



RIGHT OF LIGHT  
CONSULTING  
Chartered Surveyors

# Daylight and Sunlight Report

(Within Development)

**18 January 2022**

22 to 25 New Road,  
Gravesend, Kent DA11 0AA

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## 1 EXECUTIVE SUMMARY

### 1.1 Overview

- 1.1.1 Right of Light Consulting has been commissioned by CGL Architects to undertake a daylight and sunlight study of the proposed development at 22 to 25 New Road, Gravesend, Kent DA11 0AA. The study is in connection with the application for prior approval of the change of use from change of use from Class E to C3 residential use. The aim of the study is to check whether the proposed residential accommodation will provide its future occupiers with adequate levels of natural light.
- 1.1.2 The study is based on the numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a good practice guide, 2<sup>nd</sup> Edition' by P J Littlefair 2011.
- 1.1.3 Appendix 1 identifies the windows analysed in this study. The no sky line contours for the habitable rooms are also presented in Appendix 1. The numerical results of the BRE daylight and sunlight tests are provided in Appendix 2.
- 1.1.4 The numerical results demonstrate that the proposed development design achieves a very high level of compliance with the BRE recommendations. In our professional opinion, the proposed design will provide the development's future occupiers with adequate levels of natural light. We consider the proposed development to be consistent with the NPPF, which requires developments to provide acceptable living standards whilst making efficient use of land.

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## 2 INFORMATION SOURCES

### 2.1 Documents Considered

2.1.1 This report is based on the following drawings:

Child Graddon Lewis

CGL-XX-01-DR-A-050211      Proposed First Floor Plan      Rev A

Promap OS Plan

Site Plan      Rev -

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

#### **3.1 General Permitted Development (England) Order 2015**

- 3.1.1 Attainment of adequate natural light in habitable rooms, is a condition of the change of use from offices to dwellings under the General Permitted Development (England) Order 2015 (GPDO 2015).
- 3.1.2 The GPDO 2015 defines habitable rooms as any rooms used or intended to be used for sleeping or living which are not solely used for cooking purposes, but does not include bath or toilet facilities, service rooms, corridors, laundry rooms, hallways or utility rooms.

#### **3.2 BRE Guidance**

- 3.2.1 We understand that the Local Authority takes the conventional approach of considering daylight and sunlight amenity with reference to the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice, 2<sup>nd</sup> Edition' by P J Littlefair 2011. A new European standard BS EN 17037 'Daylight in Buildings' was published in May 2019. An update to the BRE guide to take into account the European standard is expected sometime in 2022. It is not yet clear how, and to what extent, the European recommendations will be adopted by the BRE and Local Authorities.
- 3.2.2 The standards set out in the BRE guide are intended to be used flexibly. The BRE guide states:
- "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."

#### **3.3 National Planning Policy Framework**

- 3.3.1 The BRE numerical guidelines should be considered in the context of the National Planning Policy Framework (NPPF), which stipulates that local planning authorities should take a flexible approach to daylight and sunlight to ensure the efficient use of land. Paragraph 125c of the NPPF states:

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“Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).”

### 3.4 Interior Daylighting

- 3.4.1 The interior daylighting recommendations set out in the BRE guide are based on British Standard BS 8206 Part 2 and the Chartered Institute of Building Services Engineers Applications Manual on window design. Collectively, the guides set out three main criteria for interior daylighting. These are summarised as follows:

#### Test 1 - Average Daylight Factor

- 3.4.2 The Average Daylight Factor (ADF) can be calculated using the following formula:

$$df = \frac{T A_w \theta}{A (1-R^2)} \%$$

where

T is the diffuse visible transmittance of the glazing  
A<sub>w</sub> is the net glazed area of the window (m<sup>2</sup>)  
A is the total area of the room surfaces (m<sup>2</sup>)  
R is their average reflectance  
θ is the angle of visible sky in degrees

- 3.4.3 For the purpose of this study, we have assumed BRE internal reflectance coefficients pertaining to medium wooden floors (0.4), light painted walls (0.8) and matt white painted ceilings (0.85).
- 3.4.4 We have assumed that each window is double-glazed and has a glazed area that equates to 80% of the structural opening size. A glazing transmittance value, inclusive of a maintenance to allow for the effect of dirt and grime on the glazing, of 0.68 has been used.

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- 3.4.5 The BRE guide gives minimum ADF recommendations for dwellings of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms which have been applied in this study. In the case of permitted development, the 2% target is only applied to habitable kitchens - i.e. kitchens that are not used solely for cooking purposes.
- 3.4.6 The BRE guide does not give guidance on how to apply the ADF test to spaces which contain a mix of room uses e.g. open plan living, dining and kitchen areas. For this assessment we have set a target of 2%.
- 3.4.7 A special procedure is required for floor to ceiling windows such as patio doors. If part of a window is below the height of the working plane (a horizontal plane 0.85m above the floor in housing), this portion should be treated as a separate window. The ADF for this window has an extra factor applied to it, to take account of the reduced effectiveness of low level glazing in lighting the room. A value equal to the floor reflectance may be taken for this factor. The ADF for the portion of the window above the working plane is calculated in the normal way without this additional factor, and the ADFs for the two portions are added together.
- 3.4.8 Reflected light can be factored into the ADF calculation. For example, where a window has a large obstruction in front of it, the angle of visible sky can be increased by around 6°, assuming the obstruction is painted a light colour.

