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# Daylight and Sunlight Study 6 Coptic Street, London WC1A 1NH

28 March 2017



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#### 1 EXECUTIVE SUMMARY

#### 1.1 Overview

- 1.1.1 Right of Light Consulting has been commissioned by City Investment Properties Ltd to undertake a daylight and sunlight study of the proposed development at 6 Coptic Street, London WC1A 1NH.
- 1.1.2 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring properties at 5, 7, 30 & 27 to 31 Coptic Street and 21 to 40 Streatham Chambers. 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 key in Appendix 1 identifies the windows analysed in this study. Appendix 2 gives the numerical results of the various daylight and sunlight tests. The results confirm that all neighbouring windows pass the BRE diffuse daylight and direct sunlight tests. The development also satisfies the BRE overshadowing to gardens and open spaces requirements.
- 1.1.4 In summary, the proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in the BRE guide 'Site Layout Planning for Daylight and Sunlight'.

## 2 INFORMATION SOURCES

#### 2.1 Documents Considered

## 2.1.1 This report is based on drawings:

CTP/ P14/ /A/ 8400408

| <u>FDR</u>                                                                                                           |                                                                                                                                                                                   |                                                                      |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 010<br>011<br>012<br>013<br>020<br>021<br>022<br>023                                                                 | Existing Plans Existing Second & Third Floor Plans Existing Elevations Existing Sections Proposed Plans Proposed Second & Third Floor Plans Proposed Elevations Proposed Sections | Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev – |
| Avanti Archite                                                                                                       | ects limited                                                                                                                                                                      |                                                                      |
| 8712 /P 100<br>8712 /P 101<br>8712 /P 008<br>8712 /P 009<br>8712 /P 010<br>8712 /P 011<br>8712 /P 012<br>8712 /P 013 |                                                                                                                                                                                   | Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –<br>Rev –          |
| Chatered Sur                                                                                                         | <u>veyors</u>                                                                                                                                                                     |                                                                      |

Section Through North Party Wall

Rev -

#### 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.

#### 4 RESULTS OF THE STUDY

#### 4.1 Windows & Amenity Areas Considered

4.1.1 Appendix 1 provides a plan and photographs to indicate the positions of the windows and gardens analysed in this study.

#### 4.2 Numerical Results

4.2.1 Appendix 2 lists the detailed numerical daylight and sunlight test results. The results are interpreted below.

#### 4.3 Daylight to Windows

4.3.1 All windows pass the Vertical Sky Component test. The proposed development therefore satisfies the BRE daylight requirements.

#### 4.4 Sunlight to Windows

4.4.1 All windows which face within 90 degrees of due south have been tested for direct sunlight. 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 requirements.

#### 4.5 Overshadowing to Gardens and Open Spaces

4.5.1 The proposed development will not create any new areas which receive less than two hours of sunlight on 21 March. The before/after ratio is 1 (no loss) and the proposed development therefore passes the BRE overshadowing to gardens and open spaces test.

#### 4.6 Conclusion

4.6.1 The proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in the BRE guide 'Site Layout Planning for Daylight and Sunlight'.

