 0.67  |
| Window 316              | Non Habitable | 18.2%                  | 13.6% | 4.6%  | 0.75  |
| Window 317              | Habitable     | 25.8%                  | 16.2% | 9.6%  | 0.63  |
| Window 318              | Habitable     | 26.4%                  | 16.2% | 10.2% | 0.61  |
| Window 319              | Habitable     | 26.8%                  | 18.4% | 8.4%  | 0.69  |
| Window 320              | Habitable     | 27.4%                  | 18.4% | 9.0%  | 0.67  |
| Window 321              | Habitable     | 19.7%                  | 12.7% | 7.0%  | 0.64  |
| Window 322              | Habitable     | 20.8%                  | 13.4% | 7.4%  | 0.64  |
| Window 323              | Non Habitable | 27.6%                  | 15.9% | 11.7% | 0.58  |
| Window 324              | Non Habitable | 28.6%                  | 18.2% | 10.4% | 0.64  |
| Window 325              | Non Habitable | 26.7%                  | 18.0% | 8.7%  | 0.67  |
| Window 326              | Non Habitable | 18.9%                  | 14.3% | 4.6%  | 0.76  |
| Window 327              | Habitable     | 28.6%                  | 16.3% | 12.3% | 0.57  |

| Reference  | Use Class     |        | Vertical Sky | Component |       |
|------------|---------------|--------|--------------|-----------|-------|
|            |               | Before | After        | Loss      | Ratio |
| Window 328 | Habitable     | 28.9%  | 16.4%        | 12.5%     | 0.57  |
| Window 329 | Habitable     | 29.7%  | 18.9%        | 10.8%     | 0.64  |
| Window 330 | Habitable     | 30.0%  | 19.0%        | 11.0%     | 0.63  |
| Window 331 | Habitable     | 22.6%  | 13.7%        | 8.9%      | 0.61  |
| Window 332 | Habitable     | 24.0%  | 14.8%        | 9.2%      | 0.62  |
| Window 333 | Non Habitable | 20.4%  | 14.8%        | 5.6%      | 0.73  |
| Window 334 | Habitable     | 29.5%  | 16.9%        | 12.6%     | 0.57  |
| Window 335 | Habitable     | 30.7%  | 19.5%        | 11.2%     | 0.64  |
| Window 336 | Habitable     | 22.5%  | 13.2%        | 9.3%      | 0.59  |
| Window 337 | Non Habitable | 20.5%  | 15.0%        | 5.5%      | 0.73  |
| Window 338 | Habitable     | 29.8%  | 17.3%        | 12.5%     | 0.58  |
| Window 339 | Habitable     | 31.0%  | 19.9%        | 11.1%     | 0.64  |
| Window 340 | Habitable     | 22.7%  | 13.4%        | 9.3%      | 0.59  |
| Window 341 | Non Habitable | 20.6%  | 15.4%        | 5.2%      | 0.75  |
| Window 342 | Habitable     | 30.0%  | 17.7%        | 12.3%     | 0.59  |
| Window 343 | Habitable     | 30.0%  | 17.8%        | 12.2%     | 0.59  |
| Window 344 | Habitable     | 31.1%  | 20.3%        | 10.8%     | 0.65  |
| Window 345 | Habitable     | 31.1%  | 20.4%        | 10.7%     | 0.66  |
| Window 346 | Habitable     | 23.3%  | 14.2%        | 9.1%      | 0.61  |
| Window 347 | Habitable     | 24.0%  | 15.0%        | 9.0%      | 0.63  |
| Window 348 | Non Habitable | 29.3%  | 17.7%        | 11.6%     | 0.6   |
| Window 349 | Non Habitable | 30.8%  | 20.4%        | 10.4%     | 0.66  |
| Window 350 | Non Habitable | 28.8%  | 20.0%        | 8.8%      | 0.69  |
| Window 351 | Non Habitable | 8.6%   | 3.3%         | 5.3%      | 0.38  |
| Window 352 | Habitable     | 29.4%  | 19.1%        | 10.3%     | 0.65  |
| Window 353 | Habitable     | 29.1%  | 19.3%        | 9.8%      | 0.66  |
| Window 354 | Habitable     | 30.6%  | 21.4%        | 9.2%      | 0.7   |
| Window 355 | Habitable     | 30.3%  | 21.6%        | 8.7%      | 0.71  |
| Window 356 | Habitable     | 23.1%  | 15.5%        | 7.6%      | 0.67  |
| Window 357 | Habitable     | 24.1%  | 16.8%        | 7.3%      | 0.7   |
| Window 358 | Habitable     | 28.5%  | 20.2%        | 8.3%      | 0.71  |
| Window 359 | Habitable     | 11.2%  | 11.2%        | 0.0%      | 1.0   |
| Window 360 | Habitable     | 29.7%  | 22.4%        | 7.3%      | 0.75  |

| Reference          | Use Class     |        | Vertical Sky | Component |       |
|--------------------|---------------|--------|--------------|-----------|-------|
|                    |               | Before | After        | Loss      | Ratio |
| Window 361         | Habitable     | 13.4%  | 13.4%        | 0.0%      | 1.0   |
| Window 362         | Habitable     | 22.0%  | 15.9%        | 6.1%      | 0.72  |
| Window 363         | Habitable     | 16.3%  | 16.3%        | 0.0%      | 1.0   |
| 1 to 23 Grisedale  |               |        |              |           |       |
| Window 364         | Habitable     | 20.8%  | 18.1%        | 2.7%      | 0.87  |
| Window 365         | Habitable     | 23.2%  | 20.9%        | 2.3%      | 0.9   |
| Window 366         | Habitable     | 26.2%  | 24.2%        | 2.0%      | 0.92  |
| Window 367         | Habitable     | 28.5%  | 26.6%        | 1.9%      | 0.93  |
| Window 368         | Habitable     | 29.8%  | 28.6%        | 1.2%      | 0.96  |
| Window 369         | Habitable     | 21.2%  | 18.4%        | 2.8%      | 0.87  |
| Window 370         | Habitable     | 23.1%  | 20.7%        | 2.4%      | 0.9   |
| Window 371         | Habitable     | 24.9%  | 22.9%        | 2.0%      | 0.92  |
| Window 372         | Habitable     | 26.4%  | 24.7%        | 1.7%      | 0.94  |
| Window 373         | Habitable     | 27.6%  | 26.5%        | 1.1%      | 0.96  |
| Window 374         | Habitable     | 22.1%  | 19.9%        | 2.2%      | 0.9   |
| Window 375         | Habitable     | 23.3%  | 21.5%        | 1.8%      | 0.92  |
| Window 376         | Habitable     | 24.6%  | 23.1%        | 1.5%      | 0.94  |
| Window 377         | Habitable     | 25.6%  | 24.7%        | 0.9%      | 0.96  |
| 1 to 44 Borrowdale |               |        |              |           |       |
| Window 378         | Non Habitable | 14.2%  | 12.2%        | 2.0%      | 0.86  |
| Window 379         | Habitable     | 4.1%   | 2.5%         | 1.6%      | 0.61  |
| Window 380         | Habitable     | 19.7%  | 18.1%        | 1.6%      | 0.92  |
| Window 381         | Habitable     | 8.4%   | 6.6%         | 1.8%      | 0.79  |
| Window 382         | Habitable     | 21.6%  | 20.3%        | 1.3%      | 0.94  |
| Window 383         | Habitable     | 8.9%   | 7.4%         | 1.5%      | 0.83  |
| Window 384         | Habitable     | 24.5%  | 23.4%        | 1.1%      | 0.96  |
| Window 385         | Habitable     | 9.2%   | 8.0%         | 1.2%      | 0.87  |
| Window 386         | Habitable     | 29.3%  | 28.6%        | 0.7%      | 0.98  |
| Window 387         | Habitable     | 9.5%   | 8.6%         | 0.9%      | 0.91  |
| Window 388         | Habitable     | 36.3%  | 36.0%        | 0.3%      | 0.99  |
| Window 389         | Habitable     | 9.6%   | 9.2%         | 0.4%      | 0.96  |
| Window 390         | Habitable     | 4.9%   | 3.1%         | 1.8%      | 0.63  |

| Reference  | Use Class     |        | Vertical Sky | Component |       |
|------------|---------------|--------|--------------|-----------|-------|
|            |               | Before | After        | Loss      | Ratio |
| Window 391 | Habitable     | 6.1%   | 5.3%         | 0.8%      | 0.87  |
| Window 392 | Habitable     | 7.1%   | 6.4%         | 0.7%      | 0.9   |
| Window 393 | Habitable     | 8.3%   | 7.7%         | 0.6%      | 0.93  |
| Window 394 | Habitable     | 10.2%  | 9.8%         | 0.4%      | 0.96  |
| Window 395 | Habitable     | 12.4%  | 12.2%        | 0.2%      | 0.98  |
| Window 396 | Non Habitable | 13.4%  | 13.0%        | 0.4%      | 0.97  |
| Window 397 | Habitable     | 4.5%   | 3.3%         | 1.2%      | 0.73  |
| Window 398 | Habitable     | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 399 | Habitable     | 25.7%  | 23.6%        | 2.1%      | 0.92  |
| Window 400 | Habitable     | 0.4%   | 0.4%         | 0.0%      | 1.0   |
| Window 401 | Habitable     | 28.3%  | 26.5%        | 1.8%      | 0.94  |
| Window 402 | Habitable     | 1.5%   | 1.5%         | 0.0%      | 1.0   |
| Window 403 | Habitable     | 31.4%  | 30.0%        | 1.4%      | 0.96  |
| Window 404 | Habitable     | 4.1%   | 4.1%         | 0.0%      | 1.0   |
| Window 405 | Habitable     | 34.4%  | 33.5%        | 0.9%      | 0.97  |
| Window 406 | Habitable     | 6.7%   | 6.7%         | 0.0%      | 1.0   |
| Window 407 | Habitable     | 37.0%  | 36.5%        | 0.5%      | 0.99  |
| Window 408 | Non Habitable | 28.7%  | 26.5%        | 2.2%      | 0.92  |
| Window 409 | Non Habitable | 31.4%  | 29.7%        | 1.7%      | 0.95  |
| Window 410 | Non Habitable | 34.2%  | 32.9%        | 1.3%      | 0.96  |
| Window 411 | Non Habitable | 36.3%  | 35.5%        | 0.8%      | 0.98  |
| Window 412 | Non Habitable | 10.7%  | 7.9%         | 2.8%      | 0.74  |
| Window 413 | Non Habitable | 9.0%   | 6.3%         | 2.7%      | 0.7   |
| Window 414 | Non Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 415 | Non Habitable | 14.4%  | 11.4%        | 3.0%      | 0.79  |
| Window 416 | Habitable     | 28.7%  | 26.1%        | 2.6%      | 0.91  |
| Window 417 | Habitable     | 8.6%   | 6.6%         | 2.0%      | 0.77  |
| Window 418 | Habitable     | 31.2%  | 29.1%        | 2.1%      | 0.93  |
| Window 419 | Habitable     | 9.1%   | 7.5%         | 1.6%      | 0.82  |
| Window 420 | Habitable     | 33.7%  | 32.1%        | 1.6%      | 0.95  |
| Window 421 | Habitable     | 9.6%   | 8.2%         | 1.4%      | 0.85  |
| Window 422 | Habitable     | 35.8%  | 34.6%        | 1.2%      | 0.97  |
| Window 423 | Habitable     | 9.9%   | 9.0%         | 0.9%      | 0.91  |