#### Test 2 - Room Depth

- 3.4.9 If a daylit room is lit by windows in one wall only, the depth of the room L should not exceed the limiting value given by:

$$\frac{L}{W} + \frac{L}{H} \leq \frac{2}{1-R_b}$$

where

W is the room width

H is the window-head height above floor level

R<sub>b</sub> is the average reflectance of the surfaces in the rear half of the room

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### Test 3 - Position of the no sky line (Daylight Distribution)

- 3.4.10 If a significant area of the working plane lies beyond the no sky line (i.e. it receives no direct skylight), then the distribution of daylight in the room will look poor and supplementary electric lighting will be required.
- 3.4.11 The no sky line assessment is not applicable where a room derives its daylight solely from a light well or atrium. In these situations the room relies on borrowed light instead of direct skylight.

### **3.5 Sunlight to Windows**

- 3.5.1 The BRE guide states that, in general, a dwelling will appear reasonably sunlit if:
- at least one main window wall faces within 90 degrees of due south, and
  - the centre of at least one window to a main living room can receive 25% of annual probable sunlight hours, including at least 5% of the annual probable sunlight hours during the winter months between 21st September and 21st March.
- 3.5.2 The guide states that, where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings with a main living room that meets the above recommendations.
- 3.5.3 The guide states that sunlight is viewed as less important in kitchens and bedrooms.

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## **4 RESULTS OF THE STUDY**

### **4.1 Window Reference Points and No Sky Line Contours**

- 4.1.1 Appendix 1 identifies the positions of the windows analysed in this study. The no skyline contours for the habitable rooms are also presented in Appendix 1.
- 4.1.2 In accordance with the General Permitted Development (England) Order 2015 we have tested all habitable rooms including living rooms, bedrooms and studios. We have not assessed small internal kitchens. The kitchens are non-habitable since they are not intended to be used for any purpose other than cooking.

### **4.2 Daylight & Sunlight Data**

- 4.2.1 The numerical results of the BRE daylight and sunlight tests are provided in Appendix 2.

### **4.3 Interior Daylighting**

- 4.3.1 All habitable rooms surpass the BRE minimum Average Daylight Factor (ADF) recommendations.
- 4.3.2 All rooms pass the room depth test.
- 4.3.3 The BRE guide does not give fixed numerical pass/fail criteria for the No Sky Line test when applied to new dwellings. However, for completeness, we have illustrated the no sky line contours in Appendix 1.

### **4.4 Sunlight to Windows**

- 4.4.1 The BRE guide acknowledges that, in some cases, it may not be possible for every dwelling to achieve ideal levels of sunlight. The guide explains that, where groups of dwellings are planned, the aim should be to maximise the number of dwellings that:
- have at least one main window that faces within 90 degrees of due south, and
  - have at least one window to a main living room that meets the BRE numerical targets.

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4.4.2 In the case of the proposed development, 5 of the 8 units have a living room window which faces within 90 degrees of due south. All 5 of these units have a window which meets the BRE numerical targets.

4.4.3 In our opinion, the proposed development represents good site layout design. Since the design maximises sunlight availability, as far as practically possible given the constraints of the site, the BRE direct sunlight to windows recommendations for groups of dwellings have been met.

#### **4.5 Conclusion**

4.5.1 The numerical results demonstrate that the proposed development design achieves a very high level of compliance with the BRE recommendations. In our professional opinion, the proposed design will provide the development's future occupiers with adequate levels of natural light. We consider the proposed development to be consistent with the NPPF, which requires developments to provide acceptable living standards whilst making efficient use of land.

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## 5 CLARIFICATIONS

### 5.1 General

- 5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.
- 5.1.2 The study is limited to assessing daylight and sunlight of the proposed development as set out in section 2.1 and 3.1 of the BRE Guide.
- 5.1.3 The study is based on the information listed in section 2 of this report. The study has been undertaken without access to the proposed development site or neighbouring properties.
- 5.1.4 This study does not calculate the effects of trees and hedges on daylight, sunlight and overshadowing to gardens. The BRE guide states that trees should sometimes be taken into account. e.g. where there is concern that future occupants of the dwelling may want the trees to be cut down if they block too much skylight or sunlight. We are not aware of any such circumstances, in this instance.
- 5.1.5 We have undertaken the survey following the guidelines of the RICS publication "Surveying Safely". Where limited access is available, assumptions will have been made.
- 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.

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## APPENDICES

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## **APPENDIX 1**

### **WINDOW KEY & NO SKY LINE CONTOURS**



Proposed Development

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New Road



Proposed Development

Gravesham Borough Council

New Road

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19

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25

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Proposed Development

New Road

29 30

27 28

23 24

22

12 13 15

Gravesham Borough Council

New Road



Proposed Development

29

30

27

28

22

23

24

13 14

Gravesham Borough Council

# Proposed First Floor

# Window Key and No Sky Line Contours



Key:

- Window reference
- G1 Gardens and Amenity Areas
- Area receives no direct sky light (applied to habitable rooms)
- Area does receive direct sky light.
- Light aperture.