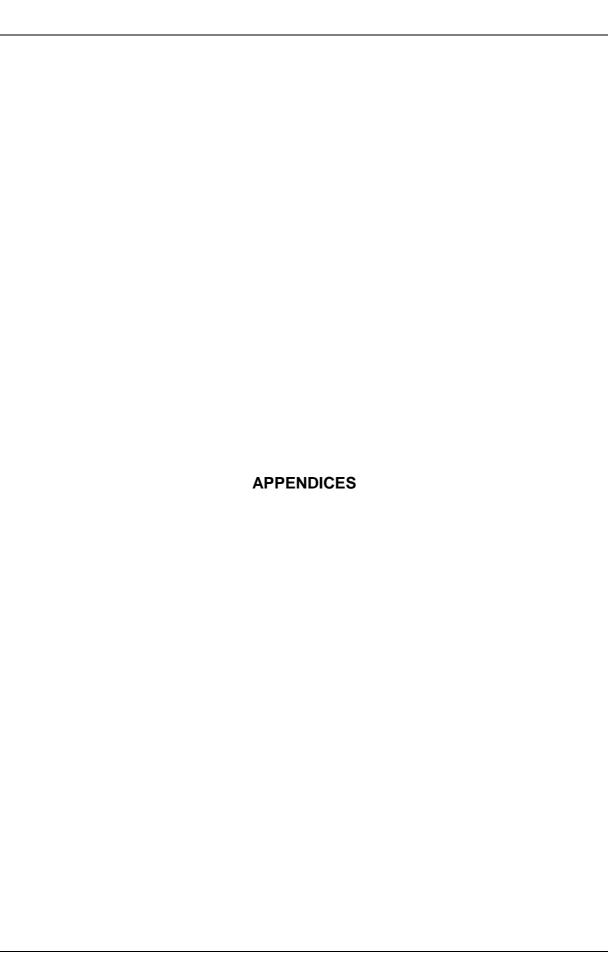
#### 5 CLARIFICATIONS

#### 5.1 General

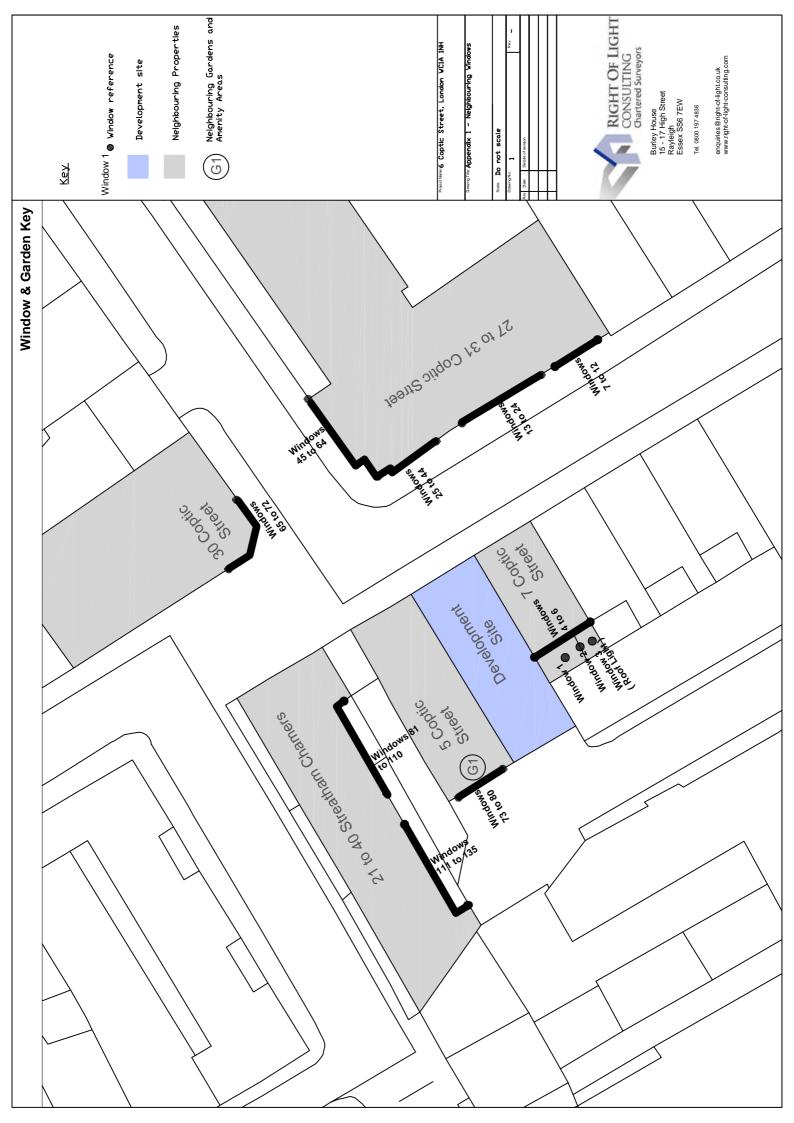
- 5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.
- 5.1.2 We have undertaken the survey following the guidelines of the RICS publication "Surveying Safely".
- 5.1.3 We have used our best endeavours to ensure all relevant windows within the neighbouring properties have been identified.
- 5.1.4 Where limited access is available, 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 This report is based upon and subject to the scope of work set out in Right of Light Consulting's quotation and standard terms and conditions.
- 5.1.7 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



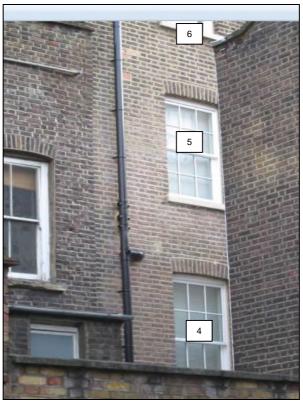
|   | APPENDIX 1          |  |
|---|---------------------|--|
| W | /INDOW & GARDEN KEY |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |
|   |                     |  |