| Reference  | Use Class     |        | Vertical Sky | Component |       |
|------------|---------------|--------|--------------|-----------|-------|
|            |               | Before | After        | Loss      | Ratio |
| Window 424 | Habitable     | 37.2%  | 36.6%        | 0.6%      | 0.98  |
| Window 425 | Habitable     | 10.0%  | 9.5%         | 0.5%      | 0.95  |
| Window 426 | Non Habitable | 22.2%  | 18.9%        | 3.3%      | 0.85  |
| Window 427 | Habitable     | 6.0%   | 3.5%         | 2.5%      | 0.58  |
| Window 428 | Habitable     | 9.1%   | 7.0%         | 2.1%      | 0.77  |
| Window 429 | Habitable     | 10.6%  | 8.8%         | 1.8%      | 0.83  |
| Window 430 | Habitable     | 10.3%  | 9.0%         | 1.3%      | 0.87  |
| Window 431 | Habitable     | 12.5%  | 11.5%        | 1.0%      | 0.92  |
| Window 432 | Habitable     | 13.1%  | 12.6%        | 0.5%      | 0.96  |
| Window 433 | Non Habitable | 23.3%  | 19.6%        | 3.7%      | 0.84  |
| Window 434 | Habitable     | 6.8%   | 4.0%         | 2.8%      | 0.59  |
| Window 435 | Habitable     | 4.5%   | 4.5%         | 0.0%      | 1.0   |
| Window 436 | Habitable     | 30.6%  | 27.4%        | 3.2%      | 0.9   |
| Window 437 | Habitable     | 5.6%   | 5.6%         | 0.0%      | 1.0   |
| Window 438 | Habitable     | 32.7%  | 30.1%        | 2.6%      | 0.92  |
| Window 439 | Habitable     | 6.7%   | 6.7%         | 0.0%      | 1.0   |
| Window 440 | Habitable     | 34.8%  | 32.7%        | 2.1%      | 0.94  |
| Window 441 | Habitable     | 7.7%   | 7.7%         | 0.0%      | 1.0   |
| Window 442 | Habitable     | 36.3%  | 34.9%        | 1.4%      | 0.96  |
| Window 443 | Habitable     | 8.3%   | 8.3%         | 0.0%      | 1.0   |
| Window 444 | Habitable     | 37.2%  | 36.6%        | 0.6%      | 0.98  |
| Window 445 | Non Habitable | 24.0%  | 20.0%        | 4.0%      | 0.83  |
| Window 446 | Habitable     | 6.6%   | 3.8%         | 2.8%      | 0.58  |
| Window 447 | Habitable     | 31.1%  | 27.7%        | 3.4%      | 0.89  |
| Window 448 | Habitable     | 8.6%   | 6.9%         | 1.7%      | 0.8   |
| Window 449 | Habitable     | 33.1%  | 30.3%        | 2.8%      | 0.92  |
| Window 450 | Habitable     | 9.2%   | 7.8%         | 1.4%      | 0.85  |
| Window 451 | Habitable     | 35.0%  | 32.9%        | 2.1%      | 0.94  |
| Window 452 | Habitable     | 9.8%   | 8.8%         | 1.0%      | 0.9   |
| Window 453 | Habitable     | 36.4%  | 35.0%        | 1.4%      | 0.96  |
| Window 454 | Habitable     | 10.1%  | 9.3%         | 0.8%      | 0.92  |
| Window 455 | Habitable     | 37.2%  | 36.5%        | 0.7%      | 0.98  |
| Window 456 | Habitable     | 10.1%  | 9.8%         | 0.3%      | 0.97  |

| Reference  | Use Class     |        | Vertical Sky | Component |       |
|------------|---------------|--------|--------------|-----------|-------|
|            |               | Before | After        | Loss      | Ratio |
| Window 457 | Non Habitable | 24.0%  | 19.8%        | 4.2%      | 0.83  |
| Window 458 | Habitable     | 6.8%   | 3.8%         | 3.0%      | 0.56  |
| Window 459 | Habitable     | 9.8%   | 6.4%         | 3.4%      | 0.65  |
| Window 460 | Habitable     | 10.8%  | 8.1%         | 2.7%      | 0.75  |
| Window 461 | Habitable     | 11.9%  | 9.8%         | 2.1%      | 0.82  |
| Window 462 | Habitable     | 12.4%  | 11.0%        | 1.4%      | 0.89  |
| Window 463 | Habitable     | 12.8%  | 12.2%        | 0.6%      | 0.95  |
| Window 464 | Non Habitable | 15.9%  | 11.7%        | 4.2%      | 0.74  |
| Window 465 | Non Habitable | 10.0%  | 6.1%         | 3.9%      | 0.61  |
| Window 466 | Non Habitable | 0.2%   | 0.1%         | 0.1%      | 0.5   |
| Window 467 | Non Habitable | 9.2%   | 7.9%         | 1.3%      | 0.86  |
| Window 468 | Habitable     | 4.8%   | 4.8%         | 0.0%      | 1.0   |
| Window 469 | Habitable     | 31.8%  | 28.0%        | 3.8%      | 0.88  |
| Window 470 | Habitable     | 5.7%   | 5.7%         | 0.0%      | 1.0   |
| Window 471 | Habitable     | 33.7%  | 30.7%        | 3.0%      | 0.91  |
| Window 472 | Habitable     | 6.5%   | 6.5%         | 0.0%      | 1.0   |
| Window 473 | Habitable     | 35.4%  | 33.2%        | 2.2%      | 0.94  |
| Window 474 | Habitable     | 7.0%   | 7.0%         | 0.0%      | 1.0   |
| Window 475 | Habitable     | 36.7%  | 35.3%        | 1.4%      | 0.96  |
| Window 476 | Habitable     | 7.4%   | 7.4%         | 0.0%      | 1.0   |
| Window 477 | Habitable     | 37.3%  | 36.7%        | 0.6%      | 0.98  |
| Window 478 | Non Habitable | 33.0%  | 29.5%        | 3.5%      | 0.89  |
| Window 479 | Non Habitable | 34.7%  | 32.2%        | 2.5%      | 0.93  |
| Window 480 | Non Habitable | 36.3%  | 34.7%        | 1.6%      | 0.96  |
| Window 481 | Habitable     | 37.1%  | 36.2%        | 0.9%      | 0.98  |
| Window 482 | Non Habitable | 37.6%  | 37.4%        | 0.2%      | 0.99  |
| Window 483 | Non Habitable | 21.7%  | 17.3%        | 4.4%      | 0.8   |
| Window 484 | Habitable     | 6.7%   | 3.9%         | 2.8%      | 0.58  |
| Window 485 | Habitable     | 32.2%  | 28.4%        | 3.8%      | 0.88  |
| Window 486 | Habitable     | 7.9%   | 7.6%         | 0.3%      | 0.96  |
| Window 487 | Habitable     | 34.0%  | 31.2%        | 2.8%      | 0.92  |
| Window 488 | Habitable     | 9.0%   | 8.7%         | 0.3%      | 0.97  |
| Window 489 | Habitable     | 35.7%  | 33.8%        | 1.9%      | 0.95  |

| Reference  | Use Class     | Vertical Sky Component |       |      |       |  |  |  |
|------------|---------------|------------------------|-------|------|-------|--|--|--|
|            |               | Before                 | After | Loss | Ratio |  |  |  |
| Window 490 | Habitable     | 9.7%                   | 9.5%  | 0.2% | 0.98  |  |  |  |
| Window 491 | Habitable     | 36.8%                  | 35.9% | 0.9% | 0.98  |  |  |  |
| Window 492 | Habitable     | 10.1%                  | 10.0% | 0.1% | 0.99  |  |  |  |
| Window 493 | Habitable     | 37.4%                  | 37.0% | 0.4% | 0.99  |  |  |  |
| Window 494 | Habitable     | 10.1%                  | 10.1% | 0.0% | 1.0   |  |  |  |
| Window 495 | Habitable     | 7.6%                   | 5.0%  | 2.6% | 0.66  |  |  |  |
| Window 496 | Habitable     | 10.0%                  | 7.0%  | 3.0% | 0.7   |  |  |  |
| Window 497 | Habitable     | 11.5%                  | 9.4%  | 2.1% | 0.82  |  |  |  |
| Window 498 | Habitable     | 12.1%                  | 10.9% | 1.2% | 0.9   |  |  |  |
| Window 499 | Habitable     | 12.9%                  | 12.4% | 0.5% | 0.96  |  |  |  |
| Window 500 | Habitable     | 13.3%                  | 13.1% | 0.2% | 0.98  |  |  |  |
| Window 501 | Non Habitable | 22.1%                  | 18.8% | 3.3% | 0.85  |  |  |  |
| Window 502 | Habitable     | 7.6%                   | 5.7%  | 1.9% | 0.75  |  |  |  |
| Window 503 | Habitable     | 5.6%                   | 5.6%  | 0.0% | 1.0   |  |  |  |
| Window 504 | Habitable     | 32.2%                  | 29.6% | 2.6% | 0.92  |  |  |  |
| Window 505 | Habitable     | 30.6%                  | 30.6% | 0.0% | 1.0   |  |  |  |
| Window 506 | Habitable     | 6.3%                   | 6.3%  | 0.0% | 1.0   |  |  |  |
| Window 507 | Habitable     | 34.1%                  | 32.3% | 1.8% | 0.95  |  |  |  |
| Window 508 | Habitable     | 6.8%                   | 6.8%  | 0.0% | 1.0   |  |  |  |
| Window 509 | Habitable     | 35.9%                  | 34.9% | 1.0% | 0.97  |  |  |  |
| Window 510 | Habitable     | 37.4%                  | 37.4% | 0.0% | 1.0   |  |  |  |
| Window 511 | Habitable     | 7.1%                   | 7.1%  | 0.0% | 1.0   |  |  |  |
| Window 512 | Habitable     | 37.0%                  | 36.9% | 0.1% | 1.0   |  |  |  |
| Window 513 | Habitable     | 7.2%                   | 7.2%  | 0.0% | 1.0   |  |  |  |
| Window 514 | Habitable     | 37.5%                  | 37.5% | 0.0% | 1.0   |  |  |  |
| Window 515 | Habitable     | 39.2%                  | 39.2% | 0.0% | 1.0   |  |  |  |