Drawing Title: Window Key and No Sky Line Contours

Scale: Do not scale

Drawing No: 2 of 5 Rev. .

| Rev | Date | Details of revision |
|-----|------|---------------------|
|     |      |                     |
|     |      |                     |



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# Proposed Second Floor

# Window Key and No Sky Line Contours

Key:

- Window reference
- G1 Gardens and Amenity Areas
- Area receives no direct sky light (applied to habitable rooms)
- Area does receive direct sky light.
- Light aperture.

Drawing Title: Window Key and No Sky Line Contours

Scale: Do not scale

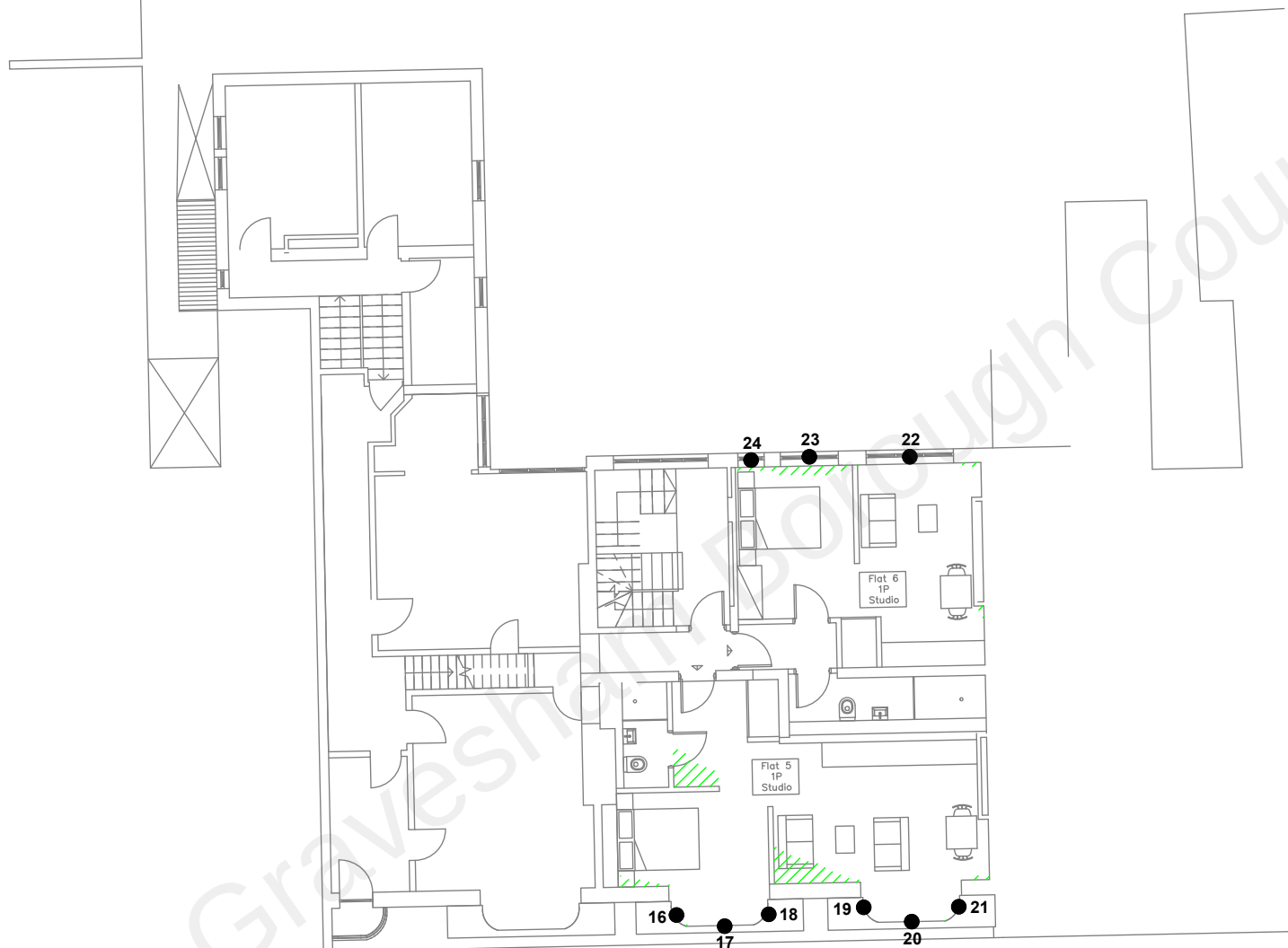
Drawing No: 3 of 5

Rev. .

| Rev | Date | Details of revision |
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# Proposed Third Floor

## Window Key and No Sky Line Contours

Key:

- Window reference
- G1 Gardens and Amenity Areas
- Area receives no direct sky light (applied to habitable rooms)
- Area does receive direct sky light.
- Light aperture.