## **Neighbouring Windows**



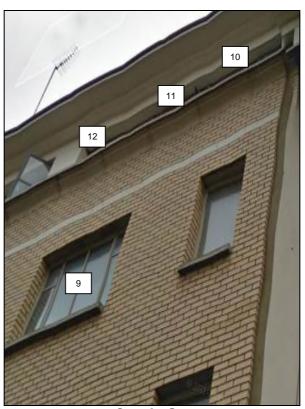
7 Coptic Street



7 Coptic Street



27 Coptic Street



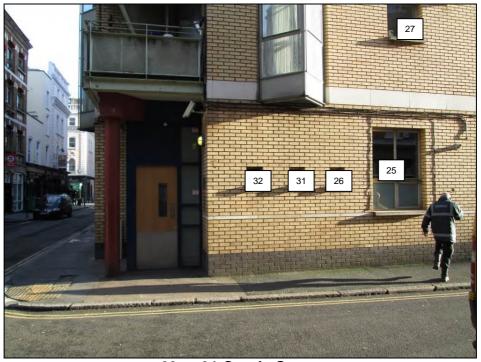
27 Coptic Street



29 to 31 Coptic Street



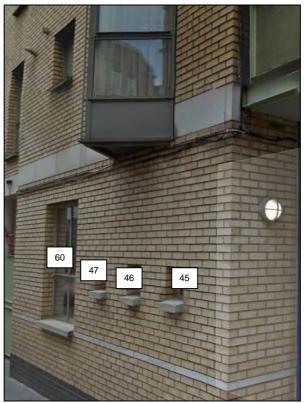
29 to 31 Coptic Street



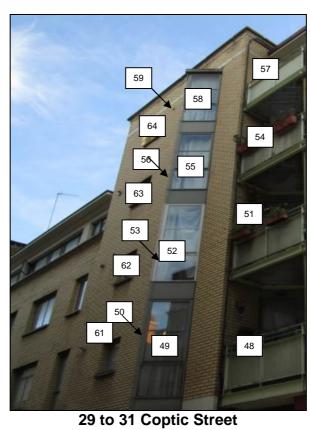
29 to 31 Coptic Street



29 to 31 Coptic Street



29 to 31 Coptic Street

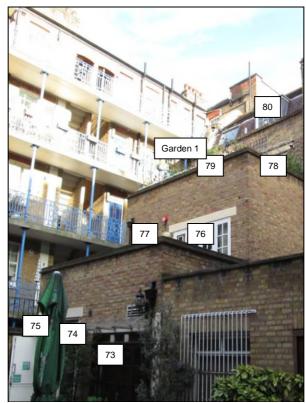




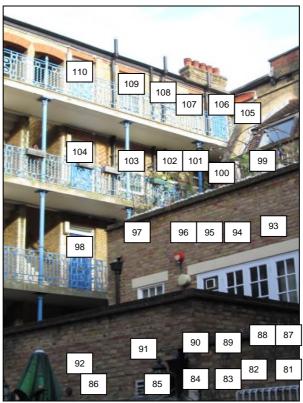
30 Coptic Street



30 Coptic Street



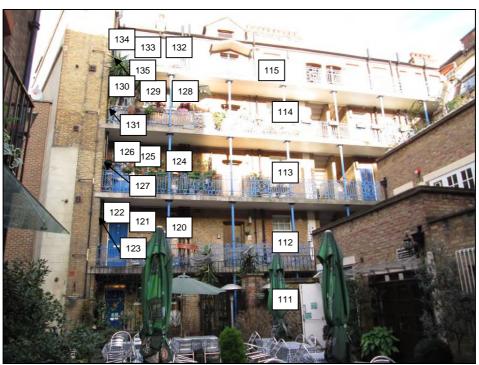
5 Coptic Street



21 to 40 Streatham Chambers



21 to 40 Streatham Chambers



21 to 40 Streatham Chambers

| APPENDIX 2               |       |
|--------------------------|-------|
| DAYLIGHT AND SUNLIGHT RE | SULTS |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |
|                          |       |

| Reference Use Class    |           | Vertical Sky Component |       |       |       |
|------------------------|-----------|------------------------|-------|-------|-------|
| Neierence              | Use Class | Before                 | After | Loss  | Ratio |
|                        |           |                        |       |       |       |
| 7 Coptic Street        |           |                        |       |       |       |
| Window 1               | Habitable | 6.8%                   | 6.8%  | 0.0%  | 1.0   |
| Window 2               | Habitable | 6.8%                   | 6.8%  | 0.0%  | 1.0   |
| Window 3               | Habitable | 25.7%                  | 25.7% | 0.0%  | 1.0   |
| Window 4               | Habitable | 25.9%                  | 25.9% | 0.0%  | 1.0   |
| Window 5               | Habitable | 29.6%                  | 29.6% | 0.0%  | 1.0   |
| Window 6               | Habitable | 33.0%                  | 33.0% | 0.0%  | 1.0   |
| 27 to 31 Coptic Street |           |                        |       |       |       |
| Window 7               | Habitable | 9.2%                   | 9.2%  | 0.0%  | 1.0   |
| Window 8               | Habitable | 11.5%                  | 11.5% | 0.0%  | 1.0   |
| Window 9               | Habitable | 15.5%                  | 15.5% | 0.0%  | 1.0   |
| Window 10              | Habitable | 21.2%                  | 21.2% | 0.0%  | 1.0   |
| Window 11              | Habitable | 21.4%                  | 21.4% | 0.0%  | 1.0   |
| Window 12              | Habitable | 21.6%                  | 21.6% | 0.0%  | 1.0   |
| Window 13              | Habitable | 9.2%                   | 9.2%  | 0.0%  | 1.0   |
| Window 14              | Habitable | 11.8%                  | 11.8% | 0.0%  | 1.0   |
| Window 15              | Habitable | 16.1%                  | 16.2% | -0.1% | 1.01  |
| Window 16              | Habitable | 21.8%                  | 21.8% | 0.0%  | 1.0   |
| Window 17              | Habitable | 22.1%                  | 22.1% | 0.0%  | 1.0   |
| Window 18              | Habitable | 22.5%                  | 22.5% | 0.0%  | 1.0   |
| Window 19              | Habitable | 8.6%                   | 8.6%  | 0.0%  | 1.0   |
| Window 20              | Habitable | 8.3%                   | 8.4%  | -0.1% | 1.01  |
| Window 21              | Habitable | 9.9%                   | 10.0% | -0.1% | 1.01  |
| Window 22              | Habitable | 12.2%                  | 12.3% | -0.1% | 1.01  |
| Window 23              | Habitable | 16.9%                  | 17.0% | -0.1% | 1.01  |
| Window 24              | Habitable | 23.1%                  | 23.1% | 0.0%  | 1.0   |
| Window 25              | Kitchen   | 9.8%                   | 9.9%  | -0.1% | 1.01  |
| Window 26              | Kitchen   | 9.6%                   | 9.7%  | -0.1% | 1.01  |
| Window 27              | Kitchen   | 13.9%                  | 14.0% | -0.1% | 1.01  |
| Window 28              | Kitchen   | 19.4%                  | 19.7% | -0.3% | 1.02  |
| Window 29              | Kitchen   | 24.7%                  | 24.8% | -0.1% | 1.0   |
| Window 30              | Kitchen   | 30.9%                  | 30.9% | 0.0%  | 1.0   |
| Window 31              | Habitable | 9.7%                   | 9.8%  | -0.1% | 1.01  |