|                         |               |        |          |           | Sunlight to | o Windov | VS        |           |       |
|-------------------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------|
| Reference               | Use Class     | Т      | otal Sur | light Hou | urs         | N        | /inter Su | nlight Ho | ours  |
|                         |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio |
| 41 to 87 Robert Street  |               |        |          |           |             |          |           |           |       |
|                         |               | 40/    | 40/      | 00/       | 4.0         | 00/      | 00/       | 00/       | 1.0   |
| Window 44               | Non Habitable | 4%     | 4%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |
| Window 96               | Non Habitable | 29%    | 29%      | 0%        | 1.0         | 13%      | 13%       | 0%        | 1.0   |
| 89 to 141 Robert Street |               |        |          |           |             |          |           |           |       |
| Window 104              | Non Habitable | 5%     | 5%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |
| Window 127              | Non Habitable | 5%     | 5%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |
| Window 154              | Non Habitable | 7%     | 7%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |
| 1 to 77 Patterdale      |               |        |          |           |             |          |           |           |       |
| Window 165              | Habitable     | 76%    | 76%      | 0%        | 1.0         | 20%      | 20%       | 0%        | 1.0   |
| Window 172              | Habitable     | 86%    | 86%      | 0%        | 1.0         | 30%      | 30%       | 0%        | 1.0   |
| Window 179              | Habitable     | 86%    | 86%      | 0%        | 1.0         | 30%      | 30%       | 0%        | 1.0   |
| Window 184              | Habitable     | 25%    | 13%      | 12%       | 0.52        | 7%       | 5%        | 2%        | 0.71  |
| Window 187              | Habitable     | 27%    | 17%      | 10%       | 0.63        | 9%       | 7%        | 2%        | 0.78  |
| Window 190              | Habitable     | 27%    | 20%      | 7%        | 0.74        | 9%       | 7%        | 2%        | 0.78  |
| Window 193              | Habitable     | 27%    | 25%      | 2%        | 0.93        | 9%       | 9%        | 0%        | 1.0   |
| Window 196              | Habitable     | 27%    | 27%      | 0%        | 1.0         | 9%       | 9%        | 0%        | 1.0   |
| Window 225              | Habitable     | 28%    | 13%      | 15%       | 0.46        | 10%      | 4%        | 6%        | 0.4   |
| Window 228              | Habitable     | 28%    | 19%      | 9%        | 0.68        | 10%      | 4%        | 6%        | 0.4   |
| Window 231              | Habitable     | 28%    | 22%      | 6%        | 0.79        | 10%      | 4%        | 6%        | 0.4   |
| Window 234              | Habitable     | 28%    | 26%      | 2%        | 0.93        | 10%      | 8%        | 2%        | 0.8   |
| Window 237              | Habitable     | 27%    | 27%      | 0%        | 1.0         | 9%       | 9%        | 0%        | 1.0   |
| Window 259              | Habitable     | 27%    | 20%      | 7%        | 0.74        | 10%      | 3%        | 7%        | 0.3   |
| Window 262              | Habitable     | 28%    | 24%      | 4%        | 0.86        | 10%      | 6%        | 4%        | 0.6   |
| Window 265              | Habitable     | 28%    | 25%      | 3%        | 0.89        | 10%      | 7%        | 3%        | 0.7   |
| Window 268              | Habitable     | 28%    | 27%      | 1%        | 0.96        | 10%      | 9%        | 1%        | 0.9   |
| Window 271              | Habitable     | 27%    | 27%      | 0%        | 1.0         | 9%       | 9%        | 0%        | 1.0   |
| Window 296              | Habitable     | 22%    | 19%      | 3%        | 0.86        | 8%       | 5%        | 3%        | 0.63  |
| Window 299              | Habitable     | 26%    | 24%      | 2%        | 0.92        | 8%       | 6%        | 2%        | 0.75  |
| Window 302              | Habitable     | 28%    | 27%      | 1%        | 0.96        | 9%       | 8%        | 1%        | 0.89  |
| Window 305              | Habitable     | 28%    | 28%      | 0%        | 1.0         | 9%       | 9%        | 0%        | 1.0   |
| Window 308              | Habitable     | 27%    | 27%      | 0%        | 1.0         | 9%       | 9%        | 0%        | 1.0   |
|                         |               |        |          |           |             |          |           |           |       |

|                         |               |        |          |           | Sunlight to | o Windov | VS        |           |             |  |
|-------------------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------------|--|
| Reference               | Use Class     | Т      | otal Sun | light Hou | urs         | N        | /inter Su | nlight Ho | light Hours |  |
|                         |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio       |  |
| <u>1 to 12 Mosedale</u> |               |        |          |           |             |          |           |           |             |  |
| Window 310              | Habitable     | 10%    | 10%      | 0%        | 1.0         | 3%       | 3%        | 0%        | 1.0         |  |
| Window 311              | Habitable     | 52%    | 40%      | 12%       | 0.77        | 17%      | 5%        | 12%       | 0.29        |  |
| Window 312              | Habitable     | 10%    | 10%      | 0%        | 1.0         | 3%       | 3%        | 0%        | 1.0         |  |
| Window 313              | Habitable     | 53%    | 43%      | 10%       | 0.81        | 18%      | 8%        | 10%       | 0.44        |  |
| Window 314              | Habitable     | 11%    | 11%      | 0%        | 1.0         | 3%       | 3%        | 0%        | 1.0         |  |
| Window 315              | Habitable     | 29%    | 22%      | 7%        | 0.76        | 18%      | 11%       | 7%        | 0.61        |  |
| Window 316              | Non Habitable | 41%    | 32%      | 9%        | 0.78        | 8%       | 0%        | 8%        | 0.0         |  |
| Window 317              | Habitable     | 52%    | 37%      | 15%       | 0.71        | 18%      | 3%        | 15%       | 0.17        |  |
| Window 318              | Habitable     | 55%    | 38%      | 17%       | 0.69        | 18%      | 1%        | 17%       | 0.06        |  |
| Window 319              | Habitable     | 57%    | 45%      | 12%       | 0.79        | 19%      | 7%        | 12%       | 0.37        |  |
| Window 320              | Habitable     | 57%    | 43%      | 14%       | 0.75        | 19%      | 5%        | 14%       | 0.26        |  |
| Window 321              | Habitable     | 34%    | 26%      | 8%        | 0.76        | 19%      | 11%       | 8%        | 0.58        |  |
| Window 322              | Habitable     | 35%    | 26%      | 9%        | 0.74        | 19%      | 10%       | 9%        | 0.53        |  |
| Window 323              | Non Habitable | 58%    | 39%      | 19%       | 0.67        | 21%      | 2%        | 19%       | 0.1         |  |
| Window 324              | Non Habitable | 59%    | 44%      | 15%       | 0.75        | 21%      | 6%        | 15%       | 0.29        |  |
| Window 325              | Non Habitable | 58%    | 46%      | 12%       | 0.79        | 21%      | 9%        | 12%       | 0.43        |  |
| Window 326              | Non Habitable | 44%    | 36%      | 8%        | 0.82        | 7%       | 0%        | 7%        | 0.0         |  |
| Window 327              | Habitable     | 59%    | 39%      | 20%       | 0.66        | 20%      | 0%        | 20%       | 0.0         |  |
| Window 328              | Habitable     | 61%    | 40%      | 21%       | 0.66        | 21%      | 0%        | 21%       | 0.0         |  |
| Window 329              | Habitable     | 62%    | 46%      | 16%       | 0.74        | 21%      | 5%        | 16%       | 0.24        |  |
| Window 330              | Habitable     | 62%    | 46%      | 16%       | 0.74        | 21%      | 5%        | 16%       | 0.24        |  |
| Window 331              | Habitable     | 38%    | 27%      | 11%       | 0.71        | 21%      | 10%       | 11%       | 0.48        |  |
| Window 332              | Habitable     | 43%    | 31%      | 12%       | 0.72        | 22%      | 10%       | 12%       | 0.45        |  |
| Window 333              | Non Habitable | 45%    | 36%      | 9%        | 0.8         | 9%       | 0%        | 9%        | 0.0         |  |
| Window 334              | Habitable     | 60%    | 40%      | 20%       | 0.67        | 21%      | 1%        | 20%       | 0.05        |  |
| Window 335              | Habitable     | 63%    | 47%      | 16%       | 0.75        | 21%      | 5%        | 16%       | 0.24        |  |
| Window 336              | Habitable     | 38%    | 27%      | 11%       | 0.71        | 21%      | 10%       | 11%       | 0.48        |  |
| Window 337              | Non Habitable | 46%    | 38%      | 8%        | 0.83        | 9%       | 1%        | 8%        | 0.11        |  |
| Window 338              | Habitable     | 61%    | 40%      | 21%       | 0.66        | 22%      | 1%        | 21%       | 0.05        |  |
| Window 339              | Habitable     | 66%    | 49%      | 17%       | 0.74        | 22%      | 5%        | 17%       | 0.23        |  |
| Window 340              | Habitable     | 39%    | 27%      | 12%       | 0.69        | 22%      | 10%       | 12%       | 0.45        |  |
| Window 341              | Non Habitable | 46%    | 38%      | 8%        | 0.83        | 9%       | 1%        | 8%        | 0.11        |  |
| Window 342              | Habitable     | 61%    | 41%      | 20%       | 0.67        | 22%      | 2%        | 20%       | 0.09        |  |