Drawing Title: Window Key and No Sky Line Contours

Scale: Do not scale

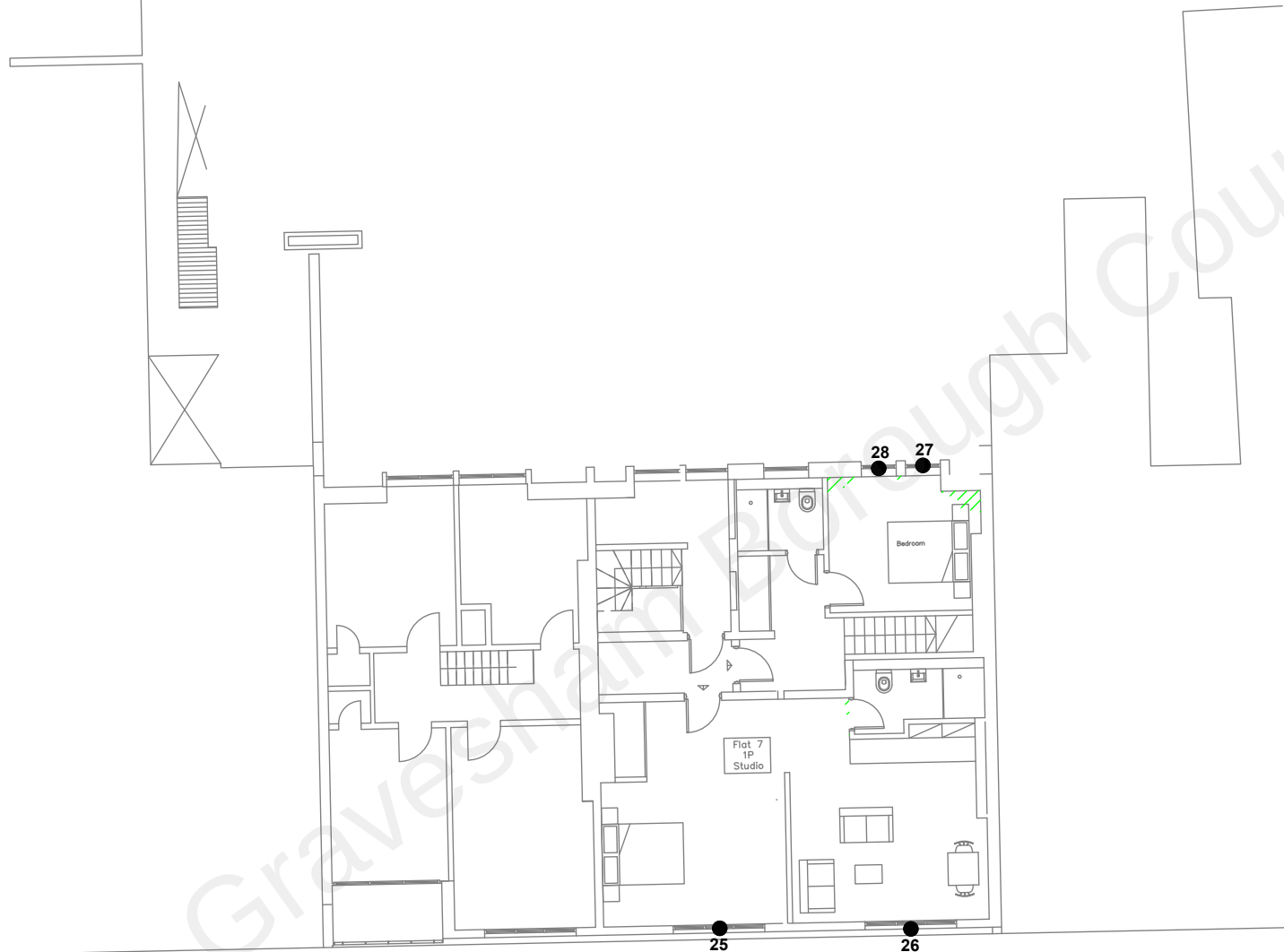
Drawing No: 4 of 5

Rev. .

| Rev | Date | Details of revision |
|-----|------|---------------------|
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# Proposed Fourth Floor

## Window Key and No Sky Line Contours

Key:

- Window reference
- G1 Gardens and Amenity Areas
- Area receives no direct sky light  
(applied to habitable rooms)
- Area does receive direct sky light.
- Light aperture.

