

## 2 HILLFIELD ROAD

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*Daylight and Sunlight Report*



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14 August 2020



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Waldrams Ltd  
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## Daylight and Sunlight Report

*Project:* 2 Hillfield Road  
*Client:* Elevations Ltd  
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## Executive Summary

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- This is a report into the impact of the proposed development at 2 Hillfield Road, London, on the daylight and sunlight to surrounding residential properties and internally to the scheme itself. This analysis has been based upon scheme drawings provided by Charabanc, a photogrammetric survey, and site photography.
- The analysis has been carried out in accordance with the methodologies contained in the Building Research Establishment's Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (2011) (the "BRE Guidelines"), which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.
- In daylight terms, the majority of windows and rooms in the surrounding properties meet the target values as set out in the BRE Guidelines. Where transgressions of these criteria occur, in most cases they are in our opinion minor and isolated.
- Where larger relative reductions to neighbouring properties occur, this is a result of a window receiving a low level of daylight in the existing position. Any absolute reduction in daylight is then exacerbated when considered as a relative reduction.
- Internally, the scheme performs well from a daylight & sunlight perspective with 89% of habitable rooms meeting their target ADF value. 4 out of 9 living rooms meet their target value for annual sunlight and 3 out of 9 living rooms meet their target value for winter sunlight. It should be noted, however, that these results include some north-facing living rooms, utilising the extant bay windows at the front of the property and so have restricted access to sunlight.
- In sunlight amenity terms, both amenity spaces analysed meet the BRE Guidelines for sunlight amenity in the proposed position.

## 1. Introduction

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Waldrams have been instructed to provide daylight and sunlight analysis for the proposed development of the site at 2 Hillfield Road, London. This analysis is based upon scheme drawings by Charabanc, a photogrammetric survey of the site and surrounding context and site photography.

The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

The existing site can be seen on drawings 2536-01-01 to -01-03 with the proposal on drawings 2536-01-04 to -01-06, all in Appendix 1. The numerical results of the quantitative daylight and sunlight analysis comparing the existing and proposed positions can be found in Appendix 2. Window maps showing the locations of the windows analysed in the neighbouring property can be found on drawings 2536-01-10 to -01-11 in Appendix 1. The numerical results of the quantitative internal daylight and sunlight analysis can be found in Appendix 3. Internal layouts showing the position of rooms analysed in the proposed scheme can be found on drawings 2536-01-12 to -01-14 in Appendix 1. The sunlight amenity results are in Appendix 4 on drawing 2536-01-15.

## 2. Summary of how daylight and sunlight are considered for planning

### 2.1 Introduction to the BRE Guidelines

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Daylight and sunlight are planning considerations. The main reference used by local planning authorities to determine the acceptability of proposals in terms of their internal daylight and sunlight and the impact on daylight and sunlight to the surrounding properties is the Building Research Establishment (BRE) Guidelines, used in conjunction with British Standard BS8206 Part 2. The BRE Guidelines provide scientific, objective methods for establishing the acceptability of daylight and sunlight internal to the scheme and the surrounding properties. In practice, it is principally the main habitable rooms internal to the scheme and within the surrounding residential properties that are sensitive in terms of daylight and sunlight. This report therefore focuses on the internal daylight and sunlight and the change in daylight and sunlight to habitable rooms in the surrounding residential property.

The BRE Guidelines specify that the daylight and sunlight results be considered flexibly and in the context of the site. Clearly, there would be a higher expectation for daylight and sunlight in a rural or suburban environment than in a dense city centre location. The important factor in all cases is that the levels of daylight and sunlight are appropriate, taking into account all the planning policy requirements of the site. The BRE Guidelines acknowledge this in the introduction where the BRE Guidelines state:

*“The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and thus this document 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 because natural lighting is only one of the many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values.”*

(Page 1, BRE Guidelines)

Thus, the numerical figures should not be rigidly applied, but instead used as part of the overall evaluation of the daylight and sunlight to the surroundings in context of the site, its existing massing, and the need for regeneration and local planning policy guidance for the site. In particular, existing local precedents or recent planning consents may provide a good indication as to appropriate levels in the vicinity.

The BRE Guidelines specifies in Paragraph H1.2:

*“Where the effect of a new building on existing buildings nearby is being analysed, it is usual to ignore the effect of trees. This is because daylight is at its scarcest and most valuable in winter months when most trees will not be in leaf.”*

The summary in section 2 of this report is provided to briefly introduce some of the main methods of the BRE Guidelines; however, the BRE Guidelines should be used as the basis for assessing the daylight and sunlight results included within this report. This section is not intended to override the wording of the BRE Guidelines for Daylight and Sunlight.

## **2.2 Daylight and sunlight criteria to surrounding residential property**

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According to the BRE Guidelines, a surrounding existing building to a proposed scheme will retain the potential for good interior daylighting if the scheme subtends less than 25 degrees from the horizontal as measured from the lowest habitable windows in the neighbouring windows. If this is

not achieved, then good daylighting to the neighbouring properties is still achieved if the Vertical Sky Component (VSC) is in excess of 27% or is reduced by less than 20% from its existing level and if the area of the room that can see the sky at desk height (known as the daylight distribution or no sky contour) is reduced by less than 20% of its existing area. The BRE Guidelines state this in paragraph 2.2.21 as:

*“If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:*

- *The VSC measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value*
- *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.”*

The test for sunlight to the neighbouring properties is calculated for each living room with a main window facing within 90° of due south. Bedrooms and kitchens are considered by the BRE Guidelines as less important for sunlight. The BRE Guidelines state that any south facing window may potentially receive up to 1486 hours of sunlight per year on average, representing 100% of the annual probable sunlight hours (APSH).

The BRE Guidelines state that, each main window to a main living room may be adversely affected if it has less than 25% of the APSH across the whole year or less than 5% APSH during the winter months (defined as the 6 months from September 21st through to March 21st); and receives less than 0.8 times its former sunlight hours as a result of a proposed development; and has a reduction in sunlight hours received over the whole year greater than 4% of annual probable sunlight hours.

Following the BRE Guidelines recommendations, VSC and APSH are measured from a point on the outer window wall whilst ADF is measured from the point halfway between the inner and outer window wall.

### **2.3 Alternative target values and applying a flexible approach**

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The BRE Guidelines recommend that, in urban development locations, alternative baselines or lower target values may be used (*c.f.* Appendix F of the BRE Guidelines for Daylight & Sunlight).

Paragraph F1 states:

Site: 2 Hillfield Road  
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*“These values [those set out in the BRE Guidelines] are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. Such alternative targets may be generated from the layout dimensions of existing development, or they may be derived from considering the internal layout and daylight needs of the proposed development itself.”*

Indeed, in paragraph 2.2.3 of the BRE Guidelines it states:

*“Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints. Another important issue is whether the existing building is itself a good neighbour, standing a reasonable distance from the boundary and taking more than its fair share of light. Appendix F gives further guidance.”*

In Paragraph F2, the BRE Guidelines state:

*“Sometimes there may be an extant planning permission for a site but the developer wants to change the design. In assessing the loss of light to existing windows nearby, the local authority may allow the vertical sky component (VSC) and annual probable sunlight hours (APSH) for the permitted scheme to be used as alternative benchmarks. However, since the permitted scheme only exists on paper, it would be inappropriate for it to be treated in the same way as an existing building, and for the developer to set 0.8 times the values for the permitted scheme as benchmarks.”*

In Paragraph F4, the BRE Guidelines state:

*“For example, in a mews in a historic city centre, a typical obstruction angle from ground floor window level might be close to 40°. This would correspond to a VSC of 18%, which could be used as a target value for development in that street if new development is to match the existing layout.”*

In Paragraph F5, the BRE Guidelines state:

*“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 those 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.”*



Applying flexibility when considering the BRE Guidelines in planning terms is also supported by the National Planning Policy Framework (NPPF) (February 2019) which states in paragraph 123:

*“Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances:*

...

*(c) 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).”*

In considering planning policy, it is important to establish whether the impact of a proposed development on the daylighting and sunlight conditions of surrounding property to the development:

- i) would or would not result in a “material deterioration” of those conditions; and
- ii) whether such deterioration would be “unacceptable”.

The BRE Guidelines are those that assess the impact of a proposed development and whether or not there is likely to be a “material deterioration”.

The Greater London Authority (GLA), in their representation hearing report D&P/3067/03-Appendix 1 (18th November 2013) in the context of a planning appeal state that:

*“It should, nevertheless, be noted that the 27% VSC target value is derived from a low density suburban housing model. The independent daylight and sunlight review states that in an inner city urban environment, VSC values in excess of 20% should be considered as reasonably good, and that VSC in the mid-teens should be acceptable. However, where the VSC value falls below 10% (so as to be in single figures), the availability of direct light from the sky will be poor. With respect to the reduction factor, it should also be noted that whilst BRE guidelines state that a 20% reduction is the threshold for a materially noticeable change, the independent daylight and sunlight review sets out that given the*

*underdeveloped nature of the site relative to its context, this percentage reduction should be increased to 30%, with and [sic] upper threshold of 40%.”<sup>1</sup>*

## **2.4 Internal new build criteria for daylight and sunlight**

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The BRE Guidelines refer to BS8206 Part 2 and CIBSE Lighting Guide LG10 which set out the following criteria for assessing interior daylight:

- Average Daylight Factor
- Position of the no sky line (Daylight distribution)
- Room depth

Analysis of the first two measurements is laid out below. Due to the irregular plan dimensions of rooms within the scheme, such that they are not rectilinear, the room depth is ambiguous and so this calculation has not been carried out.

The ADF measure of daylight takes into account the main factors that affect the actual daylight appearance of a room including the area of the window.

ADF provides an absolute measure of daylight expressed as a ratio of daylight for the room in question as a proportion of the daylight outside at any moment in time. The ADF for a living room should be above 1.5% (i.e. the room should enjoy a minimum of 1.5% of the average external daylight at any moment in time), whilst that for a bedroom and kitchen should be in excess of 1% and 2% respectively. ADF is dependent on the area of sky visibility, which is closely related to VSC, the area of the window serving the room, the glazing transmittance, the total area of the room's surfaces and the internal reflectance of the room.

In terms of ADF, while the BRE Guidelines recommend that in cases where one room serves more than one purpose the minimum ADF should be that for the room type with the higher value, for rooms designated as a 'living room/kitchen/dining room' (LKD), we would argue that the principal use of the room is as a living room. Accordingly, it would therefore be reasonable to apply the minimum ADF value for a living room (1.5%) as an alternative target value for a room designated as an LKD.

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<sup>1</sup> Greater London Authority, *representation hearing report D&P/3067/03-Appendix 1* (18 November 2013), page i.

We have therefore used the threshold of 1.5% as a benchmark of acceptability for living room/kitchen/dining rooms.

In relation to the position of the no-sky line (daylight distribution), the BRE Guidelines state in paragraph C16:

*“If a significant area of the working plane (normally more than 20%) 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.”*

We have therefore calculated the proportion of each habitable room internally to the scheme between the window and the no-sky line.

For internal sunlight, the only test put forward in the BRE Guidelines is Annual Probable Sunlight Hours (APSH). The test for sunlight is calculated for each main south facing window to habitable rooms and in particular living rooms. Bedrooms and kitchens are considered by the BRE Guidelines as less important for sunlight. The BRE Guidelines state that any south facing window may potentially receive up to 1486 hours of sunlight per year on average, representing 100% of the annual probable sunlight hours (APSH). Of this, each main window to a main habitable room may be adversely affected if it has less than 25% of the total APSH across the whole year or less than 5% APSH during the winter months (defined as the 6 months from September 21st through to March 21st).

Following the BRE Guidelines recommendations, APSH is measured from a point on the inner window wall whilst ADF is measured from the point halfway between the inner and outer window wall.

## **2.5 Method used for calculating the daylight and sunlight results**

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The analysis provided in this report utilizes state-of-the-art software to calculate in three dimensions the daylight and sunlight following the methods specified in the BRE Guidelines. A three dimensional accurate computer model has been created for the existing site in context of the immediate surrounding properties, based upon a photogrammetric survey of the site and surrounding properties, site photographs and Ordnance Survey information.

Drawings of the existing and proposed building in context of the surrounding properties are shown in Appendix 1.

### 2.5.1 Surrounding properties

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Daylight and sunlight levels comparing the existing and proposed daylight (VSC and daylight distribution) and sunlight (APSH) situation are then calculated for the surrounding properties. These results are provided in Appendix 2.

### 2.5.2 Internal residential rooms

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Daylight and sunlight levels for the proposed daylight (ADF and daylight distribution) and sunlight (APSH) internally to the scheme are then calculated. These results are provided in Appendix 3.

#### **References:**

*BRE Guidelines (BR 209):- Site layout planning for daylight and sunlight: a guide to good practice*, by PJ Littlefair (2011).

These Guidelines provide the basis of the analysis described in this report. Please refer to this document for a detailed description as to the approach, methodology, and implementation of the numerical analysis used in this report. A summary of the approach and methods recommended by the BRE Guidelines is included in Section 2 above of this report.

## 3. Assumptions used in the analysis

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Uses of the surrounding properties have been based on external appearance to determine whether they are residential or commercial use. Where this is ambiguous, we have researched the Council Tax records for the property, which if listed would indicate residential use.

It is important to note that the precise position of the surrounding property elevations has been estimated based on brick counts from site photographs. The floor levels for the surrounding buildings are assumed unless otherwise indicated, which may affect the daylight distribution and ADF calculations.

We have not been able to obtain layouts or gain access internally to any of the surrounding properties and so details of the internal layouts and floor level heights have been assumed from the external appearance of the building, and the locations of windows. Unless known or otherwise, appropriate the depths of rooms have been assumed at 4.27m for residential properties and 6m for commercial properties, or half the building depth if this is less than these dimensions.

All property addresses are taken from the Land Registry MapSearch website and we advise that these are checked by your solicitor prior to any action being taken based on this report.

The following assumed window transmittance and internal reflectance values have been used in the ADF calculations:

- Transmittance (T): 0.68
- Reflectance (R): 0.69

Please note that we have not applied a maintenance factor in the calculation; we have assumed that the windows are cleaned regularly. The details of the proportion of frame to each window aperture have not yet been finalised and so a frame factor of 9% has been assumed and applied for the ADF calculations internally within the rooms within the scheme.