|                          |               |        |          |           | Sunlight to | o Windov | VS        |           |       |
|--------------------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------|
| Reference                | Use Class     | Т      | otal Sun | light Hou | urs         | V        | /inter Su | nlight Ho | ours  |
|                          |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio |
| Window 343               | Habitable     | 62%    | 41%      | 21%       | 0.66        | 23%      | 2%        | 21%       | 0.09  |
| Window 344               | Habitable     | 65%    | 49%      | 16%       | 0.75        | 22%      | 6%        | 16%       | 0.27  |
| Window 345               | Habitable     | 66%    | 49%      | 17%       | 0.74        | 23%      | 6%        | 17%       | 0.26  |
| Window 346               | Habitable     | 41%    | 29%      | 12%       | 0.71        | 22%      | 10%       | 12%       | 0.45  |
| Window 347               | Habitable     | 42%    | 31%      | 11%       | 0.74        | 23%      | 12%       | 11%       | 0.52  |
| Window 348               | Non Habitable | 59%    | 40%      | 19%       | 0.68        | 21%      | 2%        | 19%       | 0.1   |
| Window 349               | Non Habitable | 63%    | 47%      | 16%       | 0.75        | 22%      | 6%        | 16%       | 0.27  |
| Window 350               | Non Habitable | 62%    | 51%      | 11%       | 0.82        | 22%      | 11%       | 11%       | 0.5   |
| Window 351               | Non Habitable | 15%    | 7%       | 8%        | 0.47        | 10%      | 2%        | 8%        | 0.2   |
| Window 352               | Habitable     | 60%    | 43%      | 17%       | 0.72        | 22%      | 5%        | 17%       | 0.23  |
| Window 353               | Habitable     | 59%    | 41%      | 18%       | 0.69        | 22%      | 4%        | 18%       | 0.18  |
| Window 354               | Habitable     | 64%    | 49%      | 15%       | 0.77        | 23%      | 8%        | 15%       | 0.35  |
| Window 355               | Habitable     | 64%    | 49%      | 15%       | 0.77        | 23%      | 8%        | 15%       | 0.35  |
| Window 356               | Habitable     | 41%    | 30%      | 11%       | 0.73        | 23%      | 12%       | 11%       | 0.52  |
| Window 357               | Habitable     | 44%    | 33%      | 11%       | 0.75        | 23%      | 12%       | 11%       | 0.52  |
| Window 358               | Habitable     | 58%    | 45%      | 13%       | 0.78        | 21%      | 8%        | 13%       | 0.38  |
| Window 360               | Habitable     | 60%    | 48%      | 12%       | 0.8         | 22%      | 10%       | 12%       | 0.45  |
| Window 362               | Habitable     | 40%    | 32%      | 8%        | 0.8         | 22%      | 14%       | 8%        | 0.64  |
| <u>1 to 23 Grisedale</u> |               |        |          |           |             |          |           |           |       |
| Window 364               | Habitable     | 36%    | 32%      | 4%        | 0.89        | 14%      | 10%       | 4%        | 0.71  |
| Window 365               | Habitable     | 41%    | 38%      | 3%        | 0.93        | 14%      | 11%       | 3%        | 0.79  |
| Window 366               | Habitable     | 53%    | 51%      | 2%        | 0.96        | 17%      | 15%       | 2%        | 0.88  |
| Window 367               | Habitable     | 55%    | 53%      | 2%        | 0.96        | 18%      | 16%       | 2%        | 0.89  |
| Window 368               | Habitable     | 59%    | 59%      | 0%        | 1.0         | 20%      | 20%       | 0%        | 1.0   |
| Window 369               | Habitable     | 42%    | 38%      | 4%        | 0.9         | 16%      | 12%       | 4%        | 0.75  |
| Window 370               | Habitable     | 49%    | 45%      | 4%        | 0.92        | 17%      | 13%       | 4%        | 0.76  |
| Window 371               | Habitable     | 50%    | 48%      | 2%        | 0.96        | 17%      | 15%       | 2%        | 0.88  |
| Window 372               | Habitable     | 52%    | 50%      | 2%        | 0.96        | 18%      | 16%       | 2%        | 0.89  |
| Window 373               | Habitable     | 54%    | 54%      | 0%        | 1.0         | 18%      | 18%       | 0%        | 1.0   |
| Window 374               | Habitable     | 48%    | 44%      | 4%        | 0.92        | 17%      | 13%       | 4%        | 0.76  |
| Window 375               | Habitable     | 47%    | 45%      | 2%        | 0.96        | 16%      | 14%       | 2%        | 0.88  |
| Window 376               | Habitable     | 50%    | 48%      | 2%        | 0.96        | 17%      | 15%       | 2%        | 0.88  |
| Window 377               | Habitable     | 50%    | 50%      | 0%        | 1.0         | 16%      | 16%       | 0%        | 1.0   |

|                    |               |        |          |           | Sunlight to | o Windov | VS        |           |       |
|--------------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------|
| Reference          | Use Class     | Т      | otal Sur | light Hou | urs         | N        | /inter Su | nlight Ho | ours  |
|                    |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio |
| 1 to 44 Borrowdale |               |        |          |           |             |          |           |           |       |
| Window 378         | Non Habitable | 27%    | 24%      | 3%        | 0.89        | 9%       | 6%        | 3%        | 0.67  |
| Window 379         | Habitable     | 10%    | 7%       | 3%        | 0.7         | 4%       | 1%        | 3%        | 0.25  |
| Window 380         | Habitable     | 41%    | 38%      | 3%        | 0.93        | 13%      | 10%       | 3%        | 0.77  |
| Window 381         | Habitable     | 22%    | 20%      | 2%        | 0.91        | 7%       | 5%        | 2%        | 0.71  |
| Window 382         | Habitable     | 42%    | 40%      | 2%        | 0.95        | 13%      | 11%       | 2%        | 0.85  |
| Window 383         | Habitable     | 23%    | 20%      | 3%        | 0.87        | 8%       | 5%        | 3%        | 0.63  |
| Window 384         | Habitable     | 43%    | 41%      | 2%        | 0.95        | 13%      | 11%       | 2%        | 0.85  |
| Window 385         | Habitable     | 24%    | 22%      | 2%        | 0.92        | 8%       | 6%        | 2%        | 0.75  |
| Window 386         | Habitable     | 45%    | 44%      | 1%        | 0.98        | 13%      | 12%       | 1%        | 0.92  |
| Window 387         | Habitable     | 24%    | 22%      | 2%        | 0.92        | 8%       | 6%        | 2%        | 0.75  |
| Window 388         | Habitable     | 47%    | 47%      | 0%        | 1.0         | 13%      | 13%       | 0%        | 1.0   |
| Window 389         | Habitable     | 24%    | 24%      | 0%        | 1.0         | 8%       | 8%        | 0%        | 1.0   |
| Window 390         | Habitable     | 10%    | 7%       | 3%        | 0.7         | 4%       | 1%        | 3%        | 0.25  |
| Window 391         | Habitable     | 10%    | 10%      | 0%        | 1.0         | 2%       | 2%        | 0%        | 1.0   |
| Window 392         | Habitable     | 13%    | 12%      | 1%        | 0.92        | 3%       | 2%        | 1%        | 0.67  |
| Window 393         | Habitable     | 14%    | 13%      | 1%        | 0.93        | 3%       | 2%        | 1%        | 0.67  |
| Window 394         | Habitable     | 15%    | 14%      | 1%        | 0.93        | 3%       | 2%        | 1%        | 0.67  |
| Window 395         | Habitable     | 17%    | 17%      | 0%        | 1.0         | 4%       | 4%        | 0%        | 1.0   |
| Window 396         | Non Habitable | 15%    | 14%      | 1%        | 0.93        | 1%       | 0%        | 1%        | 0.01  |
| Window 397         | Habitable     | 7%     | 6%       | 1%        | 0.86        | 2%       | 1%        | 1%        | 0.5   |
| Window 399         | Habitable     | 41%    | 38%      | 3%        | 0.93        | 12%      | 9%        | 3%        | 0.75  |
| Window 401         | Habitable     | 45%    | 42%      | 3%        | 0.93        | 13%      | 10%       | 3%        | 0.77  |
| Window 403         | Habitable     | 46%    | 44%      | 2%        | 0.96        | 13%      | 11%       | 2%        | 0.85  |
| Window 405         | Habitable     | 46%    | 44%      | 2%        | 0.96        | 13%      | 11%       | 2%        | 0.85  |
| Window 407         | Habitable     | 47%    | 47%      | 0%        | 1.0         | 13%      | 13%       | 0%        | 1.0   |
| Window 408         | Non Habitable | 44%    | 40%      | 4%        | 0.91        | 13%      | 9%        | 4%        | 0.69  |
| Window 409         | Non Habitable | 46%    | 43%      | 3%        | 0.93        | 13%      | 10%       | 3%        | 0.77  |
| Window 410         | Non Habitable | 46%    | 44%      | 2%        | 0.96        | 13%      | 11%       | 2%        | 0.85  |
| Window 411         | Non Habitable | 47%    | 46%      | 1%        | 0.98        | 13%      | 12%       | 1%        | 0.92  |
| Window 412         | Non Habitable | 20%    | 16%      | 4%        | 0.8         | 7%       | 3%        | 4%        | 0.43  |
| Window 413         | Non Habitable | 12%    | 8%       | 4%        | 0.67        | 5%       | 1%        | 4%        | 0.2   |
| Window 414         | Non Habitable | 0%     | 0%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |

|            |               |        |          |           | Sunlight to | o Windov | VS        |           |       |
|------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------|
| Reference  | Use Class     | Т      | otal Sun | light Hou | urs         | N        | /inter Su | nlight Ho | ours  |
|            |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio |
| Window 415 | Non Habitable | 20%    | 16%      | 4%        | 0.8         | 7%       | 4%        | 3%        | 0.57  |
| Window 416 | Habitable     | 41%    | 37%      | 4%        | 0.9         | 12%      | 8%        | 4%        | 0.67  |
| Window 417 | Habitable     | 22%    | 19%      | 3%        | 0.86        | 7%       | 4%        | 3%        | 0.57  |
| Window 418 | Habitable     | 44%    | 40%      | 4%        | 0.91        | 13%      | 9%        | 4%        | 0.69  |
| Window 419 | Habitable     | 23%    | 20%      | 3%        | 0.87        | 8%       | 5%        | 3%        | 0.63  |
| Window 420 | Habitable     | 46%    | 43%      | 3%        | 0.93        | 13%      | 10%       | 3%        | 0.77  |
| Window 421 | Habitable     | 24%    | 22%      | 2%        | 0.92        | 8%       | 6%        | 2%        | 0.75  |
| Window 422 | Habitable     | 46%    | 44%      | 2%        | 0.96        | 13%      | 11%       | 2%        | 0.85  |
| Window 423 | Habitable     | 24%    | 23%      | 1%        | 0.96        | 8%       | 7%        | 1%        | 0.88  |
| Window 424 | Habitable     | 47%    | 47%      | 0%        | 1.0         | 13%      | 13%       | 0%        | 1.0   |
| Window 425 | Habitable     | 24%    | 23%      | 1%        | 0.96        | 8%       | 7%        | 1%        | 0.88  |
| Window 426 | Non Habitable | 30%    | 25%      | 5%        | 0.83        | 9%       | 6%        | 3%        | 0.67  |
| Window 427 | Habitable     | 9%     | 6%       | 3%        | 0.67        | 4%       | 1%        | 3%        | 0.25  |
| Window 428 | Habitable     | 9%     | 8%       | 1%        | 0.89        | 1%       | 0%        | 1%        | 0.01  |
| Window 429 | Habitable     | 12%    | 10%      | 2%        | 0.83        | 3%       | 1%        | 2%        | 0.33  |
| Window 430 | Habitable     | 14%    | 13%      | 1%        | 0.93        | 3%       | 2%        | 1%        | 0.67  |
| Window 431 | Habitable     | 14%    | 13%      | 1%        | 0.93        | 3%       | 2%        | 1%        | 0.67  |
| Window 432 | Habitable     | 15%    | 14%      | 1%        | 0.93        | 3%       | 2%        | 1%        | 0.67  |
| Window 433 | Non Habitable | 30%    | 23%      | 7%        | 0.77        | 9%       | 6%        | 3%        | 0.67  |
| Window 434 | Habitable     | 9%     | 5%       | 4%        | 0.56        | 4%       | 1%        | 3%        | 0.25  |
| Window 436 | Habitable     | 42%    | 37%      | 5%        | 0.88        | 13%      | 9%        | 4%        | 0.69  |
| Window 438 | Habitable     | 45%    | 42%      | 3%        | 0.93        | 14%      | 11%       | 3%        | 0.79  |
| Window 440 | Habitable     | 47%    | 45%      | 2%        | 0.96        | 14%      | 12%       | 2%        | 0.86  |
| Window 442 | Habitable     | 47%    | 46%      | 1%        | 0.98        | 14%      | 13%       | 1%        | 0.93  |
| Window 444 | Habitable     | 48%    | 47%      | 1%        | 0.98        | 14%      | 13%       | 1%        | 0.93  |
| Window 445 | Non Habitable | 30%    | 22%      | 8%        | 0.73        | 8%       | 5%        | 3%        | 0.63  |
| Window 446 | Habitable     | 11%    | 5%       | 6%        | 0.45        | 5%       | 1%        | 4%        | 0.2   |
| Window 447 | Habitable     | 44%    | 37%      | 7%        | 0.84        | 14%      | 10%       | 4%        | 0.71  |
| Window 448 | Habitable     | 25%    | 20%      | 5%        | 0.8         | 9%       | 7%        | 2%        | 0.78  |
| Window 449 | Habitable     | 47%    | 43%      | 4%        | 0.91        | 15%      | 12%       | 3%        | 0.8   |
| Window 450 | Habitable     | 26%    | 21%      | 5%        | 0.81        | 10%      | 7%        | 3%        | 0.7   |
| Window 451 | Habitable     | 48%    | 45%      | 3%        | 0.94        | 15%      | 12%       | 3%        | 0.8   |
| Window 452 | Habitable     | 26%    | 22%      | 4%        | 0.85        | 10%      | 7%        | 3%        | 0.7   |

|            |               |        |          |           | Sunlight to | o Windov | VS        |           |       |
|------------|---------------|--------|----------|-----------|-------------|----------|-----------|-----------|-------|
| Reference  | Use Class     | Т      | otal Sun | light Hou | urs         | V        | /inter Su | nlight Ho | ours  |
|            |               | Before | After    | Loss      | Ratio       | Before   | After     | Loss      | Ratio |
| Window 453 | Habitable     | 48%    | 46%      | 2%        | 0.96        | 15%      | 13%       | 2%        | 0.87  |
| Window 454 | Habitable     | 26%    | 23%      | 3%        | 0.88        | 10%      | 7%        | 3%        | 0.7   |
| Window 455 | Habitable     | 49%    | 48%      | 1%        | 0.98        | 15%      | 14%       | 1%        | 0.93  |
| Window 456 | Habitable     | 26%    | 25%      | 1%        | 0.96        | 10%      | 9%        | 1%        | 0.9   |
| Window 457 | Non Habitable | 28%    | 19%      | 9%        | 0.68        | 6%       | 5%        | 1%        | 0.83  |
| Window 458 | Habitable     | 9%     | 3%       | 6%        | 0.33        | 4%       | 2%        | 2%        | 0.5   |
| Window 459 | Habitable     | 11%    | 6%       | 5%        | 0.55        | 4%       | 2%        | 2%        | 0.5   |
| Window 460 | Habitable     | 14%    | 9%       | 5%        | 0.64        | 5%       | 2%        | 3%        | 0.4   |
| Window 461 | Habitable     | 15%    | 11%      | 4%        | 0.73        | 5%       | 2%        | 3%        | 0.4   |
| Window 462 | Habitable     | 16%    | 13%      | 3%        | 0.81        | 5%       | 2%        | 3%        | 0.4   |
| Window 463 | Habitable     | 17%    | 16%      | 1%        | 0.94        | 5%       | 4%        | 1%        | 0.8   |
| Window 464 | Non Habitable | 18%    | 10%      | 8%        | 0.56        | 4%       | 3%        | 1%        | 0.75  |
| Window 465 | Non Habitable | 10%    | 5%       | 5%        | 0.5         | 3%       | 2%        | 1%        | 0.67  |
| Window 466 | Non Habitable | 0%     | 0%       | 0%        | 1.0         | 0%       | 0%        | 0%        | 1.0   |
| Window 467 | Non Habitable | 4%     | 2%       | 2%        | 0.5         | 0%       | 0%        | 0%        | 1.0   |
| Window 469 | Habitable     | 44%    | 38%      | 6%        | 0.86        | 14%      | 12%       | 2%        | 0.86  |
| Window 471 | Habitable     | 46%    | 41%      | 5%        | 0.89        | 15%      | 13%       | 2%        | 0.87  |
| Window 473 | Habitable     | 47%    | 44%      | 3%        | 0.94        | 15%      | 13%       | 2%        | 0.87  |
| Window 475 | Habitable     | 47%    | 45%      | 2%        | 0.96        | 15%      | 13%       | 2%        | 0.87  |
| Window 477 | Habitable     | 49%    | 48%      | 1%        | 0.98        | 15%      | 14%       | 1%        | 0.93  |
| Window 478 | Non Habitable | 45%    | 39%      | 6%        | 0.87        | 14%      | 12%       | 2%        | 0.86  |
| Window 479 | Non Habitable | 46%    | 43%      | 3%        | 0.93        | 15%      | 13%       | 2%        | 0.87  |
| Window 480 | Non Habitable | 47%    | 45%      | 2%        | 0.96        | 15%      | 13%       | 2%        | 0.87  |
| Window 481 | Non Habitable | 48%    | 47%      | 1%        | 0.98        | 15%      | 14%       | 1%        | 0.93  |
| Window 482 | Non Habitable | 49%    | 49%      | 0%        | 1.0         | 15%      | 15%       | 0%        | 1.0   |
| Window 483 | Non Habitable | 28%    | 20%      | 8%        | 0.71        | 6%       | 5%        | 1%        | 0.83  |
| Window 484 | Habitable     | 8%     | 3%       | 5%        | 0.38        | 3%       | 2%        | 1%        | 0.67  |
| Window 485 | Habitable     | 43%    | 35%      | 8%        | 0.81        | 13%      | 11%       | 2%        | 0.85  |
| Window 486 | Habitable     | 23%    | 21%      | 2%        | 0.91        | 7%       | 7%        | 0%        | 1.0   |
| Window 487 | Habitable     | 46%    | 40%      | 6%        | 0.87        | 15%      | 13%       | 2%        | 0.87  |
| Window 488 | Habitable     | 26%    | 24%      | 2%        | 0.92        | 10%      | 10%       | 0%        | 1.0   |
| Window 489 | Habitable     | 47%    | 45%      | 2%        | 0.96        | 15%      | 13%       | 2%        | 0.87  |
| Window 490 | Habitable     | 26%    | 26%      | 0%        | 1.0         | 10%      | 10%       | 0%        | 1.0   |