Drawing Title: Window Key and No Sky Line Contours

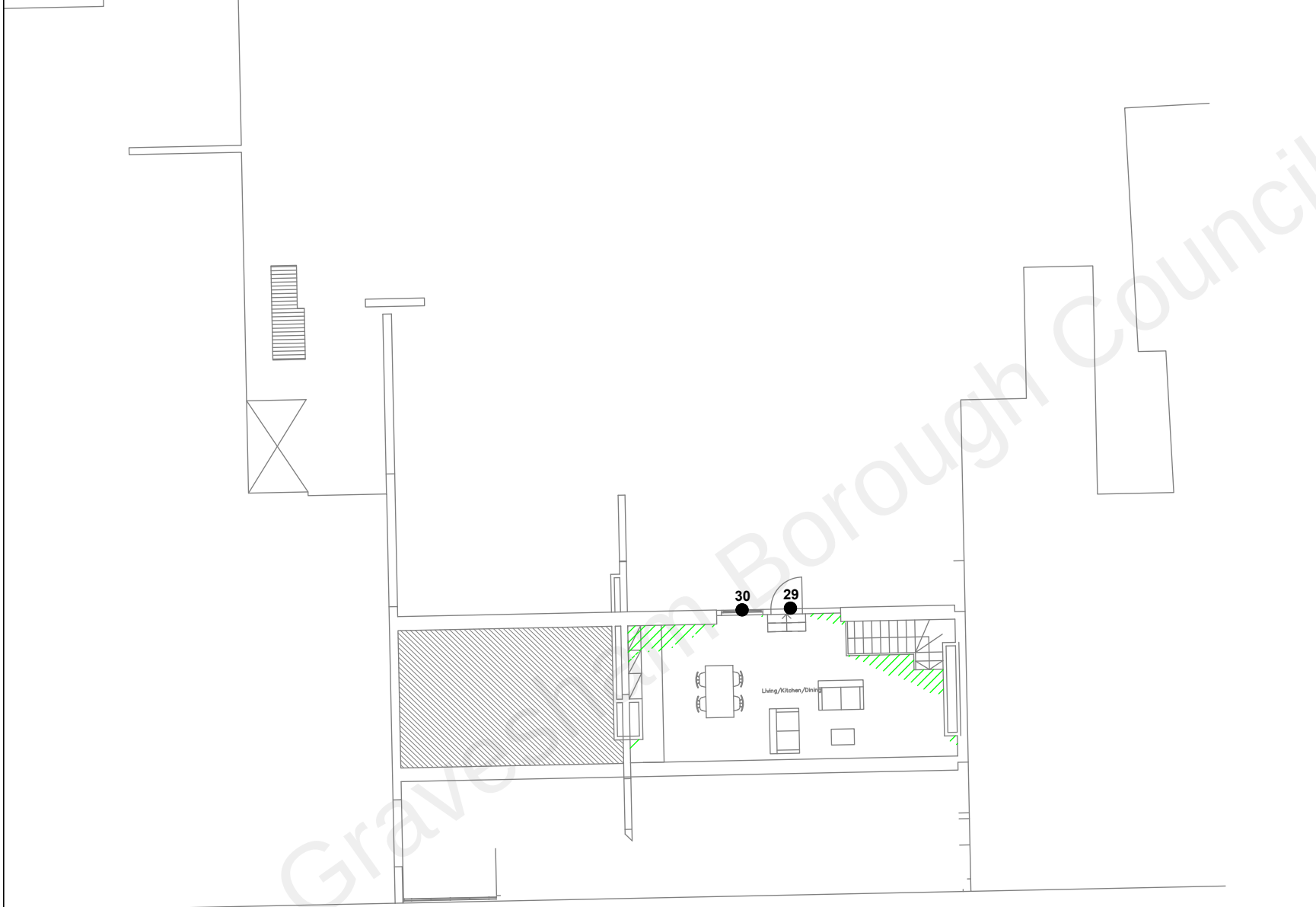
Scale: Do not scale

Drawing No: 5 of 5

Rev. .

| Rev | Date | Details of revision |
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## **APPENDIX 2**