#### 4. Sources of Information Used in the Report

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##### **Charabanc**

095 Existing\_from planning  
095-200 Elevations

Basement  
Ground floor  
First floor  
Second floor  
Third floor  
Roof

OS Map

**Received 29/7/20**

Proposed Plan\_1.pdf

**Received 30/7/20**

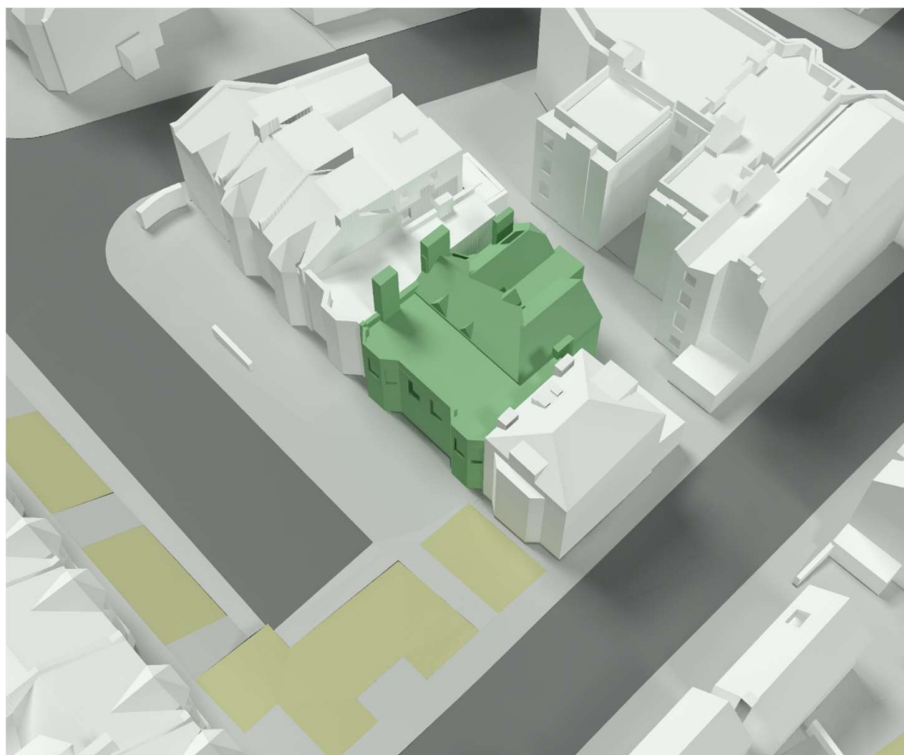
##### **Waldrams Chartered Surveyors**

Photogrammetry  
Ordnance Survey

## 5. Daylight & Sunlight Analysis

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The existing site is shown on drawings 2536-01-01 to -01-03 in Appendix 1 whilst the proposed scheme is shown on drawings 2536-01-04 to -01-06. The existing site in its current condition is shown in *fig. 1* below.



**Fig. 1:** Existing site

In terms of daylight and sunlight, the results of the comparison of the daylight and sunlight to the following properties in Table 1 below were analysed in both the existing and proposed scenarios due to their proximity to the development site, given the height and massing of the proposal.

| Property           | Vertical Sky Component      |  |  |                    |                | No Sky Line               |  |  |                    |                | Annual Probable Sunlight Hours           |  |
|--------------------|-----------------------------|--|--|--------------------|----------------|---------------------------|--|--|--------------------|----------------|--|--|
|                    | Total no. of windows tested | Total no. of windows satisfying BRE criteria | Total no. of windows not satisfying BRE criteria |                    |                | Total no. of rooms tested | Total no. of rooms satisfying BRE criteria | Total no. of rooms not satisfying BRE criteria |                    |                | Total no. of south facing windows tested | Total no. of windows satisfying BRE criteria |
|                    |                             |  | 20-29.9% reduction                               | 30-39.9% reduction | >40% reduction |                           |  | 20-29.9% reduction                             | 30-39.9% reduction | >40% reduction |  |  |
| Gondar House       | 6                           | 6  |  |                    |                | 2                         | 2  |  |                    |                | 6  | 6  |
| 1 Hillfield Road   | 8                           | 8  |  |                    |                | 4                         | 4  |  |                    |                | 8  | 8  |
| 3 Hillfield Road   | 8                           | 8  |  |                    |                | 4                         | 4  |  |                    |                | 8  | 8  |
| 5 Hillfield Road   | 8                           | 8  |  |                    |                | 4                         | 4  |  |                    |                | 8  | 8  |
| 1a Gondar Gardens  | 7                           | 7  |  |                    |                | 5                         | 5  |  |                    |                |  |  |
| Gondar Cottage     | 5                           | 3  |  | 1                  | 1              | 3                         | 3  |  |                    |                | 4  | 3  |
| 2a Hillfield Road  | 7                           | 3  | 2  | 1                  | 1              | 5                         | 2  | 1  |                    | 2              | 7  | 6  |
| 2b Hillfield Road  | 9                           | 8  | 1  |                    |                | 6                         | 3  | 1  |                    | 2              | 9  | 9  |
| 31 Mill Lane       | 6                           | 3  | 2  | 1                  |                | 5                         | 3  | 1  | 1                  |                |  |  |
| 10-12 The Mansions | 6                           | 5  | 1  |                    |                | 6                         | 4  |  | 2                  |                |  |  |
| 14-19 The Mansions | 3                           | 3  |  |                    |                | 3                         | 3  |  |                    |                |  |  |
| <b>Total</b>       | <b>73</b>                   | <b>62</b>                                    | <b>6</b>   | <b>3</b>           | <b>2</b>       | <b>47</b>                 | <b>37</b>                                  | <b>3</b>                                       | <b>3</b>           | <b>4</b>       | <b>50</b>                                | <b>48</b>                                    |

**Table 1: Existing vs Proposed comparison**

Table 1 above demonstrates that the following properties meet the target values as set out in the BRE Guidelines for daylight (in terms of VSC and daylight distribution) and sunlight (in terms of APSH) when comparing the existing and proposed scenarios and therefore, are not commented on further:

- Gondar House
- 1 Hillfield Road
- Hillfield Road
- Hillfield Road
- 1a Gondar Gardens
- 14-19 The Mansions

Commentary on the remaining properties follows below.

#### **Gondar Cottage**

This residential property is shown below in photos 1 and 2. The Valuations Office Agency (VOA) website lists two properties within this building, one on the ground floor and a maisonette on the first and second floors above.



**Photo 1: Gondar Cottage, Gondar Gardens**

We have not been able to view the rear of this property in its entirety. At the time of our site visit, the boundary between 2 Hillfield Road and this property was very overgrown and no ground floor window



could be seen in the location shown in photo 2 below. However, in order to cover the risk of there being a window in this location, a test window has been inserted into the 3D model used in the analysis.



Photo 2: Rear of Gondar Cottage with location of ground floor test window marked

In daylight terms, three out of five windows analysed meet the target values for VSC in the proposed position when comparing the existing and proposed positions. All rooms analysed meet the target value for daylight distribution, although these are based on reasonably assumed layouts and so the VSC results take precedence. In sunlight terms, three out of the four windows analysed meets the target value for annual APSH whilst both meet the target value for winter sunlight.

### Opinion

One of the two windows which does not meet the target value for VSC and the one window which does not meet the target value for annual APSH is the test window referred to above. It may be the case, therefore, that this window does not exist and, if so, the remaining commentary beneath on this property can be disregarded. If it does exist, it experiences a 35% reduction in VSC, although the assumed room it serves retains in excess of 80% of its existing daylight distribution, indicating that the room served will remain well daylit. The second window is a door serving the same space as the large

skylight partially visible in photo 2. Given its size and location, in our opinion this window is the main window to this room and will maintain an acceptable level of daylight in the proposed position.

### **2a Hillfield Road**

This residential property is shown below in photo 3.



**Photo 3: 2a Hillfield Road**

In daylight terms, three out of seven windows analysed meet the target values for VSC in the proposed position when comparing the existing and proposed positions. Two out of five rooms analysed meet the target value for daylight distribution, although these are based on reasonably assumed layouts and so the VSC results take precedence. In sunlight terms, six out of the seven windows analysed meet the target value for annual APSH whilst both meet the target value for winter sunlight.

### *Opinion*

All four remaining windows are positioned on the side elevation of the side return of 2A Hillfield Road facing the site. These windows have low levels of light in the existing position (no greater than 5.4% VSC in absolute terms) and so any reductions in absolute VSC are exacerbated when considered as a percentage of the existing level of VSC. Three of these four windows experience reductions no greater than 1.03% with the fourth, W1 on the first floor, experiencing a 4% absolute reduction. In our opinion, these reductions are small and likely unnoticeable. Two of the three remaining rooms are on the first floor and so, in our opinion, are likely to be bedrooms if used as habitable space. Bedrooms are described in the BRE Guidelines as being “*less important*” in relation to daylight distribution.

In sunlight terms, the one remaining window is positioned in the side return of 2A Hillfield Road on the first floor and so is not considered likely to serve a living room, which the BRE Guidelines identifies as being most important for sunlight.

Overall, therefore, in our view the impact on the daylight and sunlight within this property should be considered acceptable.

#### **2b Hillfield Road**

This residential property is shown below in photo 4.



**Photo 4: 2b Hillfield Road**

In daylight terms, eight out of nine windows analysed meet the target values for VSC in the proposed position when comparing the existing and proposed positions. Three out of six rooms analysed meet the target value for daylight distribution, although these are based on reasonably assumed layouts and so the VSC results take precedence. In sunlight terms, all windows analysed meet the target value for annual and winter sunlight.

#### Opinion

The one window which does not meet the VSC criteria is on the first floor of 2b Hillfield Road, facing the site, and retains 20% VSC in absolute terms. This is, in our opinion, a good level of daylight for an urban location, and is a level of daylight supported by the GLA in recent planning decisions as being appropriate for London. The three rooms which do not meet the daylight distribution criteria are all positioned on the side elevation of the side return of 2B Hillfield Road, directly facing the site. Given their position in the building, these rooms are not likely to be living rooms and, when on the first floor, are likely to be bedrooms which are described in the BRE Guidelines as being “*less important*” when considering daylight distribution. Furthermore, all three rooms are modelled based on reasonably assumed layouts and so the VSC results must take precedence. All windows serving these rooms therefore either meet the target VSC value in the proposed position or retain 20% VSC in absolute terms (see above). As such, in our view, the impact on the daylight and sunlight within this property should be considered acceptable.

#### **Gondar Mansions, 31 Mill Lane**

This residential property is shown below in photo 5. It is of commercial use on the ground floor; no further commentary is provided for the ground floor as commercial space is considered to be less sensitive to changes in daylight & sunlight.



Photo 5: 31 Mill Lane

In daylight terms, two out of three windows analysed as serving residential space meet the target values for VSC in the proposed position when comparing the existing and proposed positions. Two out of three rooms analysed meet the target value for daylight distribution, although these are based on reasonably assumed layouts and so the VSC results take precedence. In sunlight terms, all windows analysed face within 90° of due north and so do not require analysis for sunlight as per the BRE Guidelines.

#### Opinion

The one window which does not meet the VSC criteria serves the one room which does not meet the daylight distribution criteria and is on the first floor of the property. The window retains 19% VSC in absolute terms which, in our opinion, is a good level of daylight for an urban location such as this, and is a level of daylight supported by the GLA in recent planning decisions as being appropriate for London. The rooms on the rear façade of this building appear most likely to be bedrooms based on their external appearance and, if so, would be considered “*less important*” in daylight & sunlight terms further to the BRE Guidelines’ recommendation. As such, in our view, this property retains an acceptable level of daylight with the proposed development in place

### 10-12 The Mansions, Mill Lane

This residential property is shown below in photo 5. It is of commercial use on the ground floor; no further commentary is provided for the ground floor as commercial space is considered to be less sensitive to changes in daylight & sunlight.



Photo 5: 10-14 The Mansions, Mill Lane

In daylight terms, all windows analysed and serving residential space meet the target values for VSC in the proposed position when comparing the existing and proposed positions. Similarly, all rooms analysed and serving habitable space meet the target value for daylight distribution, although these are based on reasonably assumed layouts and so the VSC results take precedence. In sunlight terms, all windows analysed face within 90° of due north and so do not require analysis for sunlight as per the BRE Guidelines.

## 6. Internal daylight and sunlight

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The room layouts within the proposed development are shown on drawings 2536-01-12 to 01-14 in Appendix 1, which reference the results of the internal daylight and sunlight analysis, included in Appendix 3.

The BRE Guidelines make it clear that ADF is a primary measure for daylight for new build accommodation such as this, and APSH is the measure for sunlight. It is important to note that the BRE Guidelines recommend that a kitchen should enjoy daylight levels of 2% ADF, a living room levels of 1.5%, and bedrooms 1% ADF. Where a room is designated as a living room/kitchen/dining room (LKD), the threshold of 1.5% has been used as an alternative target value as detailed in section 2.3 above.

In daylight terms, 25 out of 28 (89%) habitable rooms meet their target daylight level in ADF terms. 22 out of 27 habitable rooms meet their target daylight distribution level.

In sunlight terms, 4 out of 9 living rooms meet their target value for annual sunlight and 3 out of 9 living rooms meet their target value for winter sunlight. It should be noted, however, that these results include some north-facing living rooms, utilising the extant bay windows at the front of the property and so have restricted access to sunlight.

### Opinion

In ADF terms, two of the three remaining rooms achieve 90% of their target value and so, in our opinion, come very close to achieving the recommendation. Three of the five remaining rooms in daylight distribution terms are bedrooms.

## 7. Sunlight amenity

---

We have assessed the level of sunlight to the outdoor amenity spaces (i.e. gardens) within the surrounding properties. The results of the analysis to surrounding amenity spaces at Gondor Cottage and 2a Hillfield Road can be found on drawing 2536-01-15 in Appendix 4. The BRE Guidelines recommend that an outdoor amenity space receives at least 2 hours of sunlight on March 21st to at least 50% of its area in the proposed situation or retains at least 80% of its former value with the proposal in place.

The analysis demonstrates that both amenity spaces meet the BRE Guidelines for sunlight amenity in the proposed position.

## 8. Conclusions

---

This is a report into the impact of the proposed development at 2 Hillfield Road, London, on the daylight and sunlight to surrounding residential properties and internally to the scheme itself. This analysis has been based upon scheme drawings provided by Charabanc, a photogrammetric survey, and site photography.

The analysis has been carried out in accordance with the methodologies contained in the Building Research Establishment's Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (2011) (the "BRE Guidelines"), which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

In daylight terms, the majority of windows and rooms in the surrounding properties meet the target values as set out in the BRE Guidelines. Where transgressions of these criteria occur, in most cases they are in our opinion minor and isolated.

Where larger relative reductions to neighbouring properties occur, this is a result of a window receiving a low level of daylight in the existing position. Any absolute reduction in daylight is then exacerbated when considered as a relative reduction.

Internally, the scheme performs well from a daylight & sunlight perspective with 89% of habitable rooms meeting their target ADF value. 4 out of 9 living rooms meet their target value for annual sunlight and 3 out of 9 living rooms meet their target value for winter sunlight. It should be noted, however, that these results include some north-facing living rooms, utilising the extant bay windows at the front of the property and so have restricted access to sunlight.