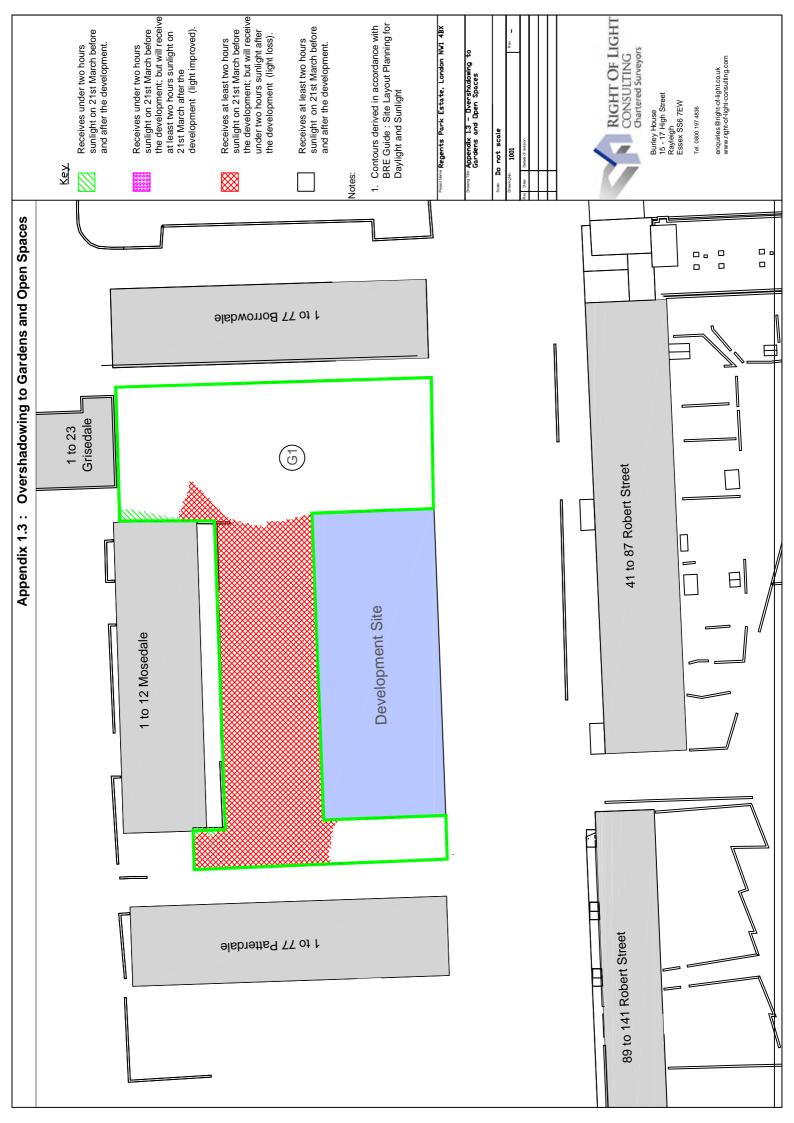
|            |               | Sunlight to Windows  |       |      |       |                       |       |      |       |
|------------|---------------|----------------------|-------|------|-------|-----------------------|-------|------|-------|
| Reference  | Use Class     | Total Sunlight Hours |       |      |       | Winter Sunlight Hours |       |      |       |
|            |               | Before               | After | Loss | Ratio | Before                | After | Loss | Ratio |
| Window 491 | Habitable     | 47%                  | 46%   | 1%   | 0.98  | 15%                   | 14%   | 1%   | 0.93  |
| Window 492 | Habitable     | 26%                  | 26%   | 0%   | 1.0   | 10%                   | 10%   | 0%   | 1.0   |
| Window 493 | Habitable     | 49%                  | 49%   | 0%   | 1.0   | 15%                   | 15%   | 0%   | 1.0   |
| Window 494 | Habitable     | 26%                  | 26%   | 0%   | 1.0   | 10%                   | 10%   | 0%   | 1.0   |
| Window 495 | Habitable     | 10%                  | 7%    | 3%   | 0.7   | 4%                    | 4%    | 0%   | 1.0   |
| Window 496 | Habitable     | 11%                  | 8%    | 3%   | 0.73  | 3%                    | 3%    | 0%   | 1.0   |
| Window 497 | Habitable     | 15%                  | 13%   | 2%   | 0.87  | 5%                    | 5%    | 0%   | 1.0   |
| Window 498 | Habitable     | 15%                  | 13%   | 2%   | 0.87  | 5%                    | 5%    | 0%   | 1.0   |
| Window 499 | Habitable     | 15%                  | 15%   | 0%   | 1.0   | 5%                    | 5%    | 0%   | 1.0   |
| Window 500 | Habitable     | 17%                  | 17%   | 0%   | 1.0   | 5%                    | 5%    | 0%   | 1.0   |
| Window 501 | Non Habitable | 23%                  | 21%   | 2%   | 0.91  | 1%                    | 1%    | 0%   | 1.0   |
| Window 502 | Habitable     | 8%                   | 7%    | 1%   | 0.88  | 3%                    | 3%    | 0%   | 1.0   |
| Window 504 | Habitable     | 39%                  | 37%   | 2%   | 0.95  | 10%                   | 10%   | 0%   | 1.0   |
| Window 505 | Habitable     | 75%                  | 75%   | 0%   | 1.0   | 19%                   | 19%   | 0%   | 1.0   |
| Window 507 | Habitable     | 44%                  | 42%   | 2%   | 0.95  | 14%                   | 14%   | 0%   | 1.0   |
| Window 509 | Habitable     | 46%                  | 44%   | 2%   | 0.96  | 15%                   | 15%   | 0%   | 1.0   |
| Window 510 | Habitable     | 84%                  | 84%   | 0%   | 1.0   | 28%                   | 28%   | 0%   | 1.0   |
| Window 512 | Habitable     | 46%                  | 46%   | 0%   | 1.0   | 15%                   | 15%   | 0%   | 1.0   |
| Window 514 | Habitable     | 48%                  | 48%   | 0%   | 1.0   | 15%                   | 15%   | 0%   | 1.0   |
| Window 515 | Habitable     | 86%                  | 86%   | 0%   | 1.0   | 30%                   | 30%   | 0%   | 1.0   |

#### Appendix 1.2 - Overshadowing to Gardens and Open Spaces Regents Park Estate, London NW1 4BX

| Reference     | Total Area | Area receiving at least two hours of sunlight on 21st March |               |               |       |  |  |  |  |
|---------------|------------|---|---------------|---------------|-------|--|--|--|--|
|               |            | Before  | After         | Loss          | Ratio |  |  |  |  |
| Amenity Space |            |   |               |               |       |  |  |  |  |
| Garden 1      | 1308.48 m2 | 1293.1 m2 99%   | 723.91 m2 55% | 569.19 m2 44% | 0.56  |  |  |  |  |

**APPENDIX 1.3** 

OVERSHADOWING TO GARDENS AND OPEN SPACES



**APPENDIX 1.4** 

ALTERNATIVE DAYLIGHT AND SUNLIGHT RESULTS

| Reference                 | Use Class | Vertical Sky Component |       |       |       |  |  |
|---------------------------|-----------|------------------------|-------|-------|-------|--|--|
|                           |           | Before                 | After | Loss  | Ratio |  |  |
| 41 to 87 Robert Street    |           |                        |       |       |       |  |  |
| Window 27                 | Habitable | 28.0%                  | 25.2% | 2.8%  | 0.9   |  |  |
| Window 28                 | Habitable | 27.9%                  | 24.9% | 3.0%  | 0.89  |  |  |
| Window 49                 | Habitable | 29.4%                  | 25.0% | 4.4%  | 0.85  |  |  |
| Window 50                 | Habitable | 29.5%                  | 24.3% | 5.2%  | 0.82  |  |  |
| Window 53                 | Habitable | 32.2%                  | 29.1% | 3.1%  | 0.9   |  |  |
| Window 54                 | Habitable | 32.3%                  | 28.8% | 3.5%  | 0.89  |  |  |
| Window 61                 | Habitable | 29.6%                  | 23.1% | 6.5%  | 0.78  |  |  |
| Window 62                 | Habitable | 29.7%                  | 22.7% | 7.0%  | 0.76  |  |  |
| Window 65                 | Habitable | 32.5%                  | 28.1% | 4.4%  | 0.86  |  |  |
| Window 66                 | Habitable | 32.5%                  | 27.8% | 4.7%  | 0.86  |  |  |
| Window 73                 | Habitable | 29.6%                  | 22.2% | 7.4%  | 0.75  |  |  |
| Window 74                 | Habitable | 29.5%                  | 22.1% | 7.4%  | 0.75  |  |  |
| Window 77                 | Habitable | 32.5%                  | 27.6% | 4.9%  | 0.85  |  |  |
| Window 78                 | Habitable | 32.4%                  | 27.5% | 4.9%  | 0.85  |  |  |
| Window 85                 | Habitable | 29.1%                  | 21.8% | 7.3%  | 0.75  |  |  |
| Window 86                 | Habitable | 28.7%                  | 21.5% | 7.2%  | 0.75  |  |  |
| Window 89                 | Habitable | 32.0%                  | 27.2% | 4.8%  | 0.85  |  |  |
| Window 90                 | Habitable | 31.7%                  | 27.0% | 4.7%  | 0.85  |  |  |
| <u>1 to 77 Patterdale</u> |           |                        |       |       |       |  |  |
| Window 167                | Habitable | 35.5%                  | 33.2% | 2.3%  | 0.94  |  |  |
| Window 168                | Habitable | 33.5%                  | 23.5% | 10.0% | 0.7   |  |  |
| Window 170                | Habitable | 36.5%                  | 34.7% | 1.8%  | 0.95  |  |  |
| Window 171                | Habitable | 35.2%                  | 27.1% | 8.1%  | 0.77  |  |  |
| Window 175                | Habitable | 36.6%                  | 31.2% | 5.4%  | 0.85  |  |  |
| Window 183                | Habitable | 33.5%                  | 23.1% | 10.4% | 0.69  |  |  |
| Window 186                | Habitable | 35.2%                  | 26.7% | 8.5%  | 0.76  |  |  |
| Window 189                | Habitable | 36.6%                  | 30.9% | 5.7%  | 0.84  |  |  |
| Window 224                | Habitable | 33.2%                  | 26.5% | 6.7%  | 0.8   |  |  |
| Window 225                | Habitable | 34.4%                  | 29.7% | 4.7%  | 0.86  |  |  |

Г

| Reference                 | Use Class | Vertical Sky Component |       |      |       |  |  |  |
|---------------------------|-----------|------------------------|-------|------|-------|--|--|--|
|                           |           | Before                 | After | Loss | Ratio |  |  |  |
| Window 227                | Habitable | 35.0%                  | 29.6% | 5.4% | 0.85  |  |  |  |
| Window 228                | Habitable | 36.3%                  | 32.4% | 3.9% | 0.89  |  |  |  |
| Window 230                | Habitable | 36.4%                  | 32.5% | 3.9% | 0.89  |  |  |  |
| Window 231                | Habitable | 38.0%                  | 35.0% | 3.0% | 0.92  |  |  |  |
| Window 258                | Habitable | 32.3%                  | 28.4% | 3.9% | 0.88  |  |  |  |
| Window 259                | Habitable | 34.7%                  | 30.7% | 4.0% | 0.88  |  |  |  |
| Window 261                | Habitable | 34.7%                  | 31.6% | 3.1% | 0.91  |  |  |  |
| Window 262                | Habitable | 36.3%                  | 32.9% | 3.4% | 0.91  |  |  |  |
| Window 265                | Habitable | 37.6%                  | 35.2% | 2.4% | 0.94  |  |  |  |
| Window 296                | Habitable | 34.2%                  | 31.4% | 2.8% | 0.92  |  |  |  |
| Window 299                | Habitable | 35.9%                  | 33.5% | 2.4% | 0.93  |  |  |  |
| <u>1 to 12 Mosedale</u>   |           |                        |       |      |       |  |  |  |
| Window 315                | Habitable | 27.1%                  | 21.2% | 5.9% | 0.78  |  |  |  |
| Window 321                | Habitable | 28.9%                  | 21.9% | 7.0% | 0.76  |  |  |  |
| Window 322                | Habitable | 29.5%                  | 22.0% | 7.5% | 0.75  |  |  |  |
| Window 331                | Habitable | 31.9%                  | 22.9% | 9.0% | 0.72  |  |  |  |
| Window 332                | Habitable | 32.2%                  | 23.0% | 9.2% | 0.71  |  |  |  |
| Window 336                | Habitable | 32.9%                  | 23.6% | 9.3% | 0.72  |  |  |  |
| Window 340                | Habitable | 33.2%                  | 24.0% | 9.2% | 0.72  |  |  |  |
| Window 346                | Habitable | 33.4%                  | 24.3% | 9.1% | 0.73  |  |  |  |
| Window 347                | Habitable | 33.4%                  | 24.4% | 9.0% | 0.73  |  |  |  |
| Window 356                | Habitable | 32.8%                  | 25.2% | 7.6% | 0.77  |  |  |  |
| Window 357                | Habitable | 32.6%                  | 25.3% | 7.3% | 0.78  |  |  |  |
| <u>1 to 44 Borrowdale</u> |           |                        |       |      |       |  |  |  |
| Window 379                | Habitable | 18.8%                  | 16.9% | 1.9% | 0.9   |  |  |  |
| Window 390                | Habitable | 21.5%                  | 19.4% | 2.1% | 0.9   |  |  |  |
| Window 397                | Habitable | 23.7%                  | 21.4% | 2.3% | 0.9   |  |  |  |
| Window 417                | Habitable | 35.0%                  | 33.0% | 2.0% | 0.94  |  |  |  |
| Window 427                | Habitable | 27.6%                  | 24.5% | 3.1% | 0.89  |  |  |  |
| Window 428                | Habitable | 30.0%                  | 27.3% | 2.7% | 0.91  |  |  |  |
| Window 434                | Habitable | 28.6%                  | 25.1% | 3.5% | 0.88  |  |  |  |
| Window 446                | Habitable | 29.2%                  | 25.5% | 3.7% | 0.87  |  |  |  |
| Window 458                | Habitable | 29.8%                  | 25.8% | 4.0% | 0.87  |  |  |  |
| Window 459                | Habitable | 31.8%                  | 28.4% | 3.4% | 0.89  |  |  |  |
| Window 460                | Habitable | 33.6%                  | 30.9% | 2.7% | 0.92  |  |  |  |
| Window 484                | Habitable | 30.5%                  | 26.4% | 4.1% | 0.87  |  |  |  |
| Window 496                | Habitable | 32.4%                  | 29.4% | 3.0% | 0.91  |  |  |  |