| Reference | Use Class | Vertical Sky Component |       |       |       |
|-----------|-----------|------------------------|-------|-------|-------|
|           |           | Before                 | After | Loss  | Ratio |
| Window 32 | Habitable | 9.8%                   | 9.9%  | -0.1% | 1.01  |
| Window 33 | Habitable | 13.8%                  | 13.9% | -0.1% | 1.01  |
| Window 34 | Habitable | 17.4%                  | 17.7% | -0.3% | 1.02  |
| Window 35 | Habitable | 17.5%                  | 17.6% | -0.1% | 1.01  |
| Window 36 | Habitable | 18.4%                  | 18.7% | -0.3% | 1.02  |
| Window 37 | Habitable | 22.9%                  | 23.4% | -0.5% | 1.02  |
| Window 38 | Habitable | 21.6%                  | 21.9% | -0.3% | 1.01  |
| Window 39 | Habitable | 23.2%                  | 23.2% | 0.0%  | 1.0   |
| Window 40 | Habitable | 28.3%                  | 28.4% | -0.1% | 1.0   |
| Window 41 | Habitable | 26.6%                  | 26.6% | 0.0%  | 1.0   |
| Window 42 | Habitable | 28.9%                  | 28.9% | 0.0%  | 1.0   |
| Window 43 | Habitable | 32.8%                  | 32.8% | 0.0%  | 1.0   |
| Window 44 | Habitable | 31.2%                  | 31.2% | 0.0%  | 1.0   |
| Window 45 | Habitable | 14.8%                  | 14.8% | 0.0%  | 1.0   |
| Window 46 | Habitable | 14.0%                  | 14.0% | 0.0%  | 1.0   |
| Window 47 | Habitable | 13.6%                  | 13.6% | 0.0%  | 1.0   |
| Window 48 | Habitable | 17.1%                  | 17.2% | -0.1% | 1.01  |
| Window 49 | Habitable | 17.7%                  | 17.8% | -0.1% | 1.01  |
| Window 50 | Habitable | 17.8%                  | 17.8% | 0.0%  | 1.0   |
| Window 51 | Habitable | 21.0%                  | 21.3% | -0.3% | 1.01  |
| Window 52 | Habitable | 22.7%                  | 22.8% | -0.1% | 1.0   |
| Window 53 | Habitable | 21.3%                  | 21.3% | 0.0%  | 1.0   |
| Window 54 | Habitable | 25.7%                  | 25.7% | 0.0%  | 1.0   |
| Window 55 | Habitable | 28.2%                  | 28.2% | 0.0%  | 1.0   |
| Window 56 | Habitable | 26.1%                  | 26.1% | 0.0%  | 1.0   |
| Window 57 | Habitable | 28.8%                  | 28.8% | 0.0%  | 1.0   |
| Window 58 | Habitable | 33.8%                  | 33.8% | 0.0%  | 1.0   |
| Window 59 | Habitable | 32.6%                  | 32.6% | 0.0%  | 1.0   |
| Window 60 | Kitchen   | 13.2%                  | 13.2% | 0.0%  | 1.0   |
| Window 61 | Kitchen   | 16.4%                  | 16.4% | 0.0%  | 1.0   |
| Window 62 | Kitchen   | 21.6%                  | 21.6% | 0.0%  | 1.0   |
| Window 63 | Kitchen   | 27.0%                  | 27.0% | 0.0%  | 1.0   |
| Window 64 | Kitchen   | 33.7%                  | 33.7% | 0.0%  | 1.0   |

| Reference                | Use Class   |        | Vertical Sky | Component |       |
|--------------------------|-------------|--------|--------------|-----------|-------|
|                          |             | Before | After        | Loss      | Ratio |
| 30 Coptic Street         |             |        |              |           |       |
| Window 65                | Habitable   | 22.8%  | 22.8%        | 0.0%      | 1.0   |
| Window 66                | Habitable   | 21.8%  | 21.8%        | 0.0%      | 1.0   |
| Window 67                | Habitable   | 27.8%  | 27.8%        | 0.0%      | 1.0   |
| Window 68                | Habitable   | 27.1%  | 27.1%        | 0.0%      | 1.0   |
| Window 69                | Habitable   | 32.3%  | 32.3%        | 0.0%      | 1.0   |
| Window 70                | Habitable   | 31.8%  | 31.8%        | 0.0%      | 1.0   |
| Window 71                | Habitable   | 36.5%  | 36.5%        | 0.0%      | 1.0   |
| Window 72                | Habitable   | 36.1%  | 36.1%        | 0.0%      | 1.0   |
| 5 Coptic Street          |             |        |              |           |       |
| Window 73                | Habitable   | 12.4%  | 12.4%        | 0.0%      | 1.0   |
| Window 74                | Habitable   | 12.5%  | 12.5%        | 0.0%      | 1.0   |
| Window 75                | Habitable   | 11.8%  | 11.8%        | 0.0%      | 1.0   |
| Window 76                | Habitable   | 17.7%  | 17.7%        | 0.0%      | 1.0   |
| Window 77                | Habitable   | 16.2%  | 16.2%        | 0.0%      | 1.0   |
| Window 78                | Habitable   | 23.2%  | 23.1%        | 0.1%      | 1.0   |
| Window 79                | Habitable   | 23.0%  | 23.0%        | 0.0%      | 1.0   |
| Window 80                | Habitable   | 27.5%  | 27.5%        | 0.0%      | 1.0   |
| 21 to 40 Streatham Chamb | <u>pers</u> |        |              |           |       |
| Window 81                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 82                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 83                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 84                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 85                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 86                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 87                | Habitable   | 0.9%   | 0.9%         | 0.0%      | 1.0   |
| Window 88                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 89                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 90                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 91                | Habitable   | 1.0%   | 1.0%         | 0.0%      | 1.0   |
| Window 92                | Habitable   | 0.1%   | 0.1%         | 0.0%      | 1.0   |