In sunlight amenity terms, both amenity spaces analysed meet the BRE Guidelines for sunlight amenity in the proposed position.



# APPENDIX 1

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## *Drawings*



**waldrams**  
daylight & sunlight



**SOURCES OF INFORMATION:**

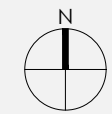
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CHAR-A-BANC  
 IR02 (RECEIVED ON 29.07.2020)  
 IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS

**NOTES:**

EXISTING BUILDING SHOWN IN GREEN



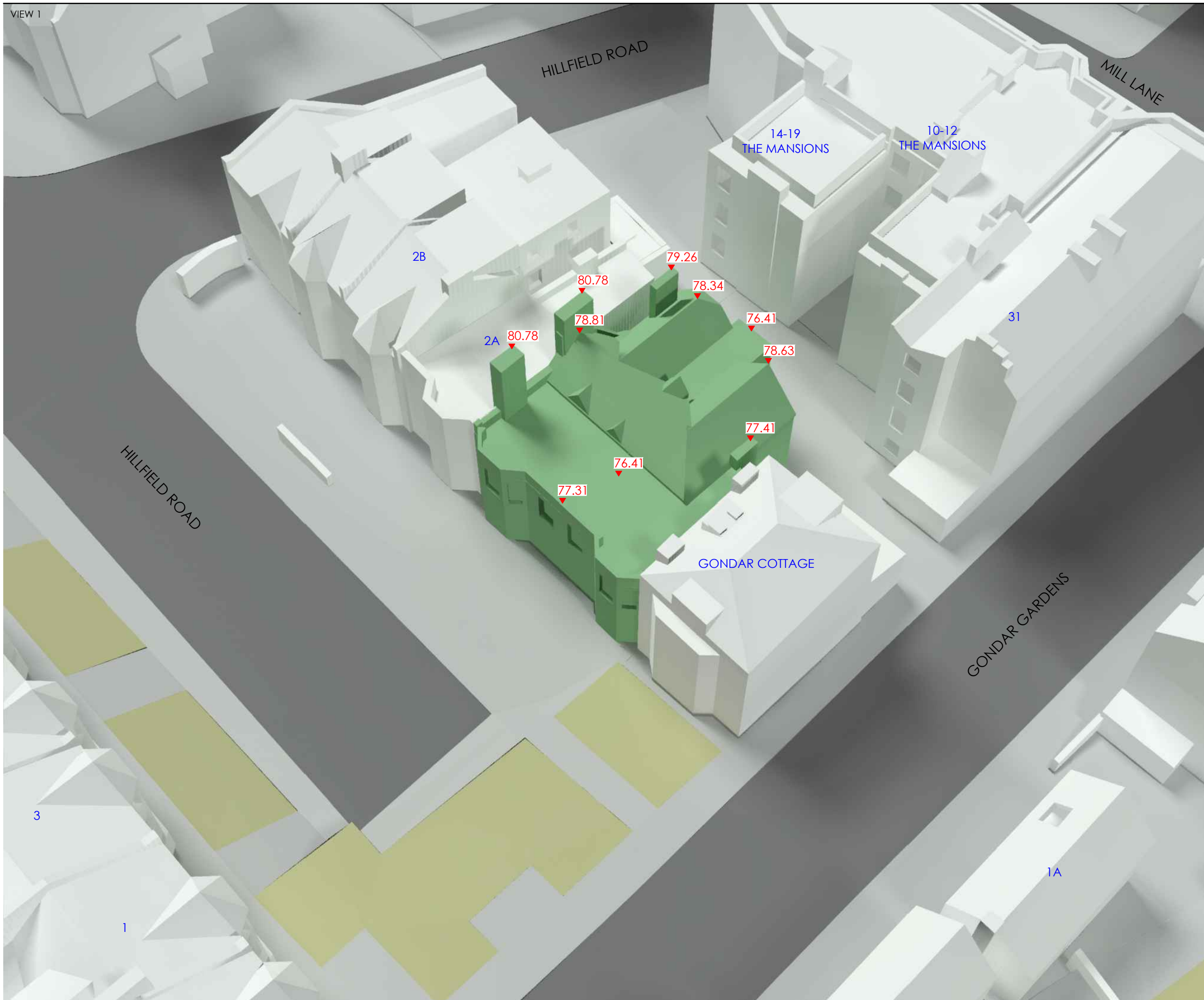
**PROJECT**  
 2 HILLFIELD ROAD  
 LONDON NW6

**DRAWING**  
 PLAN VIEW  
 EXISTING CONDITION

**SCALE @ A3**      **DATE**  
 1:250                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
 MZ                              MZ

**PROJECT No.**      **REL No. - DWG No.**  
 2536                      01-01



**SOURCES OF INFORMATION:**

ACCUCITIES  
IR01 (RECEIVED ON 13.07.2020)

CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS

**NOTES:**

EXISTING BUILDING SHOWN IN GREEN

AOD HEIGHTS SHOWN IN METRES

**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
3D VIEW  
EXISTING CONDITION

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                        MZ

**PROJECT No.**      **REL No. - DWG No.**  
2536                      01-02



**SOURCES OF INFORMATION:**

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CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
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SITE PHOTOGRAPHS

**NOTES:**

EXISTING BUILDING SHOWN IN GREEN

AOD HEIGHTS SHOWN IN METRES

**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
3D VIEW  
EXISTING CONDITION

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

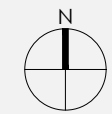
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MZ                      MZ

**PROJECT No.**      **REL No. - DWG No.**  
2536                      01-03



**SOURCES OF INFORMATION:**  
ACCUCITIES  
IR01 (RECEIVED ON 13.07.2020)  
CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)  
SITE PHOTOGRAPHS

**NOTES:**  
PROPOSED BUILDING SHOWN IN BLUE



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
PLAN VIEW  
PROPOSED SCHEME

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1:250                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                              MZ

**PROJECT No.**      **REL No.- DWG No.**  
2536                      01-04

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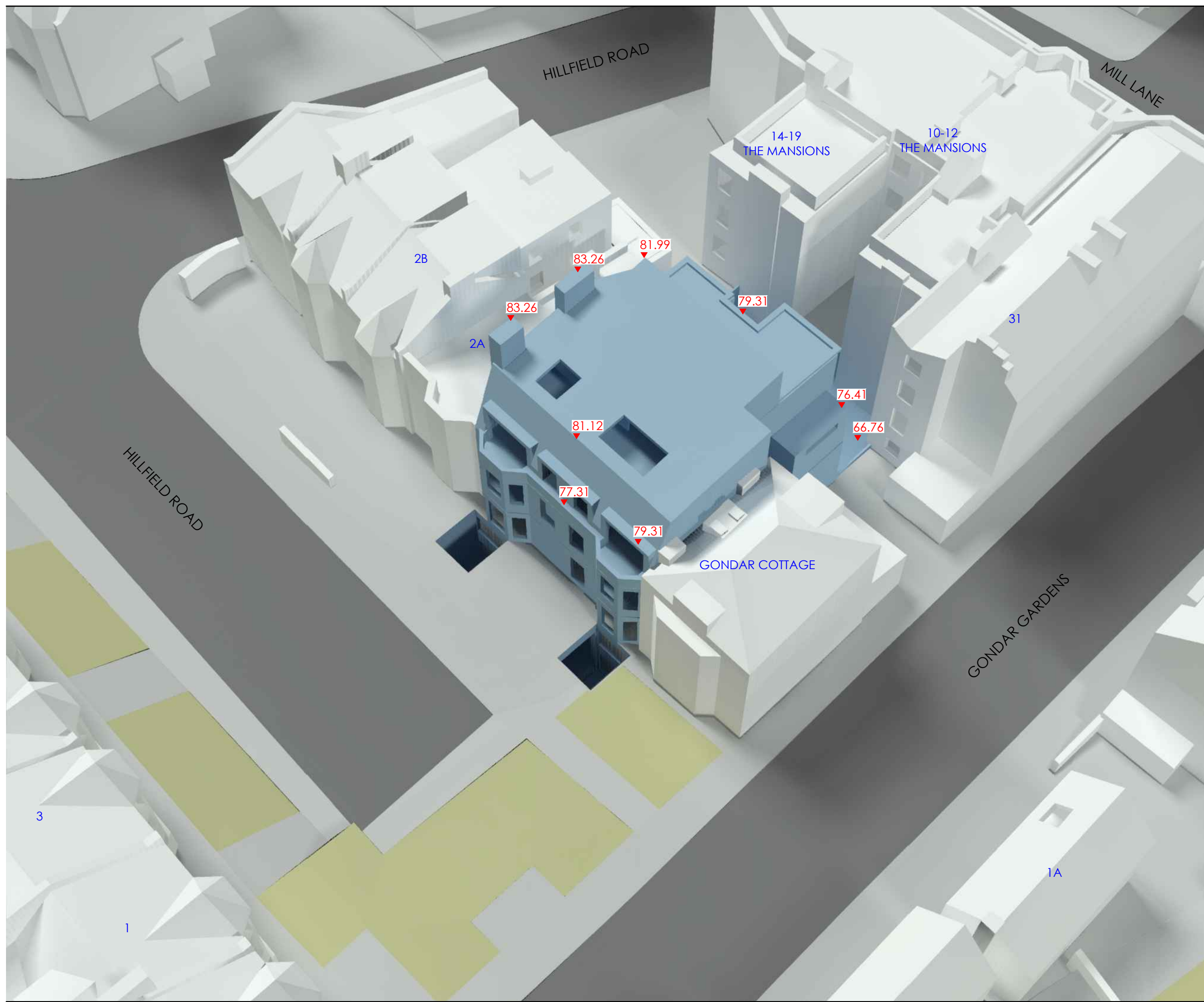
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IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS

**NOTES:**

PROPOSED BUILDING SHOWN IN BLUE

AOD HEIGHTS SHOWN IN METRES



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
3D VIEW  
PROPOSED SCHEME

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                        MZ

**PROJECT No.**      **REL No. - DWG No.**  
2536                      01-05

**SOURCES OF INFORMATION:**

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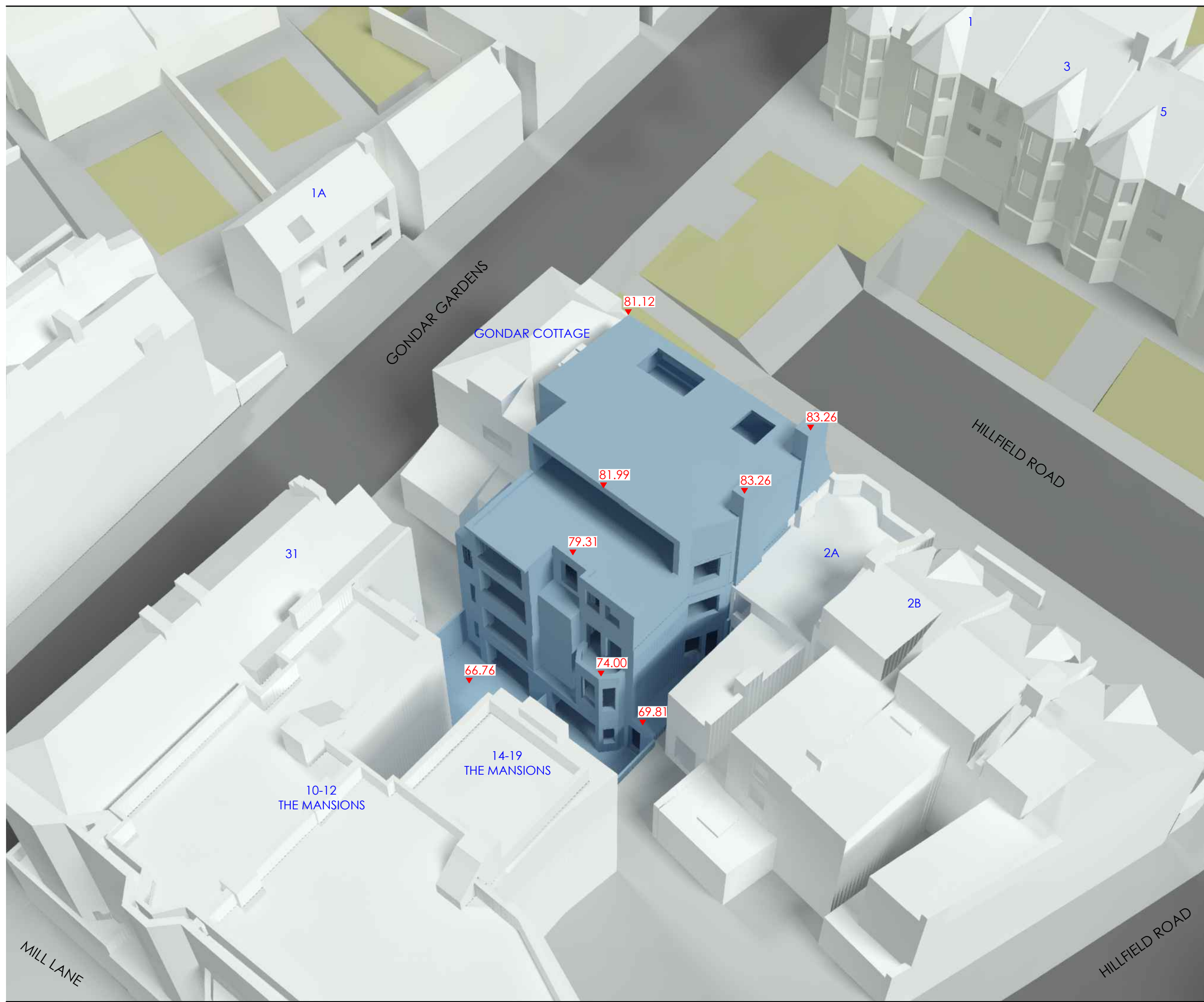
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IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS

**NOTES:**

PROPOSED BUILDING SHOWN IN BLUE

AOD HEIGHTS SHOWN IN METRES



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

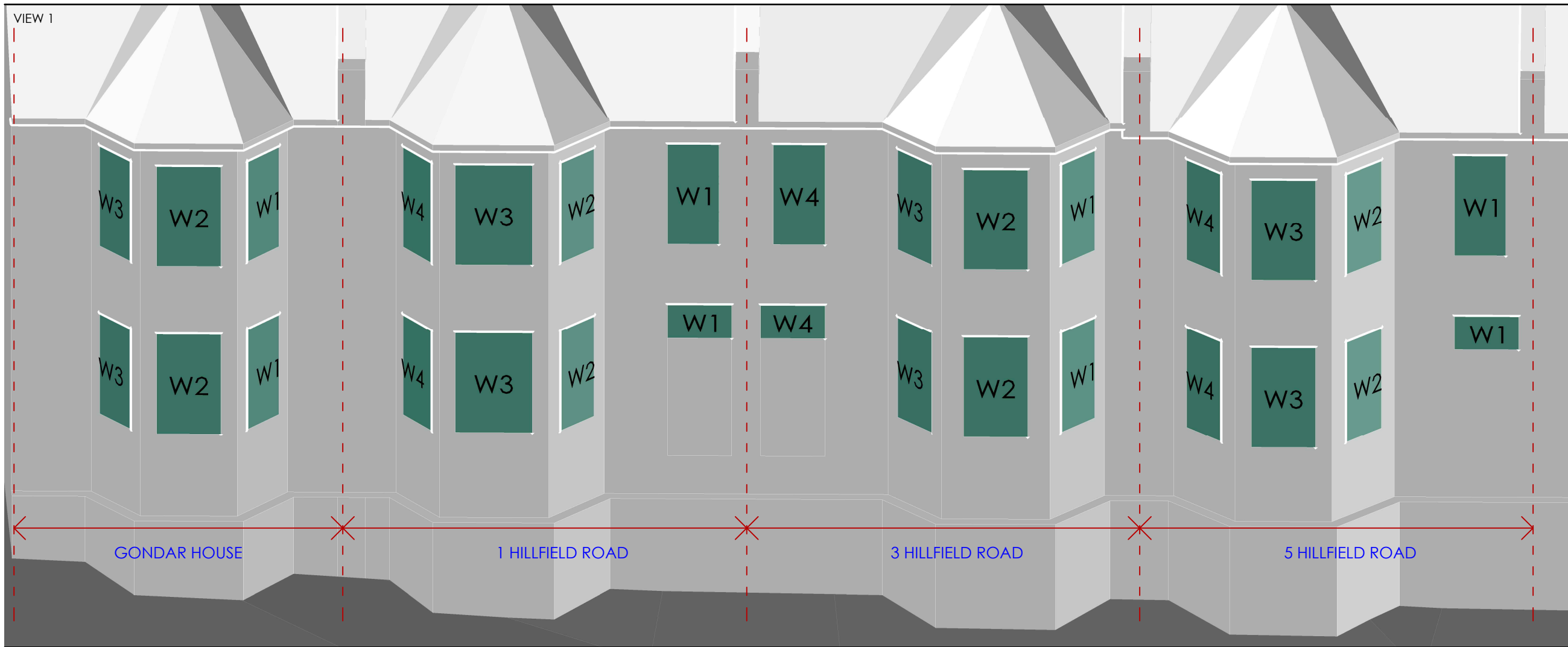
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3D VIEW  
PROPOSED SCHEME

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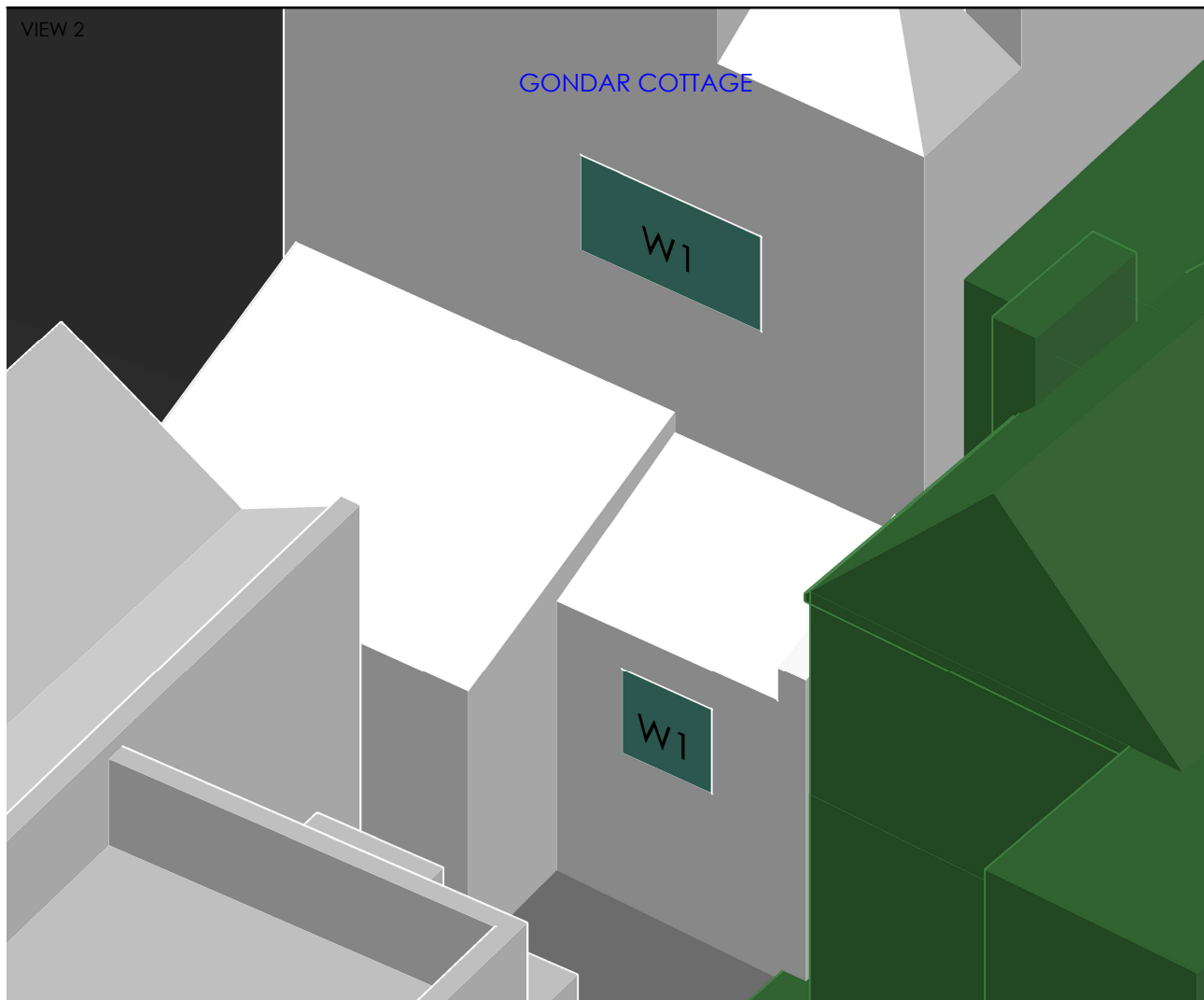
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| MZ                 | MZ              |

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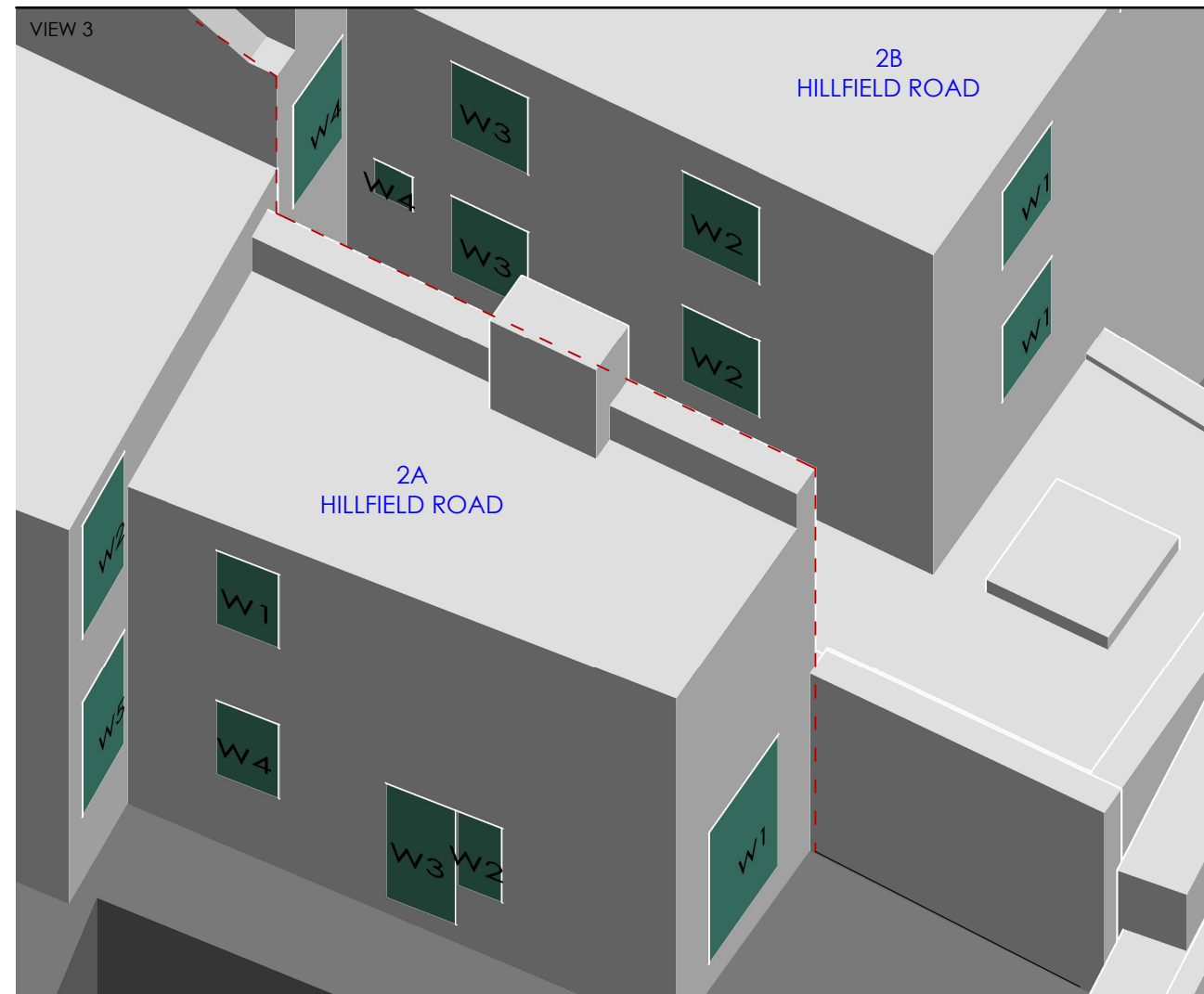
VIEW 1



VIEW 2



VIEW 3

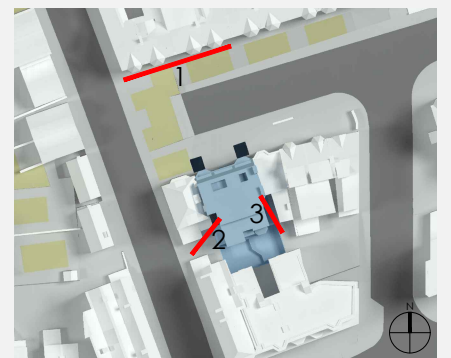


**SOURCES OF INFORMATION:**

ACCUCITIES  
IR01 (RECEIVED ON 13.07.2020)

CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
WINDOW MAPS

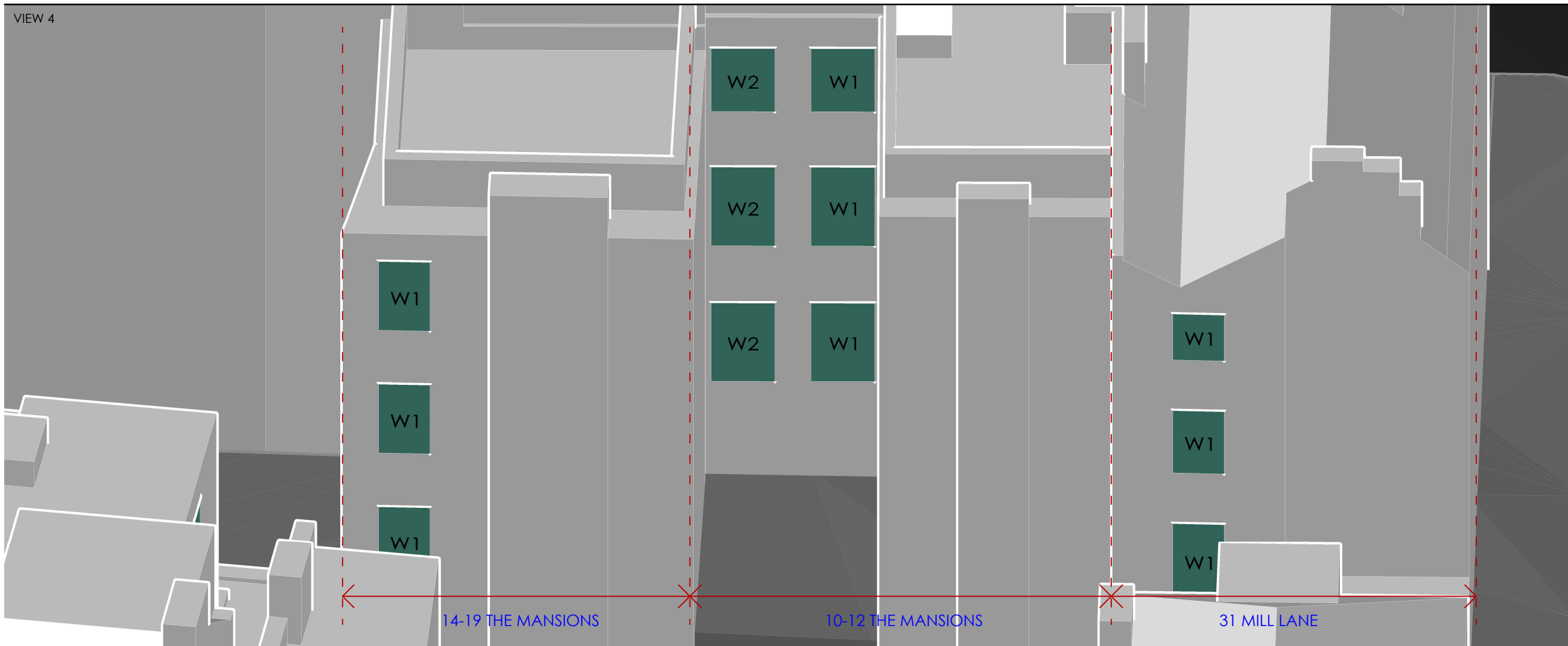
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**MODELLED BY**      **DRAWN BY**  
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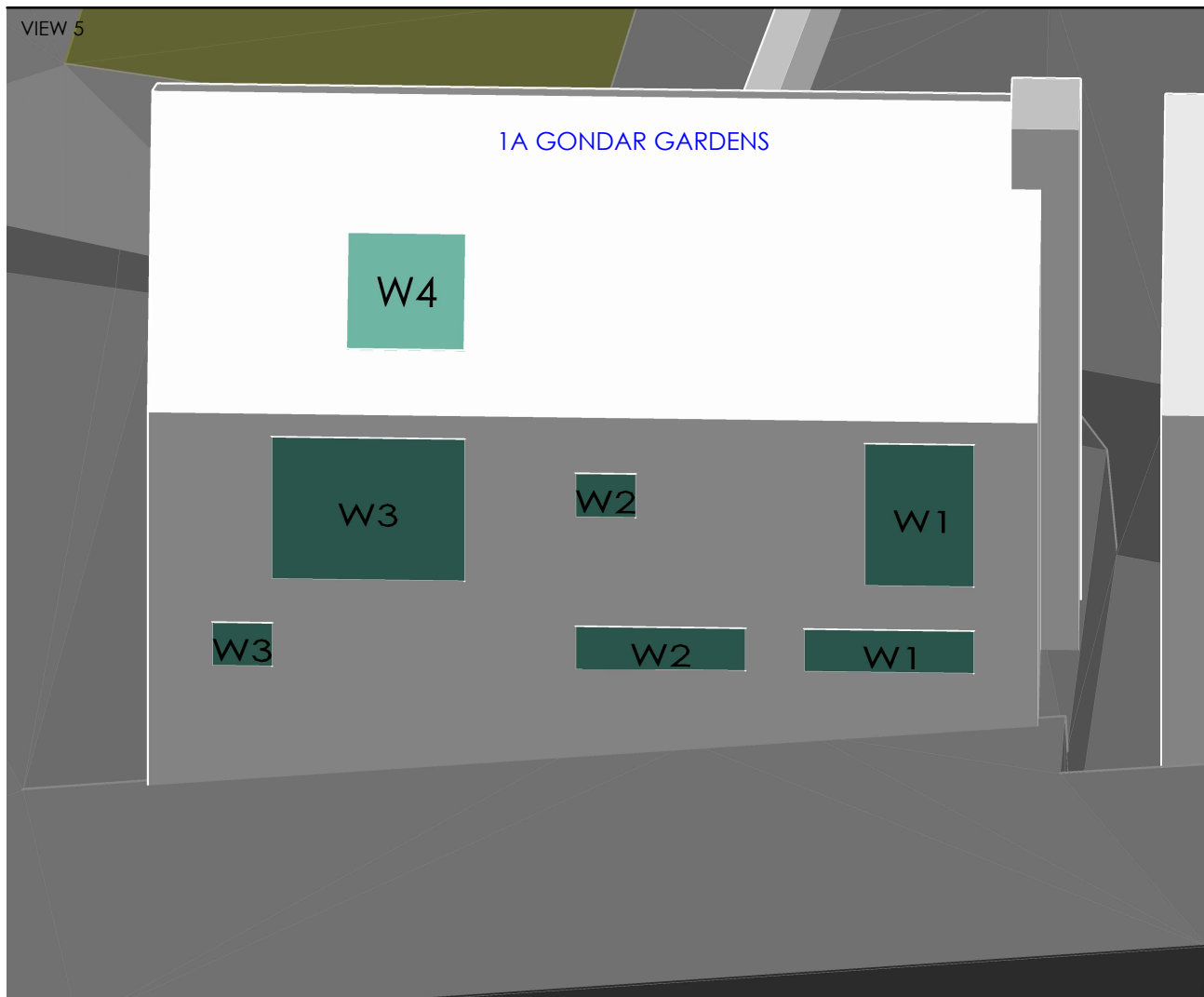
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VIEW 4