### **DAYLIGHT & SUNLIGHT DATA**

## Appendix 2 - Average Daylight Factor (ADF)

22 to 25 New Road, Gravesend, Kent DA11 0AA

| Reference          | Target ADF based on room use |      | Average Daylight Factor Coefficients |      |        |      |        | Actual |      |      |
|--------------------|------------------------------|------|--------------------------------------|------|--------|------|--------|--------|------|------|
|                    | Primary room use             | ADF  | T                                    | Aw   | A      | R    | Theta  | ADF    |      |      |
| 22 to 25 New Road  |                              |      |                                      |      |        |      |        |        |      |      |
| First Floor        |                              |      |                                      |      |        |      |        |        |      |      |
| Window 1 (lower)   | Living/Dining/Bedroom        | 1.5% | 0.68                                 | 0.34 | 99.44  | 0.71 | 59.4   | 0.1%   |      |      |
| Window 1 (upper)   |                              |      | 0.68                                 | 1.05 | 99.44  | 0.71 | 62.8   | 0.9%   |      |      |
| Window 2 (lower)   |                              |      | 0.68                                 | 0.45 | 99.44  | 0.71 | 56.9   | 0.1%   |      |      |
| Window 2 (upper)   |                              |      | 0.68                                 | 1.38 | 99.44  | 0.71 | 58.9   | 1.1%   |      |      |
| Total ADF for room |                              |      |                                      |      |        |      |        |        | 2.2% |      |
| Window 3 (lower)   |                              |      | 0.68                                 | 0.45 | 107.77 | 0.7  | 52.7   | 0.1%   |      |      |
| Window 3 (upper)   |                              |      | 0.68                                 | 1.39 | 107.77 | 0.7  | 54.7   | 0.9%   |      |      |
| Window 4 (lower)   |                              |      | 0.68                                 | 0.69 | 107.77 | 0.7  | 65.0   | 0.2%   |      |      |
| Window 4 (upper)   |                              |      | 0.68                                 | 2.11 | 107.77 | 0.7  | 68.6   | 1.8%   |      |      |
| Window 5 (lower)   |                              |      | 0.68                                 | 0.45 | 107.77 | 0.7  | 57.3   | 0.1%   |      |      |
| Window 5 (upper)   | Living/Dining/Bedroom        | 1.5% | 0.68                                 | 1.39 | 107.77 | 0.7  | 59.3   | 1.0%   |      |      |
| Total ADF for room |                              |      |                                      |      |        |      |        | 4.1%   |      |      |
| Window 6 (lower)   |                              |      | 0.68                                 | 0.43 | 103.95 | 0.7  | 54.4   | 0.1%   |      |      |
| Window 6 (upper)   |                              |      | 0.68                                 | 1.33 | 103.95 | 0.7  | 56.5   | 1.0%   |      |      |
| Window 7 (lower)   |                              |      | 0.68                                 | 0.69 | 103.95 | 0.7  | 65.9   | 0.2%   |      |      |
| Window 7 (upper)   |                              |      | 0.68                                 | 2.11 | 103.95 | 0.7  | 69.6   | 1.9%   |      |      |
| Window 8 (lower)   |                              |      | 0.68                                 | 0.45 | 103.95 | 0.7  | 57.7   | 0.1%   |      |      |
| Window 8 (upper)   |                              |      | 0.68                                 | 1.39 | 103.95 | 0.7  | 59.7   | 1.1%   |      |      |
| Total ADF for room |                              |      | Bedroom                              | 1.0% |        |      |        |        |      | 4.4% |
| Window 9 (lower)   |                              |      |                                      |      | 0.68   | 0.45 | 134.45 | 0.7    | 54.4 | 0.1% |
| Window 9 (upper)   | 0.68                         | 1.39 |                                      |      | 134.45 | 0.7  | 56.4   | 0.8%   |      |      |
| Window 10 (lower)  | 0.68                         | 0.69 |                                      |      | 134.45 | 0.7  | 66.5   | 0.2%   |      |      |
| Window 10 (upper)  | 0.68                         | 2.11 |                                      |      | 134.45 | 0.7  | 70.2   | 1.5%   |      |      |
| Window 11 (lower)  | 0.68                         | 0.45 |                                      |      | 134.45 | 0.7  | 47.2   | 0.1%   |      |      |
| Window 11 (upper)  | 0.68                         | 1.39 |                                      |      | 134.45 | 0.7  | 49.2   | 0.7%   |      |      |
| Total ADF for room | Living/Dining/Kitchen        | 2.0% |                                      |      |        |      |        |        |      | 3.4% |