| Reference  | Use Class |        | Vertical Sky | Component |       |
|------------|-----------|--------|--------------|-----------|-------|
| Reference  | USE Class | Before | After        | Loss      | Ratio |
| Window 93  | Habitable | 1.9%   | 1.9%         | 0.0%      | 1.0   |
| Window 94  | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 95  | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 96  | Habitable | 0.2%   | 0.2%         | 0.0%      | 1.0   |
| Window 97  | Habitable | 3.6%   | 3.6%         | 0.0%      | 1.0   |
| Window 98  | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 99  | Habitable | 5.2%   | 5.2%         | 0.0%      | 1.0   |
| Window 100 | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 101 | Habitable | 1.5%   | 1.5%         | 0.0%      | 1.0   |
| Window 102 | Habitable | 1.9%   | 1.9%         | 0.0%      | 1.0   |
| Window 103 | Habitable | 7.2%   | 7.2%         | 0.0%      | 1.0   |
| Window 104 | Habitable | 0.4%   | 0.4%         | 0.0%      | 1.0   |
| Window 105 | Habitable | 24.5%  | 24.5%        | 0.0%      | 1.0   |
| Window 106 | Habitable | 27.0%  | 27.0%        | 0.0%      | 1.0   |
| Window 107 | Habitable | 29.6%  | 29.6%        | 0.0%      | 1.0   |
| Window 108 | Habitable | 31.4%  | 31.4%        | 0.0%      | 1.0   |
| Window 109 | Habitable | 31.7%  | 31.7%        | 0.0%      | 1.0   |
| Window 110 | Habitable | 33.0%  | 33.0%        | 0.0%      | 1.0   |
| Window 111 | Habitable | 1.7%   | 1.7%         | 0.0%      | 1.0   |
| Window 112 | Habitable | 3.5%   | 3.5%         | 0.0%      | 1.0   |
| Window 113 | Habitable | 5.8%   | 5.8%         | 0.0%      | 1.0   |
| Window 114 | Habitable | 9.6%   | 9.6%         | 0.0%      | 1.0   |
| Window 115 | Habitable | 31.9%  | 31.9%        | 0.0%      | 1.0   |
| Window 116 | Habitable | 0.2%   | 0.2%         | 0.0%      | 1.0   |
| Window 117 | Habitable | 0.3%   | 0.3%         | 0.0%      | 1.0   |
| Window 118 | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 119 | Habitable | 1.8%   | 1.8%         | 0.0%      | 1.0   |
| Window 120 | Habitable | 0.7%   | 0.7%         | 0.0%      | 1.0   |
| Window 121 | Habitable | 0.8%   | 0.8%         | 0.0%      | 1.0   |
| Window 122 | Habitable | 0.1%   | 0.1%         | 0.0%      | 1.0   |
| Window 123 | Habitable | 2.9%   | 2.9%         | 0.0%      | 1.0   |
| Window 124 | Habitable | 1.6%   | 1.6%         | 0.0%      | 1.0   |
| Window 125 | Habitable | 1.7%   | 1.7%         | 0.0%      | 1.0   |

| Reference  | Use Class | Vertical Sky Component |       |      |       |
|------------|-----------|------------------------|-------|------|-------|
|            |           | Before                 | After | Loss | Ratio |
| Window 126 | Habitable | 0.2%                   | 0.2%  | 0.0% | 1.0   |
| Window 127 | Habitable | 4.4%                   | 4.4%  | 0.0% | 1.0   |
| Window 128 | Habitable | 3.5%                   | 3.5%  | 0.0% | 1.0   |
| Window 129 | Habitable | 3.6%                   | 3.6%  | 0.0% | 1.0   |
| Window 130 | Habitable | 0.8%                   | 0.8%  | 0.0% | 1.0   |
| Window 131 | Habitable | 6.1%                   | 6.1%  | 0.0% | 1.0   |
| Window 132 | Habitable | 32.1%                  | 32.1% | 0.0% | 1.0   |
| Window 133 | Habitable | 31.4%                  | 31.4% | 0.0% | 1.0   |
| Window 134 | Habitable | 28.0%                  | 28.0% | 0.0% | 1.0   |
| Window 135 | Habitable | 23.5%                  | 23.5% | 0.0% | 1.0   |

Appendix 2 - Daylight Distribution 6 Coptic Street, London WC1A 1NH

| Reference              | Use Class | Daylight Distribution |     |       |       |
|------------------------|-----------|-----------------------|-----|-------|-------|
| recipion               | Oct Glass | Before After          |     | Loss  | Ratio |
|                        |           |                       |     |       |       |
| 27 to 31 Coptic Street |           |                       |     |       |       |
| Window 7               | Habitable | 16%                   | 16% | 0.0%  | 1.0   |
| Window 8               | Habitable | 26%                   | 26% | 0.0%  | 1.0   |
| Window 9               | Habitable | 35%                   | 35% | 0.0%  | 1.0   |
| Window 10              | Habitable | 77%                   | 77% | 0.0%  | 1.0   |
| Window 11              | Habitable | 77%                   | 77% | 0.0%  | 1.0   |
| Window 12              | Habitable | 77%                   | 77% | 0.0%  | 1.0   |
| Window 13              | Habitable | 25%                   | 26% | -1.0% | 1.04  |
| Window 14              | Habitable | 33%                   | 34% | -1.0% | 1.03  |
| Window 15              | Habitable | 44%                   | 44% | 0.0%  | 1.0   |
| Window 16              | Habitable | 74%                   | 74% | 0.0%  | 1.0   |
| Window 17              | Habitable | 74%                   | 74% | 0.0%  | 1.0   |
| Window 18              | Habitable | 74%                   | 74% | 0.0%  | 1.0   |
| Window 19              | Habitable | 30%                   | 30% | 0.0%  | 1.0   |
| Window 20              | Habitable | 30%                   | 30% | 0.0%  | 1.0   |
| Window 21              | Habitable | 30%                   | 30% | 0.0%  | 1.0   |
| Window 22              | Habitable | 31%                   | 32% | -1.0% | 1.03  |
| Window 23              | Habitable | 46%                   | 46% | 0.0%  | 1.0   |
| Window 24              | Habitable | 66%                   | 66% | 0.0%  | 1.0   |
| Window 25              | Kitchen   | 45%                   | 47% | -2.0% | 1.04  |
| Window 26              | Kitchen   | 45%                   | 47% | -2.0% | 1.04  |
| Window 27              | Kitchen   | 51%                   | 46% | 5.0%  | 0.9   |
| Window 28              | Kitchen   | 61%                   | 61% | 0.0%  | 1.0   |
| Window 29              | Kitchen   | 66%                   | 66% | 0.0%  | 1.0   |
| Window 30              | Kitchen   | 95%                   | 95% | 0.0%  | 1.0   |
| Window 31              | Habitable | 1%                    | 1%  | 0.0%  | 1.0   |
| Window 32              | Habitable | 1%                    | 1%  | 0.0%  | 1.0   |
| Window 33              | Habitable | 88%                   | 83% | 5.0%  | 0.94  |
| Window 34              | Habitable | 88%                   | 83% | 5.0%  | 0.94  |
| Window 35              | Habitable | 88%                   | 83% | 5.0%  | 0.94  |
| Window 36              | Habitable | 97%                   | 97% | 0.0%  | 1.0   |
| Window 37              | Habitable | 97%                   | 97% | 0.0%  | 1.0   |
| Window 38              | Habitable | 97%                   | 97% | 0.0%  | 1.0   |
| Window 39              | Habitable | 97%                   | 97% | 0.0%  | 1.0   |