VIEW 5

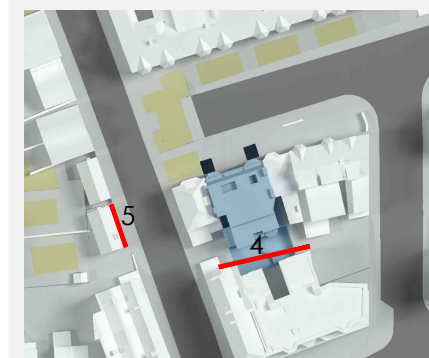


SOURCES OF INFORMATION:

ACCUCITIES  
IR01 (RECEIVED ON 13.07.2020)

CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS



PROJECT  
2 HILLFIELD ROAD  
LONDON NW6

DRAWING  
WINDOW MAPS

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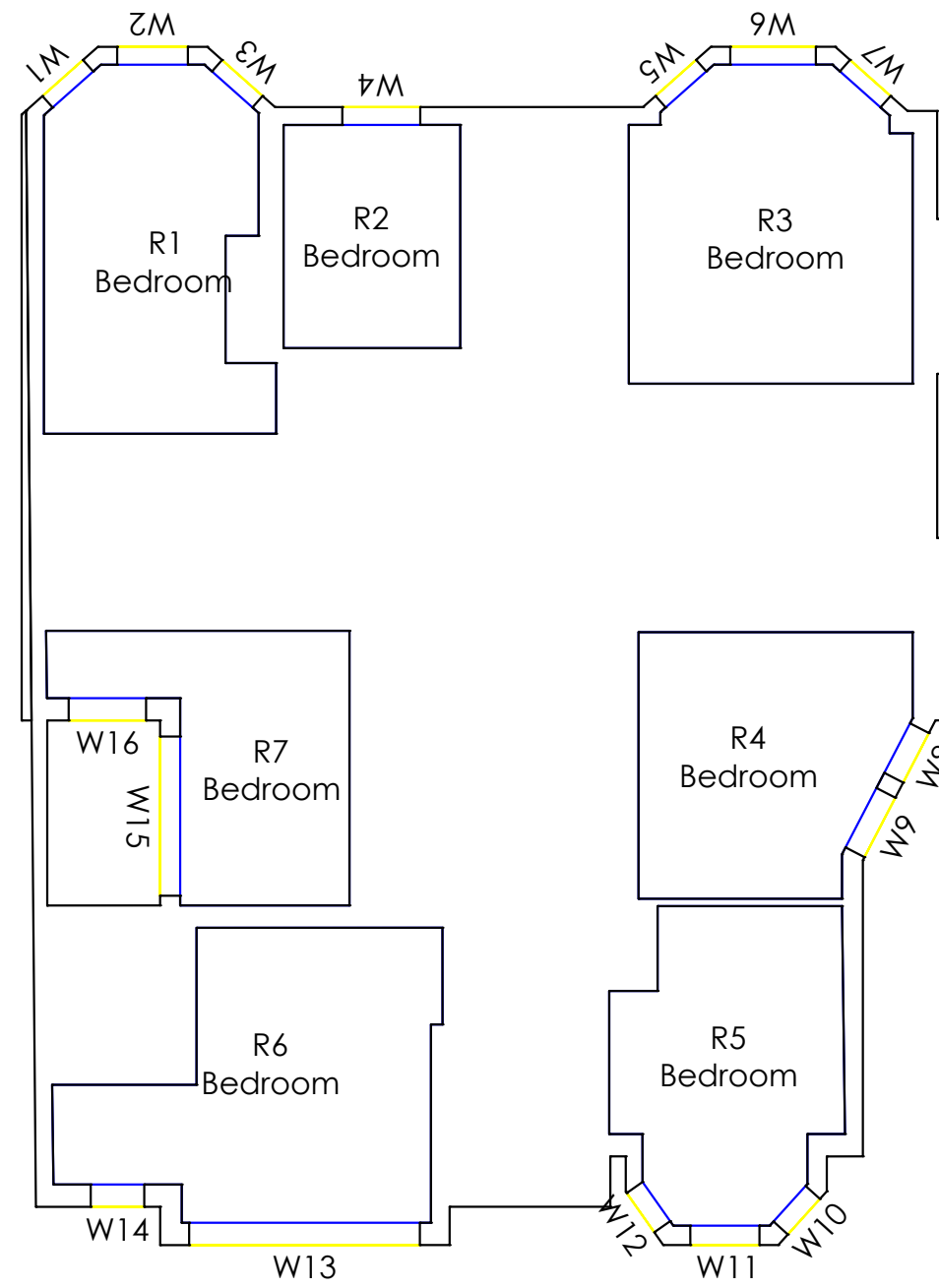
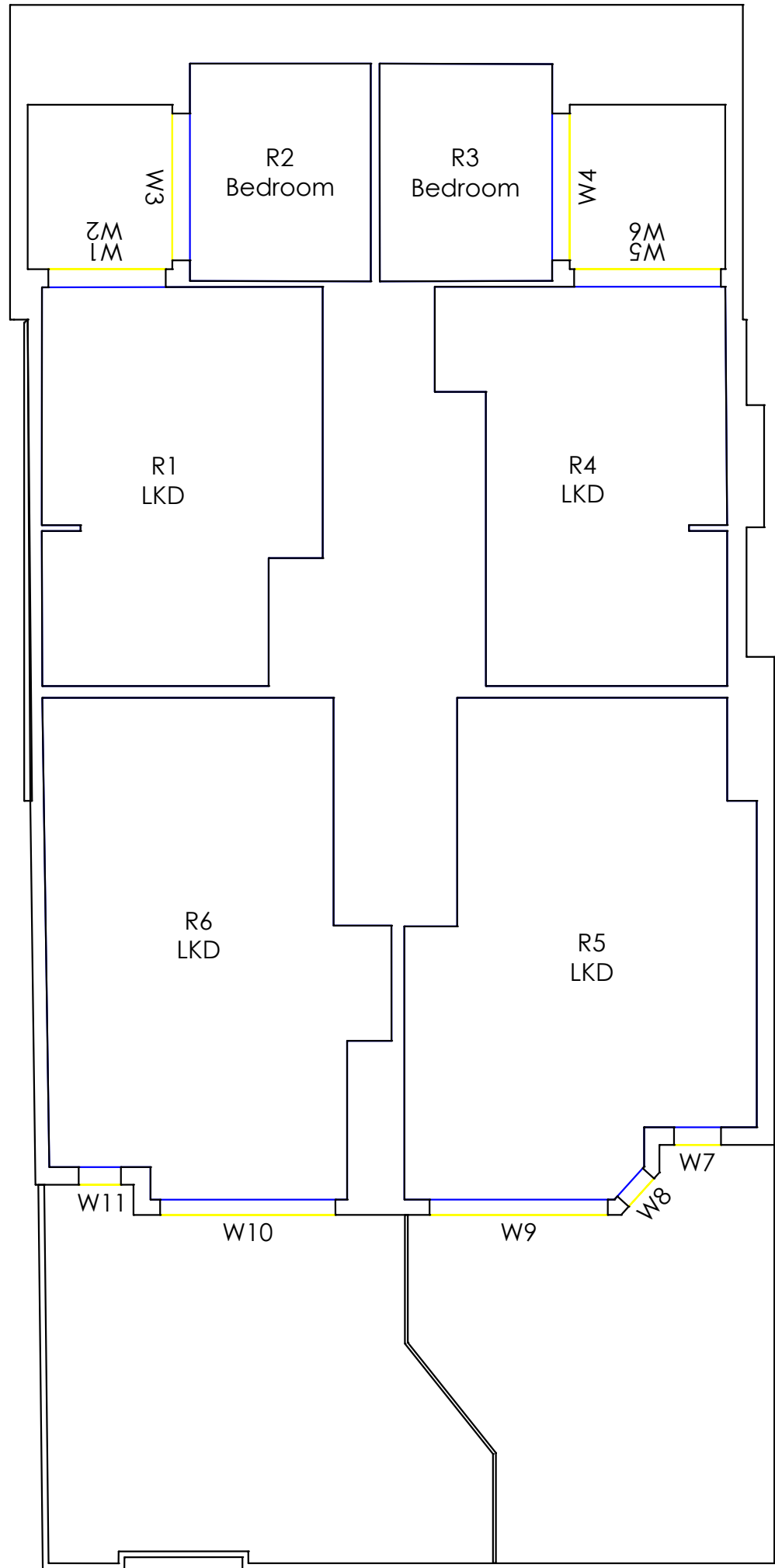
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SOURCES OF INFORMATION:

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IR01 (RECEIVED ON 13.07.2020)

CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
INTERNAL LAYOUTS

|                   |             |
|-------------------|-------------|
| <b>SCALE @ A3</b> | <b>DATE</b> |
| NTS               | 14.08.2020  |