**22 to 25 New Road, Gravesend, Kent DA11 0AA**

| Reference          | Target ADF based on room use |      | Average Daylight Factor Coefficients |      |        |      |        | Actual |      |
|--------------------|------------------------------|------|--------------------------------------|------|--------|------|--------|--------|------|
|                    | Primary room use             | ADF  | T                                    | Aw   | A      | R    | Theta  | ADF    |      |
| Window 12 (lower)  | Studio                       | 2.0% | 0.68                                 | 0.07 | 153.44 | 0.71 | 49.5   | 0.0%   |      |
| Window 12 (upper)  |                              |      | 0.68                                 | 0.81 | 153.44 | 0.71 | 60.6   | 0.4%   |      |
| Window 13 (lower)  |                              |      | 0.68                                 | 0.2  | 153.44 | 0.71 | 71.1   | 0.1%   |      |
| Window 13 (upper)  |                              |      | 0.68                                 | 2.28 | 153.44 | 0.71 | 74.8   | 1.5%   |      |
| Window 14 (lower)  |                              |      | 0.68                                 | 0.07 | 153.44 | 0.71 | 28.0   | 0.0%   |      |
| Window 14 (upper)  |                              |      | 0.68                                 | 0.81 | 153.44 | 0.71 | 33.9   | 0.2%   |      |
| Window 15 (lower)  |                              |      | 0.68                                 | 0.1  | 153.44 | 0.71 | 46.9   | 0.0%   |      |
| Window 15 (upper)  |                              |      | 0.68                                 | 0.73 | 153.44 | 0.71 | 46.2   | 0.3%   |      |
| Total ADF for room |                              |      |                                      |      |        |      |        |        | 2.5% |
| Second Floor       |                              |      |                                      |      |        |      |        |        |      |
| Window 16 (lower)  | Studio                       | 2.0% | 0.68                                 | 0.35 | 185.69 | 0.68 | 60.9   | 0.1%   |      |
| Window 16 (upper)  |                              |      | 0.68                                 | 1.41 | 185.69 | 0.68 | 61.7   | 0.6%   |      |
| Window 17 (lower)  |                              |      | 0.68                                 | 0.56 | 185.69 | 0.68 | 77.1   | 0.1%   |      |
| Window 17 (upper)  |                              |      | 0.68                                 | 2.24 | 185.69 | 0.68 | 81.0   | 1.2%   |      |
| Window 18 (lower)  |                              |      | 0.68                                 | 0.37 | 185.69 | 0.68 | 63.2   | 0.1%   |      |
| Window 18 (upper)  |                              |      | 0.68                                 | 1.47 | 185.69 | 0.68 | 63.6   | 0.6%   |      |
| Window 19 (lower)  |                              |      | 0.68                                 | 0.35 | 185.69 | 0.68 | 61.7   | 0.1%   |      |
| Window 19 (upper)  |                              |      | 0.68                                 | 1.41 | 185.69 | 0.68 | 62.4   | 0.6%   |      |
| Window 20 (lower)  |                              |      | 0.68                                 | 0.56 | 185.69 | 0.68 | 77.6   | 0.1%   |      |
| Window 20 (upper)  |                              |      | 0.68                                 | 2.24 | 185.69 | 0.68 | 81.6   | 1.3%   |      |
| Window 21 (lower)  |                              |      | 0.68                                 | 0.37 | 185.69 | 0.68 | 53.2   | 0.1%   |      |
| Window 21 (upper)  |                              |      | 0.68                                 | 1.47 | 185.69 | 0.68 | 54.7   | 0.6%   |      |
| Total ADF for room |                              |      |                                      |      |        |      |        |        | 5.5% |
| Window 22 (lower)  |                              |      | Studio                               | 2.0% | 0.68   | 0.58 | 130.22 | 0.7    | 84.0 |
| Window 22 (upper)  | 0.68                         | 3.47 |                                      |      | 130.22 | 0.7  | 83.3   | 3.0%   |      |
| Window 23          | 0.68                         | 1.73 |                                      |      | 130.22 | 0.7  | 80.7   | 1.4%   |      |
| Window 24          | 0.68                         | 0.75 |                                      |      | 130.22 | 0.7  | 81.6   | 0.6%   |      |
| Total ADF for room |                              |      |                                      |      |        |      | 5.2%   |        |      |

**Appendix 2 - Average Daylight Factor (ADF)**  
**22 to 25 New Road, Gravesend, Kent DA11 0AA**

| Reference                 | Target ADF based on room use |      | Average Daylight Factor Coefficients |      |        |      |       | Actual      |
|---------------------------|------------------------------|------|--------------------------------------|------|--------|------|-------|-------------|
|                           | Primary room use             | ADF  | T                                    | Aw   | A      | R    | Theta | ADF         |
| <u>Third Floor</u>        |                              |      |                                      |      |        |      |       |             |
| Window 25 (lower)         |                              |      | 0.68                                 | 0.09 | 171.16 | 0.69 | 86.8  | 0.0%        |
| Window 25 (upper)         |                              |      | 0.68                                 | 3.09 | 171.16 | 0.69 | 85.8  | 2.0%        |
| Window 26 (lower)         |                              |      | 0.68                                 | 0.09 | 171.16 | 0.69 | 87.5  | 0.0%        |
| Window 26 (upper)         |                              |      | 0.68                                 | 3.09 | 171.16 | 0.69 | 86.3  | 2.0%        |
| <b>Total ADF for room</b> | Studio                       | 2.0% |                                      |      |        |      |       | <b>4.0%</b> |
| Window 27 (lower)         |                              |      | 0.68                                 | 0.03 | 64.97  | 0.71 | 87.2  | 0.0%        |
| Window 27 (upper)         |                              |      | 0.68                                 | 1.28 | 64.97  | 0.71 | 85.0  | 2.3%        |
| Window 28 (lower)         |                              |      | 0.68                                 | 0.03 | 64.97  | 0.71 | 87.5  | 0.0%        |
| Window 28 (upper)         |                              |      | 0.68                                 | 1.28 | 64.97  | 0.71 | 84.7  | 2.3%        |
| <b>Total ADF for room</b> | Bedroom                      | 1.0% |                                      |      |        |      |       | <b>4.6%</b> |
| <u>Fourth Floor</u>       |                              |      |                                      |      |        |      |       |             |
| Window 29 (lower)         |                              |      | 0.68                                 | 0.42 | 124.14 | 0.69 | 87.4  | 0.2%        |
| Window 29 (upper)         |                              |      | 0.68                                 | 1.26 | 124.14 | 0.69 | 84.2  | 1.1%        |
| Window 30 (lower)         |                              |      | 0.68                                 | 0.42 | 124.14 | 0.69 | 82.7  | 0.1%        |
| Window 30 (upper)         |                              |      | 0.68                                 | 1.26 | 124.14 | 0.69 | 83.6  | 1.1%        |
| <b>Total ADF for room</b> | Living/Dining/Kitchen        | 2.0% |                                      |      |        |      |       | <b>2.5%</b> |