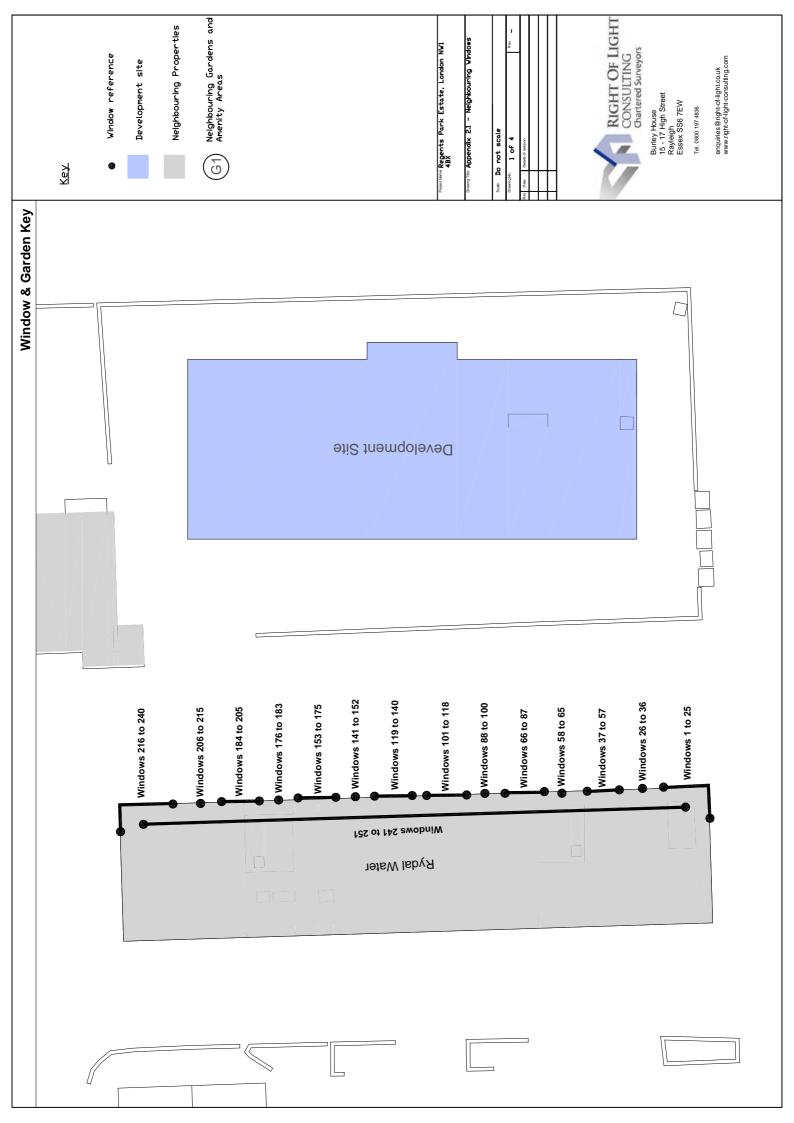
|  |           | Sunlight to Windows  |       |      |       |                       |       |      |       |
|--|-----------|----------------------|-------|------|-------|-----------------------|-------|------|-------|
| Reference  | Use Class | Total Sunlight Hours |       |      |       | Winter Sunlight Hours |       |      |       |
|  |           | Before               | After | Loss | Ratio | Before                | After | Loss | Ratio |
| <u>1 to 77 Patterdale</u>  |           |                      |       |      |       |                       |       |      |       |
| Window 184   | Habitable | 80%                  | 68%   | 12%  | 0.85  | 24%                   | 22%   | 2%   | 0.92  |
| Window 187   | Habitable | 85%                  | 75%   | 10%  | 0.88  | 29%                   | 27%   | 2%   | 0.93  |
| Window 190   | Habitable | 86%                  | 79%   | 7%   | 0.92  | 30%                   | 28%   | 2%   | 0.93  |
| Window 225   | Habitable | 80%                  | 65%   | 15%  | 0.81  | 27%                   | 21%   | 6%   | 0.78  |
| Window 228   | Habitable | 82%                  | 73%   | 9%   | 0.89  | 28%                   | 22%   | 6%   | 0.79  |
| Window 231   | Habitable | 83%                  | 77%   | 6%   | 0.93  | 28%                   | 22%   | 6%   | 0.79  |
| Window 259   | Habitable | 78%                  | 71%   | 7%   | 0.91  | 27%                   | 20%   | 7%   | 0.74  |
| <u>1 to 12 Mosedale</u><br>Window 315<br><u>1 to 44 Borrowdale</u> | Habitable | 53%                  | 46%   | 7%   | 0.87  | 18%                   | 11%   | 7%   | 0.61  |
| Window 446   | Habitable | 43%                  | 35%   | 8%   | 0.81  | 13%                   | 9%    | 4%   | 0.69  |
| Window 458   | Habitable | 42%                  | 34%   | 8%   | 0.81  | 13%                   | 11%   | 2%   | 0.85  |
| Window 459   | Habitable | 43%                  | 38%   | 5%   | 0.88  | 14%                   | 12%   | 2%   | 0.86  |
| Window 460   | Habitable | 46%                  | 41%   | 5%   | 0.89  | 15%                   | 12%   | 3%   | 0.8   |
| Window 484   | Habitable | 39%                  | 32%   | 7%   | 0.82  | 10%                   | 9%    | 1%   | 0.9   |