Appendix 2 - Daylight Distribution 6 Coptic Street, London WC1A 1NH

| Reference | Use Class | Daylight Distribution |       |      |       |
|-----------|-----------|-----------------------|-------|------|-------|
|           |           | Before                | After | Loss | Ratio |
| Window 40 | Habitable | 97%                   | 97%   | 0.0% | 1.0   |
| Window 41 | Habitable | 97%                   | 97%   | 0.0% | 1.0   |
| Window 42 | Habitable | 98%                   | 98%   | 0.0% | 1.0   |
| Window 43 | Habitable | 98%                   | 98%   | 0.0% | 1.0   |
| Window 44 | Habitable | 98%                   | 98%   | 0.0% | 1.0   |
| Window 45 | Habitable | 61%                   | 61%   | 0.0% | 1.0   |
| Window 46 | Habitable | 61%                   | 61%   | 0.0% | 1.0   |
| Window 47 | Habitable | 61%                   | 61%   | 0.0% | 1.0   |
| Window 48 | Habitable | 95%                   | 95%   | 0.0% | 1.0   |
| Window 49 | Habitable | 95%                   | 95%   | 0.0% | 1.0   |
| Window 50 | Habitable | 95%                   | 95%   | 0.0% | 1.0   |
| Window 51 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 52 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 53 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 54 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 55 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 56 | Habitable | 96%                   | 96%   | 0.0% | 1.0   |
| Window 57 | Habitable | 99%                   | 99%   | 0.0% | 1.0   |
| Window 58 | Habitable | 99%                   | 99%   | 0.0% | 1.0   |
| Window 59 | Habitable | 99%                   | 99%   | 0.0% | 1.0   |
| Window 60 | Kitchen   | 68%                   | 68%   | 0.0% | 1.0   |
| Window 61 | Kitchen   | 52%                   | 52%   | 0.0% | 1.0   |
| Window 62 | Kitchen   | 60%                   | 60%   | 0.0% | 1.0   |
| Window 63 | Kitchen   | 67%                   | 67%   | 0.0% | 1.0   |
| Window 64 | Kitchen   | 67%                   | 67%   | 0.0% | 1.0   |

Appendix 2 - Sunlight to Windows 6 Coptic Street, London WC1A 1NH

|                        | Sunlight to Windows |                      |       |      |       |           |           |      |       |
|------------------------|---------------------|----------------------|-------|------|-------|-----------|-----------|------|-------|
| Reference              | Use Class           | Total Sunlight Hours |       |      | V     | /inter Su | nlight Ho | urs  |       |
|                        |                     | Before               | After | Loss | Ratio | Before    | After     | Loss | Ratio |
| 7 Coptic Street        |                     |                      |       |      |       |           |           |      |       |
| Window 1               | Habitable           | 3%                   | 3%    | 0%   | 1.0   | 0%        | 0%        | 0%   | 1.0   |
| Window 4               | Habitable           | 44%                  | 44%   | 0%   | 1.0   | 6%        | 6%        | 0%   | 1.0   |
| Window 5               | Habitable           | 51%                  | 51%   | 0%   | 1.0   | 10%       | 10%       | 0%   | 1.0   |
| Window 6               | Habitable           | 57%                  | 57%   | 0%   | 1.0   | 16%       | 16%       | 0%   | 1.0   |
| 27 to 31 Coptic Street |                     |                      |       |      |       |           |           |      |       |
| Window 7               | Habitable           | 19%                  | 19%   | 0%   | 1.0   | 9%        | 9%        | 0%   | 1.0   |
| Window 8               | Habitable           | 20%                  | 20%   | 0%   | 1.0   | 8%        | 8%        | 0%   | 1.0   |
| Window 9               | Habitable           | 27%                  | 27%   | 0%   | 1.0   | 8%        | 8%        | 0%   | 1.0   |
| Window 10              | Habitable           | 37%                  | 37%   | 0%   | 1.0   | 9%        | 9%        | 0%   | 1.0   |
| Window 11              | Habitable           | 38%                  | 38%   | 0%   | 1.0   | 9%        | 9%        | 0%   | 1.0   |
| Window 12              | Habitable           | 42%                  | 42%   | 0%   | 1.0   | 11%       | 11%       | 0%   | 1.0   |
| Window 13              | Habitable           | 19%                  | 19%   | 0%   | 1.0   | 7%        | 7%        | 0%   | 1.0   |
| Window 14              | Habitable           | 19%                  | 19%   | 0%   | 1.0   | 6%        | 6%        | 0%   | 1.0   |
| Window 15              | Habitable           | 24%                  | 25%   | -1%  | 1.04  | 6%        | 6%        | 0%   | 1.0   |
| Window 16              | Habitable           | 38%                  | 38%   | 0%   | 1.0   | 9%        | 9%        | 0%   | 1.0   |
| Window 17              | Habitable           | 40%                  | 40%   | 0%   | 1.0   | 10%       | 10%       | 0%   | 1.0   |
| Window 18              | Habitable           | 41%                  | 41%   | 0%   | 1.0   | 11%       | 11%       | 0%   | 1.0   |
| Window 19              | Habitable           | 15%                  | 15%   | 0%   | 1.0   | 5%        | 5%        | 0%   | 1.0   |
| Window 20              | Habitable           | 15%                  | 15%   | 0%   | 1.0   | 5%        | 5%        | 0%   | 1.0   |
| Window 21              | Habitable           | 17%                  | 17%   | 0%   | 1.0   | 5%        | 5%        | 0%   | 1.0   |
| Window 22              | Habitable           | 19%                  | 19%   | 0%   | 1.0   | 5%        | 5%        | 0%   | 1.0   |
| Window 23              | Habitable           | 28%                  | 28%   | 0%   | 1.0   | 7%        | 7%        | 0%   | 1.0   |
| Window 24              | Habitable           | 44%                  | 44%   | 0%   | 1.0   | 10%       | 10%       | 0%   | 1.0   |
| Window 25              | Kitchen             | 15%                  | 15%   | 0%   | 1.0   | 4%        | 4%        | 0%   | 1.0   |
| Window 26              | Kitchen             | 14%                  | 14%   | 0%   | 1.0   | 4%        | 4%        | 0%   | 1.0   |
| Window 27              | Kitchen             | 21%                  | 21%   | 0%   | 1.0   | 5%        | 5%        | 0%   | 1.0   |
| Window 28              | Kitchen             | 33%                  | 33%   | 0%   | 1.0   | 7%        | 7%        | 0%   | 1.0   |
| Window 29              | Kitchen             | 46%                  | 46%   | 0%   | 1.0   | 10%       | 10%       | 0%   | 1.0   |
| Window 30              | Kitchen             | 57%                  | 57%   | 0%   | 1.0   | 16%       | 16%       | 0%   | 1.0   |
| Window 31              | Habitable           | 14%                  | 14%   | 0%   | 1.0   | 4%        | 4%        | 0%   | 1.0   |
| Window 32              | Habitable           | 14%                  | 14%   | 0%   | 1.0   | 4%        | 4%        | 0%   | 1.0   |
| Window 33              | Habitable           | 22%                  | 23%   | -1%  | 1.05  | 5%        | 5%        | 0%   | 1.0   |