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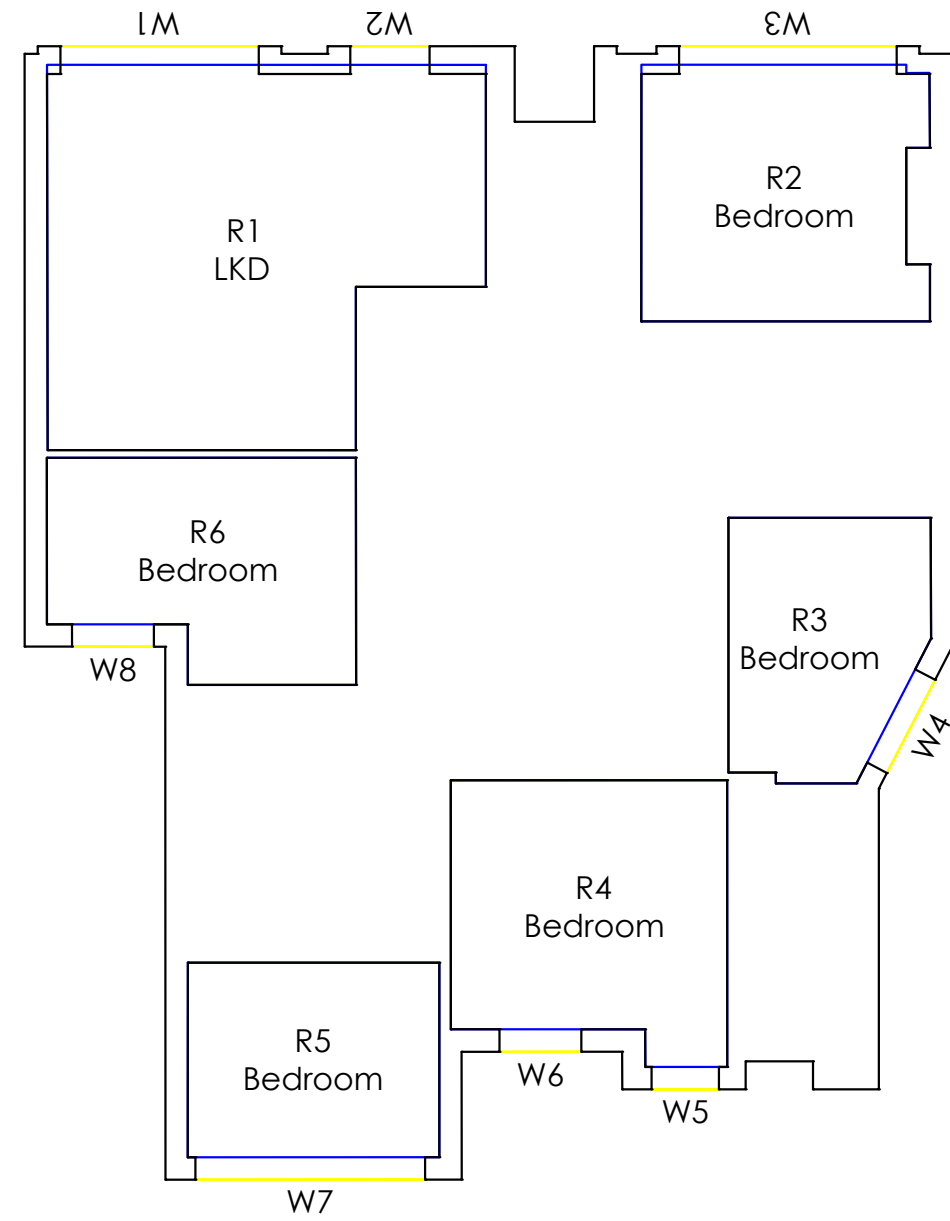
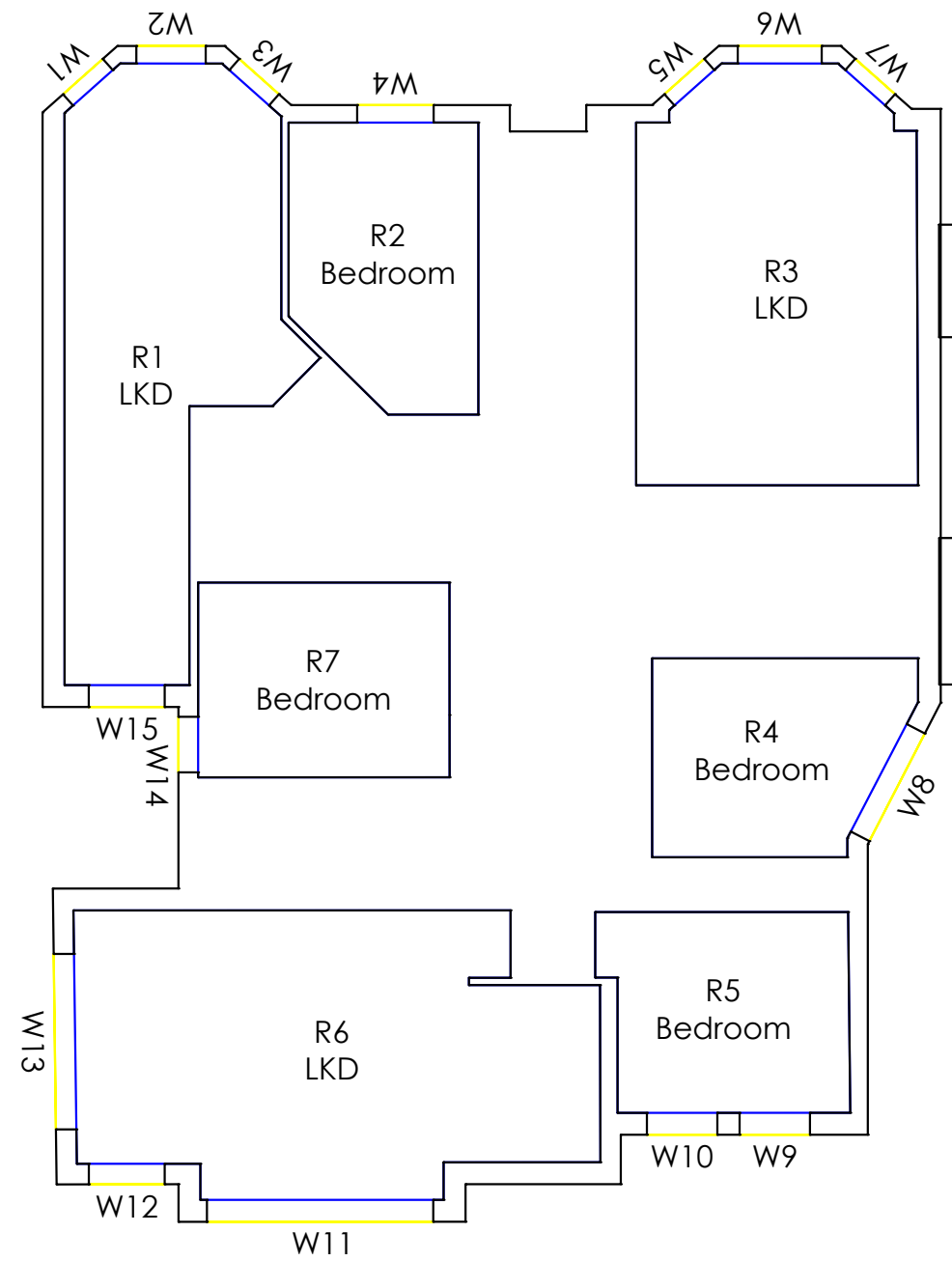
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| 2536               | 01-12                   |

SOURCES OF INFORMATION:

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IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
INTERNAL LAYOUTS

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                      MZ

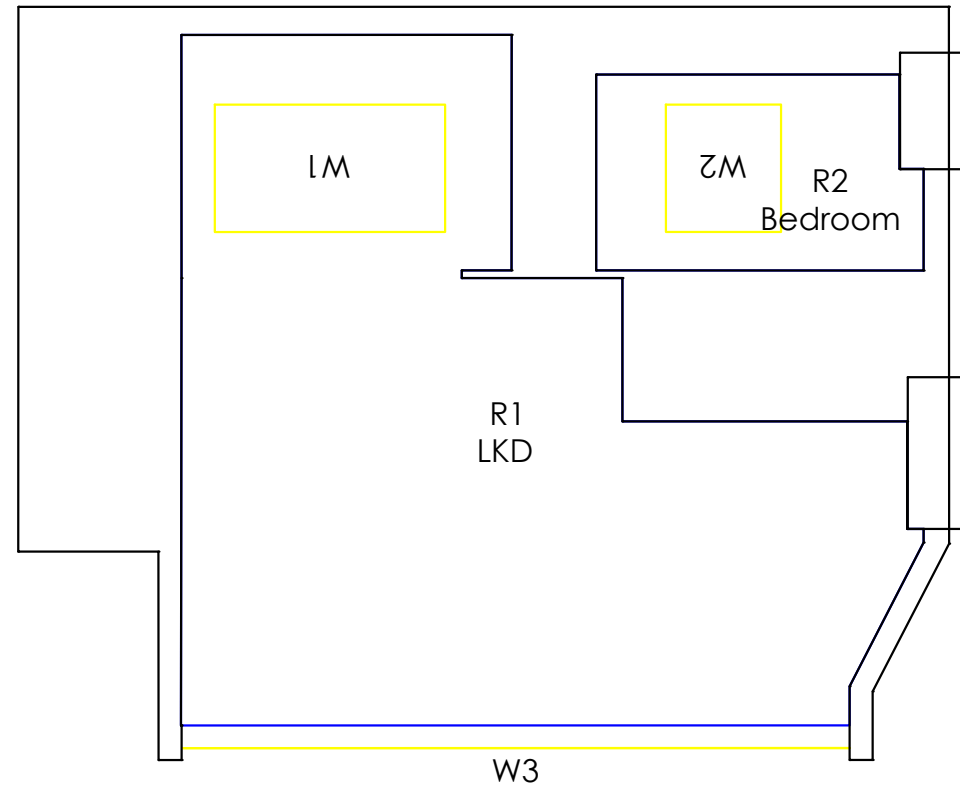
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CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)

SITE PHOTOGRAPHS



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
INTERNAL LAYOUTS

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                      MZ

**PROJECT No.**      **REL No.- DWG No.**  
2536                      01-14

## APPENDIX 2

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### *Daylight & Sunlight Results*

Daylight\_Sunlight Analysis Table  
 Surroundings

|                          |          |               |            |            | Vertical Sky Component |                |                              | No Skyline               |                |                |                              | Annual Probable Sunlight Hours |                           |                                 |                           |                           |                                 |
|--------------------------|----------|---------------|------------|------------|------------------------|----------------|------------------------------|--------------------------|----------------|----------------|------------------------------|--------------------------------|---------------------------|---------------------------------|---------------------------|---------------------------|---------------------------------|
| Address/Floor            | Room Ref | Property Type | Room Usage | Window Ref | Existing VSC %         | Proposed VSC % | Ratio Proposed /Existing VSC | Room Area m <sup>2</sup> | Existing NSC % | Proposed NSC % | Ratio Proposed /Existing NSC | Existing Sunlight Annual%      | Proposed Sunlight Annual% | Ratio Proposed /Existing Annual | Existing Sunlight Winter% | Proposed Sunlight Winter% | Ratio Proposed /Existing Winter |
| <b>Gondar House</b>      |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 28.48                  | 27.92          | 0.98                         | 22.58                    | 99.15          | 99.15          | 1.00                         | 59                             | 59                        | 1.00                            | 21                        | 21                        | 1.00                            |
| Ground                   | R1       | Residential   | Unknown    | W2         | 36.87                  | 36.25          | 0.98                         | 22.58                    | 99.15          | 99.15          | 1.00                         | 86                             | 86                        | 1.00                            | 28                        | 28                        | 1.00                            |
| Ground                   | R1       | Residential   | Unknown    | W3         | 32.41                  | 32.25          | 1.00                         | 22.58                    | 99.15          | 99.15          | 1.00                         | 69                             | 69                        | 1.00                            | 26                        | 26                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W1         | 30.93                  | 30.62          | 0.99                         | 22.58                    | 99.18          | 99.18          | 1.00                         | 58                             | 58                        | 1.00                            | 21                        | 21                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W2         | 38.18                  | 37.85          | 0.99                         | 22.58                    | 99.18          | 99.18          | 1.00                         | 88                             | 88                        | 1.00                            | 30                        | 30                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W3         | 34.32                  | 34.24          | 1.00                         | 22.58                    | 99.18          | 99.18          | 1.00                         | 71                             | 71                        | 1.00                            | 28                        | 28                        | 1.00                            |
| <b>1 Hillfield Road</b>  |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 35.77                  | 35.18          | 0.98                         | 8.56                     | 98.64          | 98.64          | 1.00                         | 74                             | 74                        | 1.00                            | 28                        | 28                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W2         | 31.18                  | 30.62          | 0.98                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 61                             | 61                        | 1.00                            | 21                        | 21                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W3         | 37.05                  | 36.36          | 0.98                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 85                             | 85                        | 1.00                            | 28                        | 28                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W4         | 26.6                   | 26.37          | 0.99                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 60                             | 60                        | 1.00                            | 24                        | 24                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W1         | 36.78                  | 36.42          | 0.99                         | 8.56                     | 98.06          | 98.06          | 1.00                         | 74                             | 74                        | 1.00                            | 26                        | 26                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W2         | 33.51                  | 33.21          | 0.99                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 61                             | 61                        | 1.00                            | 21                        | 21                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W3         | 38.16                  | 37.8           | 0.99                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 89                             | 89                        | 1.00                            | 30                        | 30                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W4         | 29.45                  | 29.34          | 1.00                         | 18.67                    | 99.77          | 99.77          | 1.00                         | 62                             | 62                        | 1.00                            | 25                        | 25                        | 1.00                            |
| <b>3 Hillfield Road</b>  |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 28.61                  | 28.18          | 0.99                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 59                             | 59                        | 1.00                            | 21                        | 21                        | 1.00                            |
| Ground                   | R1       | Residential   | Unknown    | W2         | 37.14                  | 36.41          | 0.98                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 87                             | 87                        | 1.00                            | 29                        | 29                        | 1.00                            |
| Ground                   | R1       | Residential   | Unknown    | W3         | 30.37                  | 29.91          | 0.98                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 66                             | 66                        | 1.00                            | 25                        | 25                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W4         | 35.74                  | 35.15          | 0.98                         | 8.56                     | 98.58          | 98.58          | 1.00                         | 77                             | 77                        | 1.00                            | 28                        | 28                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W1         | 31.21                  | 30.99          | 0.99                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 58                             | 58                        | 1.00                            | 21                        | 21                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W2         | 38.27                  | 37.91          | 0.99                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 88                             | 88                        | 1.00                            | 30                        | 30                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W3         | 32.88                  | 32.66          | 0.99                         | 17.94                    | 99.91          | 99.91          | 1.00                         | 69                             | 69                        | 1.00                            | 26                        | 26                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W4         | 36.79                  | 36.45          | 0.99                         | 8.56                     | 98.2           | 98.2           | 1.00                         | 76                             | 76                        | 1.00                            | 28                        | 28                        | 1.00                            |
| <b>5 Hillfield Road</b>  |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 35.69                  | 35.19          | 0.99                         | 8.38                     | 98.61          | 98.61          | 1.00                         | 74                             | 74                        | 1.00                            | 28                        | 28                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W2         | 31.56                  | 31.22          | 0.99                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 64                             | 64                        | 1.00                            | 23                        | 23                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W3         | 37.12                  | 36.45          | 0.98                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 87                             | 87                        | 1.00                            | 29                        | 29                        | 1.00                            |
| Ground                   | R2       | Residential   | Unknown    | W4         | 28.99                  | 28.45          | 0.98                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 65                             | 65                        | 1.00                            | 26                        | 26                        | 1.00                            |
| First                    | R1       | Residential   | Unknown    | W1         | 36.81                  | 36.51          | 0.99                         | 8.38                     | 97.98          | 97.98          | 1.00                         | 74                             | 74                        | 1.00                            | 26                        | 26                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W2         | 34.03                  | 33.86          | 0.99                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 64                             | 64                        | 1.00                            | 23                        | 23                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W3         | 38.3                   | 37.96          | 0.99                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 88                             | 88                        | 1.00                            | 30                        | 30                        | 1.00                            |
| First                    | R2       | Residential   | Unknown    | W4         | 31.29                  | 31.02          | 0.99                         | 18.25                    | 99.9           | 99.9           | 1.00                         | 66                             | 66                        | 1.00                            | 26                        | 26                        | 1.00                            |
| <b>1a Gondar Gardens</b> |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 29.46                  | 29.44          | 1.00                         | 17.65                    | 91.35          | 91.17          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Ground                   | R1       | Residential   | Unknown    | W2         | 29.1                   | 28.96          | 1.00                         | 17.65                    | 91.35          | 91.17          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Ground                   | R2       | Residential   | Unknown    | W3         | 28.6                   | 28.09          | 0.98                         | 5                        | 82.75          | 82.07          | 0.99                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                    | R1       | Residential   | Unknown    | W1         | 31.81                  | 31.77          | 1.00                         | 8.83                     | 96.97          | 96.97          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                    | R2       | Residential   | Unknown    | W2         | 31.83                  | 31.62          | 0.99                         | 5                        | 79.75          | 78.55          | 0.98                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                    | R3       | Residential   | Unknown    | W3         | 31.31                  | 30.94          | 0.99                         | 10.79                    | 100            | 100            | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                    | R3       | Residential   | Unknown    | W4         | 78.43                  | 78.09          | 1.00                         | 10.79                    | 100            | 100            | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| <b>Gondar Cottage</b>    |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                   | R1       | Residential   | Unknown    | W1         | 15.45                  | 10.1           | 0.65                         | 9.24                     | 35             | 29.92          | 0.85                         | 34                             | 21                        | 0.62                            | 2                         | 2                         | 1.00                            |