## **APPENDIX 2**

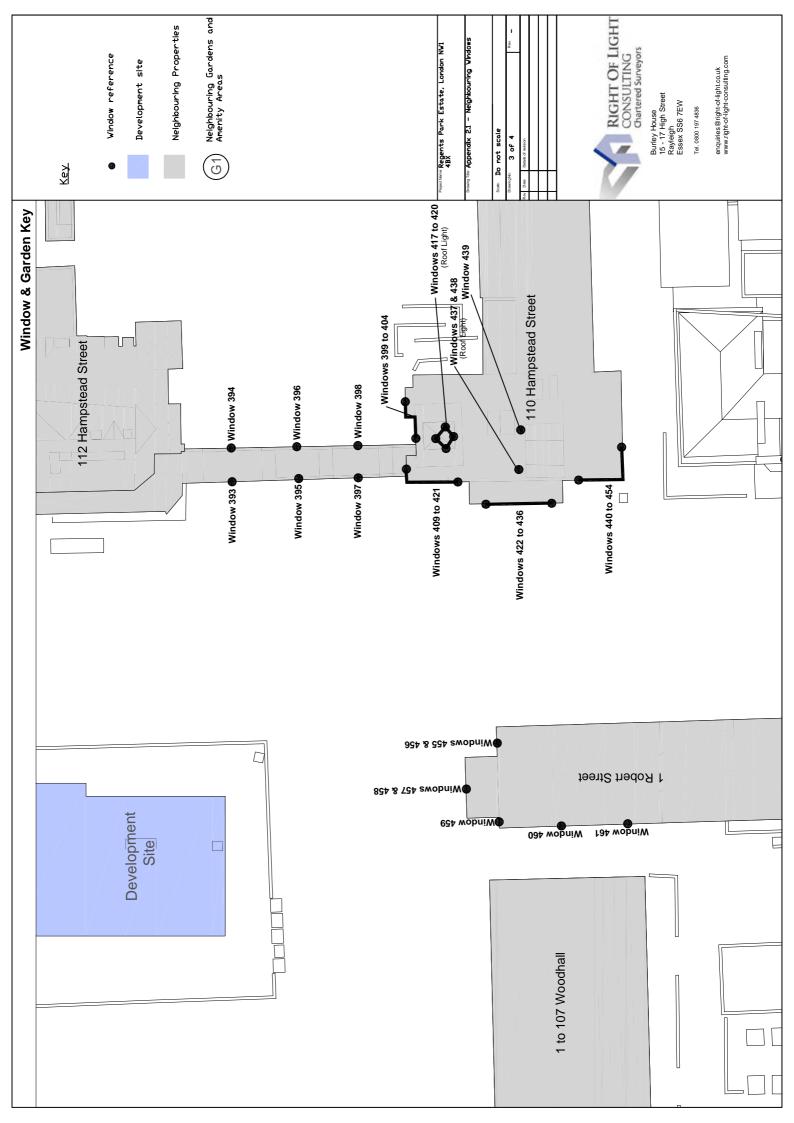
FORMER ONE STOP SHOP

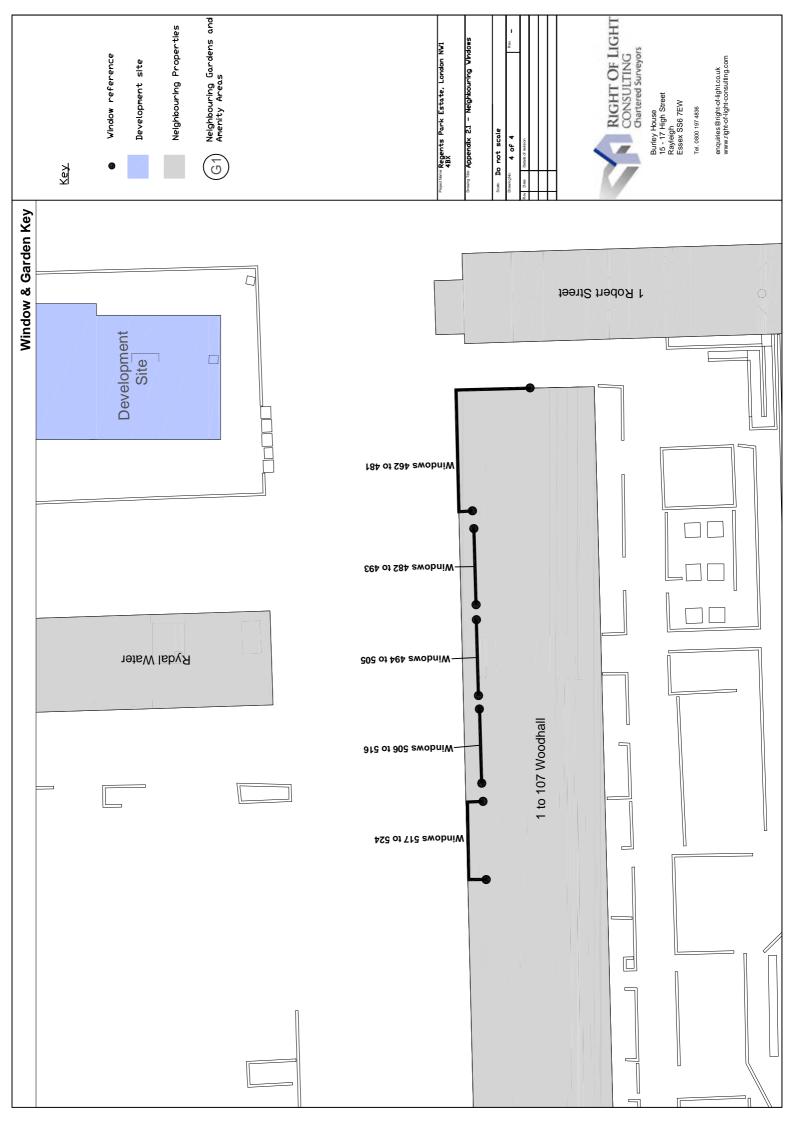
#### **APPENDIX 2.1**

WINDOW & GARDEN KEY





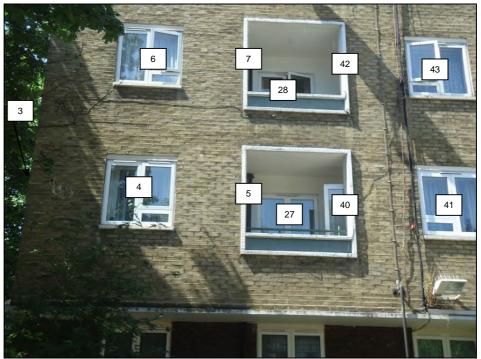




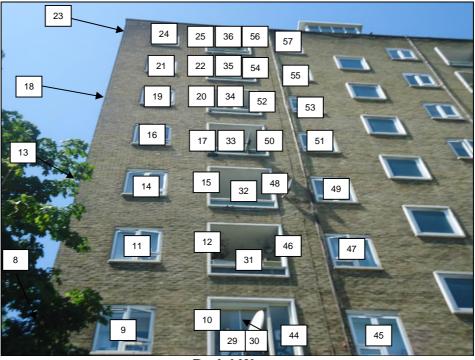
# Neighbouring Windows



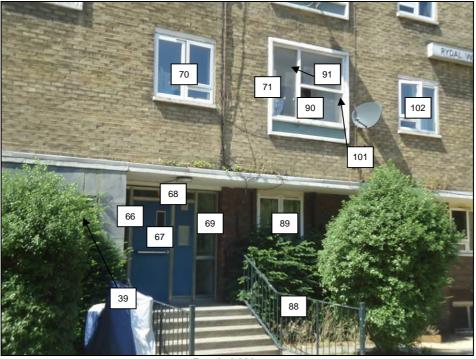
Rydal Water



**Rydal Water** 



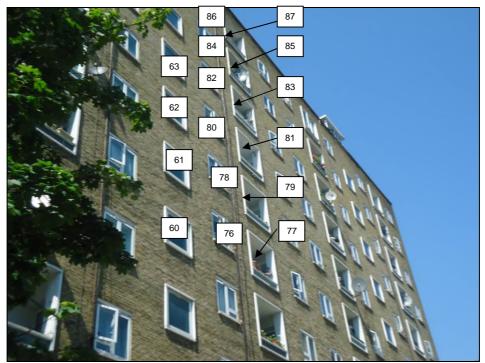
Rydal Water



Rydal Water



Rydal Water



Rydal Water



Rydal Water



Rydal Water



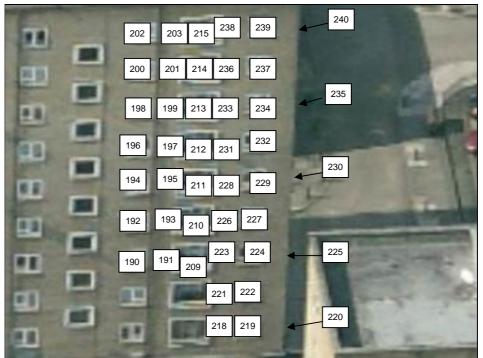
**Rydal Water** 



**Rydal Water** 



Rydal Water



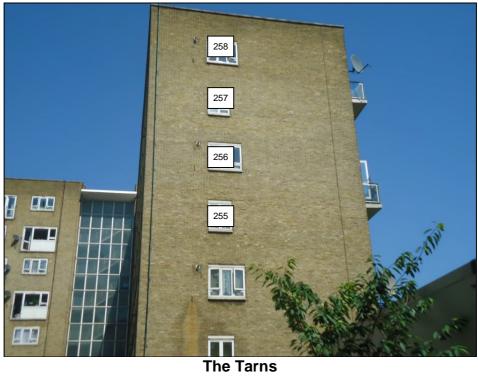
Rydal Water

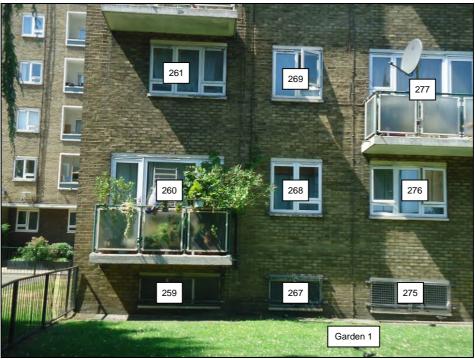


Rydal Water



The Tarns





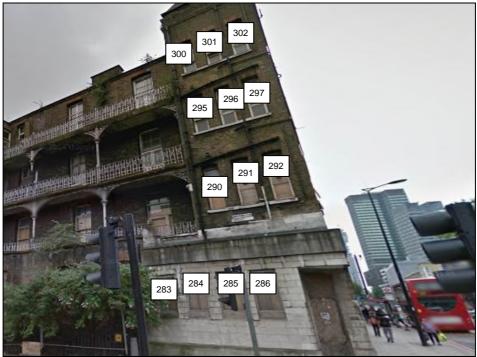
The Tarns



The Tarns



The Tarns



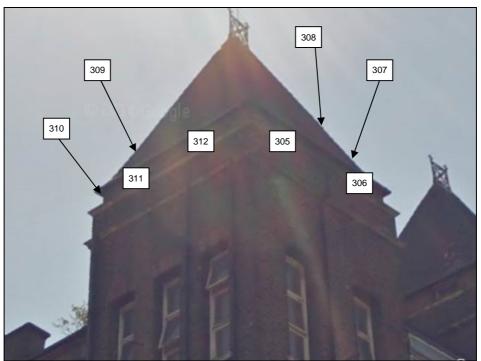
112 Hampstead Street



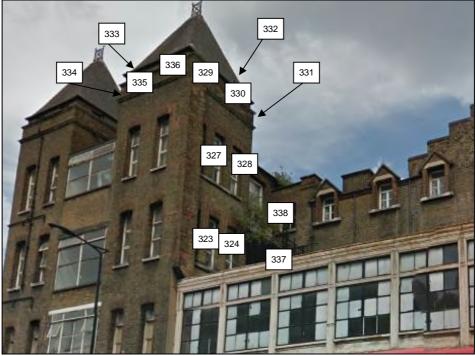
112 Hampstead Street



112 Hampstead Street



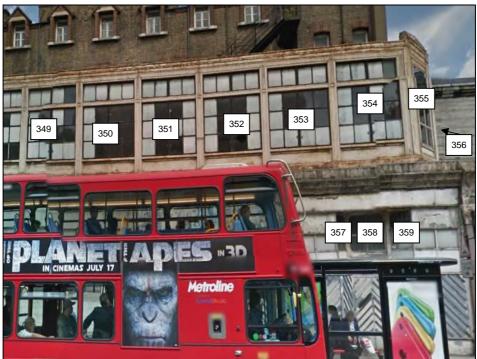
112 Hampstead Street



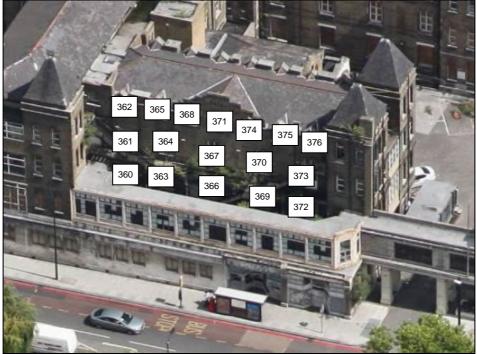
**112 Hampstead Street** 



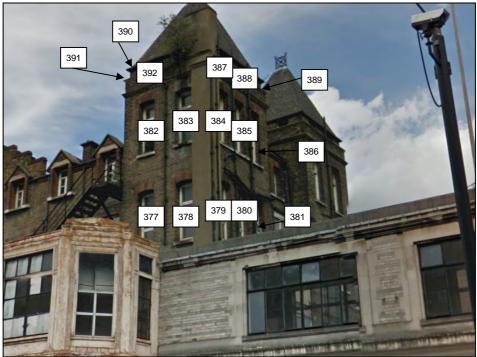
112 Hampstead Street



112 Hampstead Street



112 Hampstead Street



112 Hampstead Street



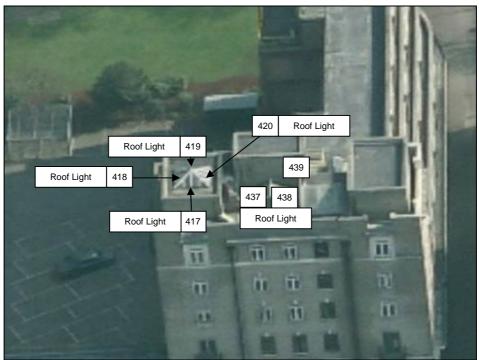
112 Hampstead Street



112 Hampstead Street



110 Hampstead Street



110 Hampstead Street



110 Hampstead Street



110 Hampstead Street



**1 Robert Street**