Appendix 2 - Sunlight to Windows 6 Coptic Street, London WC1A 1NH

|                          |             | Sunlight to Windows |          |          |       |        |          |           |       |
|--------------------------|-------------|---------------------|----------|----------|-------|--------|----------|-----------|-------|
| Reference                | Use Class   | Т                   | otal Sur | light Ho | urs   | W      | inter Su | nlight Ho | urs   |
|                          |             | Before              | After    | Loss     | Ratio | Before | After    | Loss      | Ratio |
| Window 36                | Habitable   | 35%                 | 36%      | -1%      | 1.03  | 6%     | 6%       | 0%        | 1.0   |
| Window 39                | Habitable   | 49%                 | 49%      | 0%       | 1.0   | 12%    | 12%      | 0%        | 1.0   |
| Window 42                | Habitable   | 56%                 | 56%      | 0%       | 1.0   | 14%    | 14%      | 0%        | 1.0   |
| 30 Coptic Street         |             |                     |          |          |       |        |          |           |       |
| Window 65                | Habitable   | 49%                 | 49%      | 0%       | 1.0   | 8%     | 8%       | 0%        | 1.0   |
| Window 66                | Habitable   | 47%                 | 47%      | 0%       | 1.0   | 6%     | 6%       | 0%        | 1.0   |
| Window 67                | Habitable   | 62%                 | 62%      | 0%       | 1.0   | 12%    | 12%      | 0%        | 1.0   |
| Window 68                | Habitable   | 59%                 | 59%      | 0%       | 1.0   | 10%    | 10%      | 0%        | 1.0   |
| Window 69                | Habitable   | 71%                 | 71%      | 0%       | 1.0   | 20%    | 20%      | 0%        | 1.0   |
| Window 70                | Habitable   | 71%                 | 71%      | 0%       | 1.0   | 20%    | 20%      | 0%        | 1.0   |
| Window 71                | Habitable   | 77%                 | 77%      | 0%       | 1.0   | 26%    | 26%      | 0%        | 1.0   |
| Window 72                | Habitable   | 78%                 | 78%      | 0%       | 1.0   | 27%    | 27%      | 0%        | 1.0   |
| 5 Coptic Street          |             |                     |          |          |       |        |          |           |       |
| Window 73                | Habitable   | 23%                 | 22%      | 1%       | 0.96  | 0%     | 0%       | 0%        | 1.0   |
| Window 74                | Habitable   | 26%                 | 26%      | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 75                | Habitable   | 25%                 | 25%      | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 76                | Habitable   | 31%                 | 31%      | 0%       | 1.0   | 2%     | 2%       | 0%        | 1.0   |
| Window 77                | Habitable   | 33%                 | 33%      | 0%       | 1.0   | 4%     | 4%       | 0%        | 1.0   |
| Window 78                | Habitable   | 42%                 | 41%      | 1%       | 0.98  | 8%     | 7%       | 1%        | 0.88  |
| Window 79                | Habitable   | 41%                 | 41%      | 0%       | 1.0   | 8%     | 8%       | 0%        | 1.0   |
| Window 80                | Habitable   | 46%                 | 46%      | 0%       | 1.0   | 12%    | 12%      | 0%        | 1.0   |
| 21 to 40 Streatham Chamb | <u>pers</u> |                     |          |          |       |        |          |           |       |
| Window 81                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 82                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 83                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 84                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 85                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 86                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 87                | Habitable   | 2%                  | 2%       | 0%       | 1.0   | 2%     | 2%       | 0%        | 1.0   |
| Window 88                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |
| Window 89                | Habitable   | 0%                  | 0%       | 0%       | 1.0   | 0%     | 0%       | 0%        | 1.0   |