Daylight\_Sunlight Analysis Table  
 Surroundings

|                           |          |               |            |            | Vertical Sky Component |                |                              | No Skyline               |                |                |                              | Annual Probable Sunlight Hours |                           |                                 |                           |                           |                                 |
|---------------------------|----------|---------------|------------|------------|------------------------|----------------|------------------------------|--------------------------|----------------|----------------|------------------------------|--------------------------------|---------------------------|---------------------------------|---------------------------|---------------------------|---------------------------------|
| Address/Floor             | Room Ref | Property Type | Room Usage | Window Ref | Existing VSC %         | Proposed VSC % | Ratio Proposed /Existing VSC | Room Area m <sup>2</sup> | Existing NSC % | Proposed NSC % | Ratio Proposed /Existing NSC | Existing Sunlight Annual%      | Proposed Sunlight Annual% | Ratio Proposed /Existing Annual | Existing Sunlight Winter% | Proposed Sunlight Winter% | Ratio Proposed /Existing Winter |
| First                     | R1       | Residential   | Unknown    | W1         | 29.58                  | 26.43          | 0.89                         | 15.36                    | 96.11          | 96.11          | 1.00                         | 73                             | 67                        | 0.92                            | 21                        | 20                        | 0.95                            |
| <b>2a Hillfield Road</b>  |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                    | R1       | Residential   | Unknown    | W1         | 12.59                  | 12.55          | 1.00                         | 8.33                     | 64.77          | 64.76          | 1.00                         | 31                             | 30                        | 0.97                            | 0                         | 0                         | 1.00                            |
| Ground                    | R1       | Residential   | Unknown    | W2         | 4.11                   | 3.13           | 0.76                         | 8.33                     | 64.77          | 64.76          | 1.00                         | 12                             | 12                        | 1.00                            | 0                         | 0                         | 1.00                            |
| Ground                    | R1       | Residential   | Unknown    | W3         | 3.15                   | 2.34           | 0.74                         | 8.33                     | 64.77          | 64.76          | 1.00                         | 9                              | 9                         | 1.00                            | 0                         | 0                         | 1.00                            |
| Ground                    | R2       | Residential   | Unknown    | W4         | 2.33                   | 1.49           | 0.64                         | 5.78                     | 9.34           | 0.77           | 0.08                         | 7                              | 6                         | 0.86                            | 0                         | 0                         | 1.00                            |
| Ground                    | R3       | Residential   | Unknown    | W5         | 5.84                   | 5.36           | 0.92                         | 11.51                    | 44.46          | 43.98          | 0.99                         | 8                              | 8                         | 1.00                            | 1                         | 1                         | 1.00                            |
| First                     | R1       | Residential   | Unknown    | W1         | 6.59                   | 2.6            | 0.39                         | 5.78                     | 34.57          | 6.39           | 0.18                         | 17                             | 12                        | 0.71                            | 4                         | 4                         | 1.00                            |
| First                     | R2       | Residential   | Unknown    | W2         | 21.34                  | 19.04          | 0.89                         | 11.51                    | 81.54          | 59.88          | 0.73                         | 43                             | 39                        | 0.91                            | 9                         | 9                         | 1.00                            |
| <b>2b Hillfield Road</b>  |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                    | R1       | Residential   | Unknown    | W1         | 27.22                  | 27.19          | 1.00                         | 8.95                     | 92.55          | 92.55          | 1.00                         | 71                             | 71                        | 1.00                            | 14                        | 14                        | 1.00                            |
| Ground                    | R1       | Residential   | Unknown    | W2         | 12.97                  | 12.52          | 0.97                         | 8.95                     | 92.55          | 92.55          | 1.00                         | 24                             | 24                        | 1.00                            | 6                         | 6                         | 1.00                            |
| Ground                    | R2       | Residential   | Unknown    | W3         | 11.34                  | 9.72           | 0.86                         | 7.6                      | 73.19          | 36.37          | 0.50                         | 18                             | 18                        | 1.00                            | 5                         | 5                         | 1.00                            |
| Ground                    | R2       | Residential   | Unknown    | W4         | 11.46                  | 9.29           | 0.81                         | 7.6                      | 73.19          | 36.37          | 0.50                         | 28                             | 24                        | 0.86                            | 4                         | 4                         | 1.00                            |
| Ground                    | R3       | Residential   | Unknown    | W4         | 11.46                  | 9.29           | 0.81                         | 3.57                     | 46.89          | 18.43          | 0.39                         | 28                             | 24                        | 0.86                            | 4                         | 4                         | 1.00                            |
| First                     | R1       | Residential   | Unknown    | W1         | 32.42                  | 32.4           | 1.00                         | 11.37                    | 98.4           | 97.57          | 0.99                         | 81                             | 81                        | 1.00                            | 23                        | 23                        | 1.00                            |
| First                     | R1       | Residential   | Unknown    | W2         | 30.51                  | 24.41          | 0.80                         | 11.37                    | 98.4           | 97.57          | 0.99                         | 47                             | 41                        | 0.87                            | 13                        | 13                        | 1.00                            |
| First                     | R2       | Residential   | Unknown    | W3         | 27.17                  | 19.59          | 0.72                         | 9.07                     | 95.59          | 72.2           | 0.76                         | 47                             | 39                        | 0.83                            | 16                        | 15                        | 0.94                            |
| First                     | R3       | Residential   | Unknown    | W4         | 20.36                  | 19             | 0.93                         | 8.9                      | 96.32          | 94.44          | 0.98                         | 46                             | 39                        | 0.85                            | 14                        | 14                        | 1.00                            |
| <b>31 Mill Lane</b>       |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                    | R1       | Residential   | Unknown    | W1         | 14.72                  | 10.78          | 0.73                         | 11.91                    | 33.55          | 24.02          | 0.72                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                     | R1       | Residential   | Unknown    | W1         | 24.66                  | 18.7           | 0.76                         | 11.91                    | 77.45          | 48.75          | 0.63                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Second                    | R1       | Residential   | Unknown    | W1         | 32.04                  | 25.65          | 0.80                         | 11.91                    | 98.13          | 90.67          | 0.92                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Third                     | R1       | Residential   | Unknown    | W1         | 36.71                  | 32.95          | 0.90                         | 11.91                    | 98.12          | 95.46          | 0.97                         | North                          | North                     | North                           | North                     | North                     | North                           |
| <b>10-12 The Mansions</b> |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                    | R1       | Residential   | Unknown    | W1         | 7.84                   | 6.24           | 0.80                         | 12.8                     | 81.69          | 54.26          | 0.66                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Ground                    | R2       | Residential   | Unknown    | W2         | 7.86                   | 6.1            | 0.78                         | 12.8                     | 80.19          | 50.54          | 0.63                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                     | R1       | Residential   | Unknown    | W1         | 11.89                  | 10.14          | 0.85                         | 12.8                     | 89.47          | 89.47          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                     | R2       | Residential   | Unknown    | W2         | 11.89                  | 10.03          | 0.84                         | 12.8                     | 85.25          | 85.21          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Second                    | R1       | Residential   | Unknown    | W1         | 19.83                  | 18.77          | 0.95                         | 12.8                     | 97.49          | 97.49          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Second                    | R2       | Residential   | Unknown    | W2         | 20.48                  | 19.2           | 0.94                         | 12.8                     | 96.56          | 96.56          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| <b>14-19 The Mansions</b> |          |               |            |            |                        |                |                              |                          |                |                |                              |                                |                           |                                 |                           |                           |                                 |
| Ground                    | R1       | Residential   | Unknown    | W1         | 18.59                  | 15.74          | 0.85                         | 13.46                    | 43.8           | 43.79          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| First                     | R1       | Residential   | Unknown    | W1         | 27.59                  | 24.19          | 0.88                         | 13.46                    | 85.15          | 85.15          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |
| Second                    | R1       | Residential   | Unknown    | W1         | 34.95                  | 31.53          | 0.90                         | 13.46                    | 94.87          | 94.87          | 1.00                         | North                          | North                     | North                           | North                     | North                     | North                           |

## APPENDIX 3

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### *Internal Daylight & Sunlight Results*



| Floor Ref.      | Room Ref. | Room Attribute | Room Use. | Window Ref. | Glass Transmittance | Maintenance Factor | Glazed Area | Clear Sky Angle Proposed | Room Surface Area | Average Surface Reflectance | Below Working Plane Factor | ADF Proposed |
|-----------------|-----------|----------------|-----------|-------------|---------------------|--------------------|-------------|--------------------------|-------------------|-----------------------------|----------------------------|--------------|
| <b>Proposed</b> |           |                |           |             |                     |                    |             |                          |                   |                             |                            |              |
| Basement        | R1        | LKD            |           | W1-L        | 0.68                | 1.00               | 1.29        | 16.29                    | 183.18            | 0.69                        | 0.15                       | 0.02         |
|                 |           |                |           | W1-U        | 0.68                | 1.00               | 2.53        | 20.29                    | 183.18            | 0.69                        | 1.00                       | 0.37         |
|                 |           |                |           | W2          | 0.68                | 1.00               | 2.89        | 46.58                    | 183.18            | 0.69                        | 1.00                       | 0.96         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 1.35         |
| Basement        | R2        | Bedroom        |           | W3-L        | 0.68                | 1.00               | 1.25        | 13.85                    | 90.66             | 0.69                        | 0.15                       | 0.04         |
|                 |           |                |           | W3-U        | 0.68                | 1.00               | 8.83        | 24.84                    | 90.66             | 0.69                        | 1.00                       | 3.17         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            |              |
| Basement        | R3        | Bedroom        |           | W4-L        | 0.68                | 1.00               | 1.25        | 14.88                    | 88.11             | 0.69                        | 0.15                       | 0.04         |
|                 |           |                |           | W4-U        | 0.68                | 1.00               | 8.83        | 26.40                    | 88.11             | 0.69                        | 1.00                       | 3.46         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            |              |
| Basement        | R4        | LKD            |           | W5-L        | 0.68                | 1.00               | 1.62        | 16.90                    | 182.87            | 0.69                        | 0.15                       | 0.03         |
|                 |           |                |           | W5-U        | 0.68                | 1.00               | 3.16        | 20.98                    | 182.87            | 0.69                        | 1.00                       | 0.48         |
|                 |           |                |           | W6          | 0.68                | 1.00               | 3.62        | 47.66                    | 182.87            | 0.69                        | 1.00                       | 1.23         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 1.74         |
| Basement        | R5        | LKD            |           | W7-L        | 0.68                | 1.00               | 0.36        | 21.84                    | 232.73            | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W7-U        | 0.68                | 1.00               | 1.38        | 27.51                    | 232.73            | 0.69                        | 1.00                       | 0.21         |
|                 |           |                |           | W8          | 0.68                | 1.00               | 0.88        | 34.27                    | 232.73            | 0.69                        | 1.00                       | 0.17         |
|                 |           |                |           | W9-L        | 0.68                | 1.00               | 1.38        | 27.33                    | 232.73            | 0.69                        | 0.15                       | 0.03         |
|                 |           |                |           | W9-U        | 0.68                | 1.00               | 5.42        | 30.29                    | 232.73            | 0.69                        | 1.00                       | 0.92         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 1.35         |
| Basement        | R6        | LKD            |           | W10-L       | 0.68                | 1.00               | 1.36        | 24.25                    | 231.27            | 0.69                        | 0.15                       | 0.03         |
|                 |           |                |           | W10-U       | 0.68                | 1.00               | 5.33        | 26.61                    | 231.27            | 0.69                        | 1.00                       | 0.80         |
|                 |           |                |           | W11         | 0.68                | 1.00               | 0.98        | 17.01                    | 231.27            | 0.69                        | 1.00                       | 0.09         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 0.93         |
| Ground          | R1        | Bedroom        |           | W1          | 0.68                | 1.00               | 1.43        | 55.28                    | 79.14             | 0.69                        | 1.00                       | 1.30         |
|                 |           |                |           | W2          | 0.68                | 1.00               | 1.86        | 64.37                    | 79.14             | 0.69                        | 1.00                       | 1.98         |
|                 |           |                |           | W3          | 0.68                | 1.00               | 1.42        | 59.81                    | 79.14             | 0.69                        | 1.00                       | 1.41         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 4.69         |
| Ground          | R2        | Bedroom        |           | W4          | 0.68                | 1.00               | 2.05        | 64.16                    | 49.08             | 0.69                        | 1.00                       | 3.51         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            |              |
| Ground          | R3        | Bedroom        |           | W5          | 0.68                | 1.00               | 1.43        | 59.63                    | 80.32             | 0.69                        | 1.00                       | 1.39         |
|                 |           |                |           | W6          | 0.68                | 1.00               | 2.25        | 64.33                    | 80.32             | 0.69                        | 1.00                       | 2.36         |
|                 |           |                |           | W7          | 0.68                | 1.00               | 1.43        | 54.48                    | 80.32             | 0.69                        | 1.00                       | 1.27         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 5.01         |
| Ground          | R4        | Bedroom        |           | W8-L        | 0.68                | 1.00               | 0.58        | 20.66                    | 68.28             | 0.69                        | 0.15                       | 0.03         |
|                 |           |                |           | W8-U        | 0.68                | 1.00               | 1.24        | 25.72                    | 68.28             | 0.69                        | 1.00                       | 0.61         |
|                 |           |                |           | W9          | 0.68                | 1.00               | 1.34        | 30.66                    | 68.28             | 0.69                        | 1.00                       | 0.79         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 1.44         |
| Ground          | R5        | Bedroom        |           | W10         | 0.68                | 1.00               | 1.29        | 49.00                    | 69.04             | 0.69                        | 1.00                       | 1.20         |
|                 |           |                |           | W11         | 0.68                | 1.00               | 1.86        | 39.60                    | 69.04             | 0.69                        | 1.00                       | 1.40         |
|                 |           |                |           | W12         | 0.68                | 1.00               | 1.29        | 33.12                    | 69.04             | 0.69                        | 1.00                       | 0.81         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 3.41         |
| Ground          | R6        | Bedroom        |           | W13-L       | 0.68                | 1.00               | 0.93        | 32.90                    | 90.39             | 0.69                        | 0.15                       | 0.07         |
|                 |           |                |           | W13-U       | 0.68                | 1.00               | 4.88        | 34.68                    | 90.39             | 0.69                        | 1.00                       | 2.45         |
|                 |           |                |           | W14         | 0.68                | 1.00               | 1.05        | 25.99                    | 90.39             | 0.69                        | 1.00                       | 0.39         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 2.91         |
| Ground          | R7        | Bedroom        |           | W15         | 0.68                | 1.00               | 3.12        | 20.80                    | 70.35             | 0.69                        | 1.00                       | 1.21         |
|                 |           |                |           | W16         | 0.68                | 1.00               | 1.51        | 16.62                    | 70.35             | 0.69                        | 1.00                       | 0.47         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 1.67         |
| First           | R1        | LKD            |           | W1-L        | 0.68                | 1.00               | 0.07        | 58.78                    | 102.85            | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W1-U        | 0.68                | 1.00               | 1.23        | 60.28                    | 102.85            | 0.69                        | 1.00                       | 0.94         |
|                 |           |                |           | W2-L        | 0.68                | 1.00               | 0.09        | 68.52                    | 102.85            | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W2-U        | 0.68                | 1.00               | 1.60        | 69.72                    | 102.85            | 0.69                        | 1.00                       | 1.42         |
|                 |           |                |           | W3-L        | 0.68                | 1.00               | 0.07        | 63.89                    | 102.85            | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W3-U        | 0.68                | 1.00               | 1.22        | 65.61                    | 102.85            | 0.69                        | 1.00                       | 1.02         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 0.72         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 4.13         |
| First           | R2        | Bedroom        |           | W4-L        | 0.68                | 1.00               | 0.10        | 68.31                    | 53.46             | 0.69                        | 0.15                       | 0.02         |
|                 |           |                |           | W4-U        | 0.68                | 1.00               | 1.76        | 69.57                    | 53.46             | 0.69                        | 1.00                       | 3.01         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 3.03         |
| First           | R3        | LKD            |           | W5-L        | 0.68                | 1.00               | 0.07        | 64.07                    | 93.48             | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W5-U        | 0.68                | 1.00               | 1.23        | 65.90                    | 93.48             | 0.69                        | 1.00                       | 1.13         |
|                 |           |                |           | W6-L        | 0.68                | 1.00               | 0.10        | 68.64                    | 93.48             | 0.69                        | 0.15                       | 0.02         |
|                 |           |                |           | W6-U        | 0.68                | 1.00               | 1.94        | 69.81                    | 93.48             | 0.69                        | 1.00                       | 1.89         |
|                 |           |                |           | W7-L        | 0.68                | 1.00               | 0.06        | 58.05                    | 93.48             | 0.69                        | 0.15                       | 0.01         |
|                 |           |                |           | W7-U        | 0.68                | 1.00               | 1.19        | 59.94                    | 93.48             | 0.69                        | 1.00                       | 1.00         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 4.06         |
| First           | R4        | Bedroom        |           | W8          | 0.68                | 1.00               | 2.41        | 60.30                    | 50.92             | 0.69                        | 1.00                       | 3.74         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            |              |
| First           | R5        | Bedroom        |           | W9-L        | 0.68                | 1.00               | 0.75        | 49.46                    | 52.64             | 0.69                        | 0.15                       | 0.14         |
|                 |           |                |           | W9-U        | 0.68                | 1.00               | 1.40        | 56.63                    | 52.64             | 0.69                        | 1.00                       | 1.98         |
|                 |           |                |           | W10-L       | 0.68                | 1.00               | 0.75        | 47.72                    | 52.64             | 0.69                        | 0.15                       | 0.13         |
|                 |           |                |           | W10-U       | 0.68                | 1.00               | 1.40        | 53.01                    | 52.64             | 0.69                        | 1.00                       | 1.85         |
|                 |           |                |           |             |                     |                    |             |                          |                   |                             |                            | 4.10         |
| First           | R6        | LKD            |           | W11-L       | 0.68                | 1.00               | 1.13        | 44.79                    | 115.72            | 0.69                        | 0.15                       | 0.09         |
|                 |           |                |           | W11-U       | 0.68                | 1.00               | 4.77        | 48.86                    | 115.72            | 0.69                        | 1.00                       | 2.64         |
|                 |           |                |           | W12         | 0.68                | 1.00               | 1.51        | 39.02                    | 115.72            | 0.69                        | 1.00                       | 0.67         |