**Appendix 2 - Room Depth Calculation****22 to 25 New Road, Gravesend, Kent DA11 0AA**

| Room              | Room Depth Coefficients |     |     |      | Room Depth Calculation |           | Result |
|-------------------|-------------------------|-----|-----|------|------------------------|-----------|--------|
|                   | L                       | W   | H   | Rb   | L/W + L/H              | <= 2/1-Rb |        |
| 22 to 25 New Road |                         |     |     |      |                        |           |        |
| First Floor       |                         |     |     |      |                        |           |        |
| Window 1          | 5.8                     | 3.3 | 2.8 | 0.71 | 3.83 <=                | 7.02      | Pass   |
| Window 2          | 4.0                     | 5.7 | 2.8 | 0.71 | 2.13 <=                | 7.02      | Pass   |
| Second Floor      |                         |     |     |      |                        |           |        |
| Window 16         | 5.6                     | 6.3 | 2.9 | 0.68 | 2.82 <=                | 6.33      | Pass   |
| Window 17         | 6.0                     | 8.9 | 2.9 | 0.68 | 2.74 <=                | 6.33      | Pass   |
| Window 18         | 5.0                     | 5.4 | 2.9 | 0.68 | 2.65 <=                | 6.33      | Pass   |
| Window 19         | 4.7                     | 6.3 | 2.9 | 0.68 | 2.37 <=                | 6.33      | Pass   |
| Window 20         | 6.0                     | 8.9 | 2.9 | 0.68 | 2.74 <=                | 6.33      | Pass   |
| Window 21         | 8.6                     | 5.4 | 2.9 | 0.68 | 4.56 <=                | 6.33      | Pass   |
| Window 22         | 5.0                     | 5.4 | 2.9 | 0.7  | 2.65 <=                | 6.7       | Pass   |
| Window 23         | 5.0                     | 5.4 | 2.9 | 0.7  | 2.65 <=                | 6.7       | Pass   |
| Window 24         | 5.0                     | 5.4 | 2.6 | 0.7  | 2.85 <=                | 6.7       | Pass   |
| Third Floor       |                         |     |     |      |                        |           |        |
| Window 25         | 4.8                     | 8.1 | 2.6 | 0.69 | 2.44 <=                | 6.52      | Pass   |
| Window 26         | 4.8                     | 8.1 | 2.6 | 0.69 | 2.44 <=                | 6.52      | Pass   |
| Window 27         | 3.3                     | 3.8 | 2.7 | 0.71 | 2.09 <=                | 6.89      | Pass   |
| Window 28         | 3.3                     | 3.8 | 2.7 | 0.71 | 2.09 <=                | 6.89      | Pass   |
| Fourth Floor      |                         |     |     |      |                        |           |        |
| Window 29         | 4.2                     | 9.5 | 2.3 | 0.69 | 2.27 <=                | 6.42      | Pass   |
| Window 30         | 4.2                     | 9.5 | 2.3 | 0.69 | 2.27 <=                | 6.42      | Pass   |

## Appendix 2 - Sunlight to Windows

22 to 25 New Road, Gravesend, Kent DA11 0AA

| Reference                | Room Use              | Annual Probable Sunlight Hours |        |
|--------------------------|-----------------------|--------------------------------|--------|
|                          |                       | Total                          | Winter |
| <u>22 to 25 New Road</u> |                       |                                |        |
| <u>First Floor</u>       |                       |                                |        |
| Window 1                 | Living/Dining/Bedroom | 45%                            | 13%    |
| Window 2                 | Living/Dining/Bedroom | 50%                            | 15%    |
| Window 3                 | Living/Dining/Bedroom | 48%                            | 15%    |
| Window 4                 | Living/Dining/Bedroom | 66%                            | 18%    |
| Window 5                 | Living/Dining/Bedroom | 52%                            | 17%    |
| Window 9                 | Living/Dining/Kitchen | 48%                            | 15%    |
| Window 10                | Living/Dining/Kitchen | 67%                            | 19%    |
| Window 11                | Living/Dining/Kitchen | 42%                            | 16%    |
| Window 12                | Studio                | 6%                             | 0%     |
| Window 13                | Studio                | 1%                             | 0%     |
| Window 14                | Studio                | 0%                             | 0%     |
| Window 15                | Studio                | 0%                             | 0%     |
| <u>Second Floor</u>      |                       |                                |        |
| Window 16                | Studio                | 54%                            | 21%    |
| Window 17                | Studio                | 75%                            | 27%    |
| Window 18                | Studio                | 56%                            | 22%    |
| Window 19                | Studio                | 54%                            | 21%    |
| Window 20                | Studio                | 75%                            | 27%    |
| Window 21                | Studio                | 47%                            | 21%    |
| Window 22                | Studio                | 3%                             | 0%     |
| Window 23                | Studio                | 1%                             | 0%     |
| Window 24                | Studio                | 0%                             | 0%     |
| <u>Third Floor</u>       |                       |                                |        |
| Window 25                | Studio                | 79%                            | 30%    |
| Window 26                | Studio                | 79%                            | 30%    |
| <u>Fourth Floor</u>      |                       |                                |        |
| Window 29                | Living/Dining/Kitchen | 1%                             | 0%     |
| Window 30                | Living/Dining/Kitchen | 1%                             | 0%     |