Appendix 2 - Sunlight to Windows 6 Coptic Street, London WC1A 1NH

|            |           | Sunlight to Windows |          |           |       |        |       |           |       |
|------------|-----------|---------------------|----------|-----------|-------|--------|-------|-----------|-------|
| Reference  | Use Class | Т                   | otal Sur | light Hou | urs   | Winter |       | nlight Ho | ours  |
|            |           | Before              | After    | Loss      | Ratio | Before | After | Loss      | Ratio |
| Window 90  | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 91  | Habitable | 4%                  | 4%       | 0%        | 1.0   | 3%     | 3%    | 0%        | 1.0   |
| Window 92  | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 93  | Habitable | 2%                  | 2%       | 0%        | 1.0   | 2%     | 2%    | 0%        | 1.0   |
| Window 94  | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 95  | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 96  | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 97  | Habitable | 8%                  | 8%       | 0%        | 1.0   | 7%     | 7%    | 0%        | 1.0   |
| Window 98  | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 99  | Habitable | 15%                 | 15%      | 0%        | 1.0   | 9%     | 9%    | 0%        | 1.0   |
| Window 100 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 101 | Habitable | 3%                  | 3%       | 0%        | 1.0   | 3%     | 3%    | 0%        | 1.0   |
| Window 102 | Habitable | 3%                  | 3%       | 0%        | 1.0   | 3%     | 3%    | 0%        | 1.0   |
| Window 103 | Habitable | 15%                 | 15%      | 0%        | 1.0   | 11%    | 11%   | 0%        | 1.0   |
| Window 104 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 105 | Habitable | 49%                 | 49%      | 0%        | 1.0   | 18%    | 18%   | 0%        | 1.0   |
| Window 106 | Habitable | 62%                 | 62%      | 0%        | 1.0   | 21%    | 21%   | 0%        | 1.0   |
| Window 107 | Habitable | 69%                 | 69%      | 0%        | 1.0   | 23%    | 23%   | 0%        | 1.0   |
| Window 108 | Habitable | 73%                 | 73%      | 0%        | 1.0   | 24%    | 24%   | 0%        | 1.0   |
| Window 109 | Habitable | 74%                 | 74%      | 0%        | 1.0   | 23%    | 23%   | 0%        | 1.0   |
| Window 110 | Habitable | 75%                 | 75%      | 0%        | 1.0   | 23%    | 23%   | 0%        | 1.0   |
| Window 111 | Habitable | 3%                  | 3%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 112 | Habitable | 5%                  | 5%       | 0%        | 1.0   | 3%     | 3%    | 0%        | 1.0   |
| Window 113 | Habitable | 9%                  | 9%       | 0%        | 1.0   | 6%     | 6%    | 0%        | 1.0   |
| Window 114 | Habitable | 17%                 | 17%      | 0%        | 1.0   | 11%    | 11%   | 0%        | 1.0   |
| Window 115 | Habitable | 73%                 | 73%      | 0%        | 1.0   | 21%    | 21%   | 0%        | 1.0   |
| Window 116 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 117 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%    | 0%        | 1.0   |
| Window 118 | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 120 | Habitable | 2%                  | 2%       | 0%        | 1.0   | 2%     | 2%    | 0%        | 1.0   |
| Window 121 | Habitable | 2%                  | 2%       | 0%        | 1.0   | 2%     | 2%    | 0%        | 1.0   |
| Window 122 | Habitable | 0%                  | 0%       | 0%        | 1.0   | 0%     | 0%    | 0%        | 1.0   |
| Window 124 | Habitable | 3%                  | 3%       | 0%        | 1.0   | 3%     | 3%    | 0%        | 1.0   |

## Appendix 2 - Sunlight to Windows 6 Coptic Street, London WC1A 1NH

|            |           | Sunlight to Windows |          |           |       |        |                       |      |       |  |
|------------|-----------|---------------------|----------|-----------|-------|--------|-----------------------|------|-------|--|
| Reference  | Use Class | Т                   | otal Sun | light Hou | ırs   | W      | Winter Sunlight Hours |      |       |  |
|            |           | Before              | After    | Loss      | Ratio | Before | After                 | Loss | Ratio |  |
| Window 125 | Habitable | 3%                  | 3%       | 0%        | 1.0   | 3%     | 3%                    | 0%   | 1.0   |  |
| Window 126 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%                    | 0%   | 1.0   |  |
| Window 128 | Habitable | 4%                  | 4%       | 0%        | 1.0   | 4%     | 4%                    | 0%   | 1.0   |  |
| Window 129 | Habitable | 5%                  | 5%       | 0%        | 1.0   | 5%     | 5%                    | 0%   | 1.0   |  |
| Window 130 | Habitable | 1%                  | 1%       | 0%        | 1.0   | 1%     | 1%                    | 0%   | 1.0   |  |
| Window 132 | Habitable | 71%                 | 71%      | 0%        | 1.0   | 19%    | 19%                   | 0%   | 1.0   |  |
| Window 133 | Habitable | 70%                 | 70%      | 0%        | 1.0   | 18%    | 18%                   | 0%   | 1.0   |  |
| Window 134 | Habitable | 59%                 | 59%      | 0%        | 1.0   | 12%    | 12%                   | 0%   | 1.0   |  |

## Appendix 2 - Overshadowing to Gardens and Open Spaces 6 Coptic Street, London WC1A 1NH

| Reference       | Total Area | Area receiving at least two hours of sunlight on 21st March |              |           |       |  |  |  |
|-----------------|------------|-------------------------------------------------------------|--------------|-----------|-------|--|--|--|
|                 |            | Before                                                      | After        | Loss      | Ratio |  |  |  |
| 5 Coptic Street |            |                                                             |              |           |       |  |  |  |
| Garden 1        | 16.51 m2   | 12.43 m2 75%                                                | 12.43 m2 75% | 0.0 m2 0% | 1.0   |  |  |  |

| APPENDIX 3                               |  |
|------------------------------------------|--|
| OVERSHADOWING TO GARDENS AND OPEN SPACES |  |
|                                          |  |
|                                          |  |
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