| Floor Ref.      | Room Ref. | Room Attribute | Room Use. |           | Room Area | Lit Area Proposed |
|-----------------|-----------|----------------|-----------|-----------|-----------|-------------------|
| <b>Proposed</b> |           |                |           |           |           |                   |
| Basement        | R1        |                | LKD       | Area m2   | 30.42     | 28.37             |
|                 |           |                |           | % of room |           | 93%               |
|                 | R2        |                | Bedroom   | Area m2   | 11.41     | 11.15             |
|                 |           |                |           | % of room |           | 98%               |
|                 | R3        |                | Bedroom   | Area m2   | 10.87     | 10.62             |
|                 |           |                |           | % of room |           | 98%               |
|                 | R4        |                | LKD       | Area m2   | 29.37     | 27.84             |
|                 |           |                |           | % of room |           | 95%               |
|                 | R5        |                | LKD       | Area m2   | 44.41     | 18.63             |
|                 |           |                |           | % of room |           | 42%               |
|                 | R6        |                | LKD       | Area m2   | 43.46     | 8.50              |
|                 |           |                |           | % of room |           | 20%               |
| Ground          | R1        |                | Bedroom   | Area m2   | 13.28     | 12.96             |
|                 |           |                |           | % of room |           | 98%               |
|                 | R2        |                | Bedroom   | Area m2   | 7.13      | 7.04              |
|                 |           |                |           | % of room |           | 99%               |
|                 | R3        |                | Bedroom   | Area m2   | 15.24     | 15.22             |
|                 |           |                |           | % of room |           | 100%              |
|                 | R4        |                | Bedroom   | Area m2   | 11.76     | 5.73              |
|                 |           |                | % of room |           | 49%       |                   |
|                 | R5        |                | Bedroom   | Area m2   | 11.37     | 10.25             |
|                 |           |                |           | % of room |           | 90%               |
|                 | R6        |                | Bedroom   | Area m2   | 15.38     | 10.39             |
|                 |           |                |           | % of room |           | 68%               |
|                 | R7        |                | Bedroom   | Area m2   | 10.02     | 9.04              |
|                 |           |                |           | % of room |           | 90%               |
|                 | First     | R1             |           | LKD       | Area m2   | 20.19             |
|                 |           |                |           | % of room |           | 99%               |
| R2              |           |                | Bedroom   | Area m2   | 9.48      | 9.35              |
|                 |           |                |           | % of room |           | 99%               |
| R3              |           |                | LKD       | Area m2   | 21.11     | 21.09             |
|                 |           |                |           | % of room |           | 100%              |
| R4              |           |                | Bedroom   | Area m2   | 8.77      | 8.68              |
|                 |           |                | % of room |           | 99%       |                   |
|                 | R5        |                | Bedroom   | Area m2   | 9.00      | 8.89              |
|                 |           |                |           | % of room |           | 99%               |
|                 | R6        |                | LKD       | Area m2   | 25.25     | 25.25             |
|                 |           |                |           | % of room |           | 100%              |
|                 | R7        |                | Bedroom   | Area m2   | 9.19      | 8.47              |
|                 |           |                |           | % of room |           | 92%               |
|                 | Second    | R1             |           | LKD       | Area m2   | 25.85             |
|                 |           |                |           | % of room |           | 100%              |
| R2              |           |                | Bedroom   | Area m2   | 12.44     | 12.40             |
|                 |           |                |           | % of room |           | 100%              |
|                 | R3        |                | Bedroom   | Area m2   | 8.37      | 8.30              |
|                 |           |                |           | % of room |           | 99%               |
|                 | R4        |                | Bedroom   | Area m2   | 12.58     | 12.44             |
|                 |           |                |           | % of room |           |                   |

| Floor Ref. | Room Ref. | Room Attribute | Room Use. |                      | Room Area | Lit Area Proposed |
|------------|-----------|----------------|-----------|----------------------|-----------|-------------------|
|            | R5        |                | Bedroom   | % of room<br>Area m2 | 8.56      | 99%<br>8.56       |
|            | R6        |                | Bedroom   | % of room<br>Area m2 | 10.79     | 100%<br>7.90      |
|            |           |                |           | % of room            |           | 73%               |
| Third      | R1        |                | LKD       | Area m2              | 62.77     | 62.77             |
|            |           |                |           | % of room            |           | 100%              |
|            | R2        |                | Bedroom   | Area m2              | 10.82     | 10.82             |
|            |           |                |           | % of room            |           | 100%              |

| Floor Ref.      | Room Ref. | Room Use. | Window Ref. | Window Orientation | Annual | Winter | Total Suns per Room Annual | Total Suns per Room Winter |
|-----------------|-----------|-----------|-------------|--------------------|--------|--------|----------------------------|----------------------------|
| <b>Proposed</b> |           |           |             |                    |        |        |                            |                            |
| Basement        | R1        | LKD       | W1          | 342°N              | 0.00   | 0.00   | 0.00                       | 0.00                       |
|                 |           |           | W2          | 342°N              | 0.00   | 0.00   |                            |                            |
|                 | R2        | Bedroom   | W3          | 252°               | 0.00   | 0.00   | 0.00                       | 0.00                       |
|                 | R3        | Bedroom   | W4          | 72°N               | 0.00   | 0.00   | 0.00                       | 0.00                       |
|                 | R4        | LKD       | W5          | 342°N              | 0.00   | 0.00   | 0.00                       | 0.00                       |
|                 |           |           | W6          | 342°N              | 0.00   | 0.00   |                            |                            |
|                 | R5        | LKD       | W7          | 162°               | 10.00  | 0.00   | 25.00                      | 0.00                       |
|                 |           |           | W8          | 114°               | 7.00   | 0.00   |                            |                            |
|                 |           |           | W9          | 162°               | 13.00  | 0.00   |                            |                            |
|                 | R6        | LKD       | W10         | 162°               | 9.00   | 0.00   | 10.00                      | 0.00                       |
|                 |           |           | W11         | 162°               | 1.00   | 0.00   |                            |                            |
| Ground          | R1        | Bedroom   | W1          | 300°N              | 4.00   | 0.00   | 5.00                       | 0.00                       |
|                 |           |           | W2          | 342°N              | 0.00   | 0.00   |                            |                            |
|                 |           |           | W3          | 24°N               | 1.00   | 0.00   |                            |                            |
|                 | R2        | Bedroom   | W4          | 342°N              | 1.00   | 0.00   | 1.00                       | 0.00                       |
|                 | R3        | Bedroom   | W5          | 300°N              | 7.00   | 0.00   | 7.00                       | 0.00                       |
|                 |           |           | W6          | 342°N              | 2.00   | 0.00   |                            |                            |
|                 |           |           | W7          | 24°N               | 0.00   | 0.00   |                            |                            |
|                 | R4        | Bedroom   | W8          | 99°                | 4.00   | 0.00   | 9.00                       | 0.00                       |
|                 |           |           | W9          | 99°                | 9.00   | 0.00   |                            |                            |
|                 | R5        | Bedroom   | W10         | 114°               | 21.00  | 2.00   | 40.00                      | 3.00                       |
|                 |           |           | W11         | 162°               | 21.00  | 1.00   |                            |                            |
|                 |           |           | W12         | 217°               | 15.00  | 1.00   |                            |                            |
|                 | R6        | Bedroom   | W13         | 162°               | 20.00  | 1.00   | 22.00                      | 1.00                       |
|                 |           |           | W14         | 162°               | 6.00   | 0.00   |                            |                            |
|                 | R7        | Bedroom   | W15         | 252°               | 4.00   | 0.00   | 10.00                      | 0.00                       |
|                 |           |           | W16         | 162°               | 6.00   | 0.00   |                            |                            |
|                 | First     | R1        | LKD         | W1                 | 300°N  | 8.00   | 0.00                       | 29.00                      |
| W2              |           |           |             | 342°N              | 2.00   | 0.00   |                            |                            |
| W3              |           |           |             | 24°N               | 1.00   | 0.00   |                            |                            |
| W15             |           |           |             | 162°               | 20.00  | 6.00   |                            |                            |
| R2              |           | Bedroom   | W4          | 342°N              | 2.00   | 0.00   | 2.00                       | 0.00                       |
| R3              |           | LKD       | W5          | 300°N              | 12.00  | 0.00   | 12.00                      | 0.00                       |
|                 |           |           | W6          | 342°N              | 3.00   | 0.00   |                            |                            |
|                 |           |           | W7          | 24°N               | 0.00   | 0.00   |                            |                            |
| R4              |           | Bedroom   | W8          | 99°                | 31.00  | 7.00   |                            |                            |

| Floor Ref. | Room Ref. | Room Use. | Window Ref. | Window Orientation | Annual | Winter | Total Suns per Room Annual | Total Suns per Room Winter |
|------------|-----------|-----------|-------------|--------------------|--------|--------|----------------------------|----------------------------|
|            | R5        | Bedroom   | W9          | 162°               | 43.00  | 8.00   | 31.00                      | 7.00                       |
|            |           |           | W10         | 162°               | 37.00  | 6.00   |                            |                            |
|            | R6        | LKD       | W11         | 162°               | 43.00  | 2.00   | 45.00                      | 9.00                       |
|            |           |           | W12         | 162°               | 22.00  | 1.00   |                            |                            |
|            |           |           | W13         | 251°               | 23.00  | 7.00   |                            |                            |
|            | R7        | Bedroom   | W14         | 252°               | 20.00  | 5.00   | 64.00                      | 8.00                       |
|            |           |           |             |                    |        |        | 20.00                      | 5.00                       |
| Second     | R1        | LKD       | W1          | 342°N              | 7.00   | 0.00   |                            |                            |
|            |           |           | W2          | 342°N              | 3.00   | 0.00   |                            |                            |
|            | R2        | Bedroom   | W3          | 342°N              | 9.00   | 0.00   | 7.00                       | 0.00                       |
|            | R3        | Bedroom   | W4          | 99°                | 40.00  | 10.00  | 9.00                       | 0.00                       |
|            | R4        | Bedroom   | W5          | 162°               | 56.00  | 22.00  | 40.00                      | 10.00                      |
|            |           |           | W6          | 162°               | 46.00  | 16.00  |                            |                            |
|            | R5        | Bedroom   | W7          | 162°               | 60.00  | 14.00  | 57.00                      | 22.00                      |
|            | R6        | Bedroom   | W8          | 162°               | 39.00  | 18.00  | 60.00                      | 14.00                      |
|            |           |           |             |                    |        |        | 39.00                      | 18.00                      |
| Third      | R1        | LKD       | W1          | 342°N              | 88.00  | 19.00  |                            |                            |
|            |           |           | W3          | 162°               | 76.00  | 27.00  |                            |                            |
|            | R2        | Bedroom   | W2          | 342°N              | 77.00  | 16.00  | 97.00                      | 28.00                      |
|            |           |           |             |                    |        |        | 77.00                      | 16.00                      |

## APPENDIX 4

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### *Sunlight Amenity Analysis*

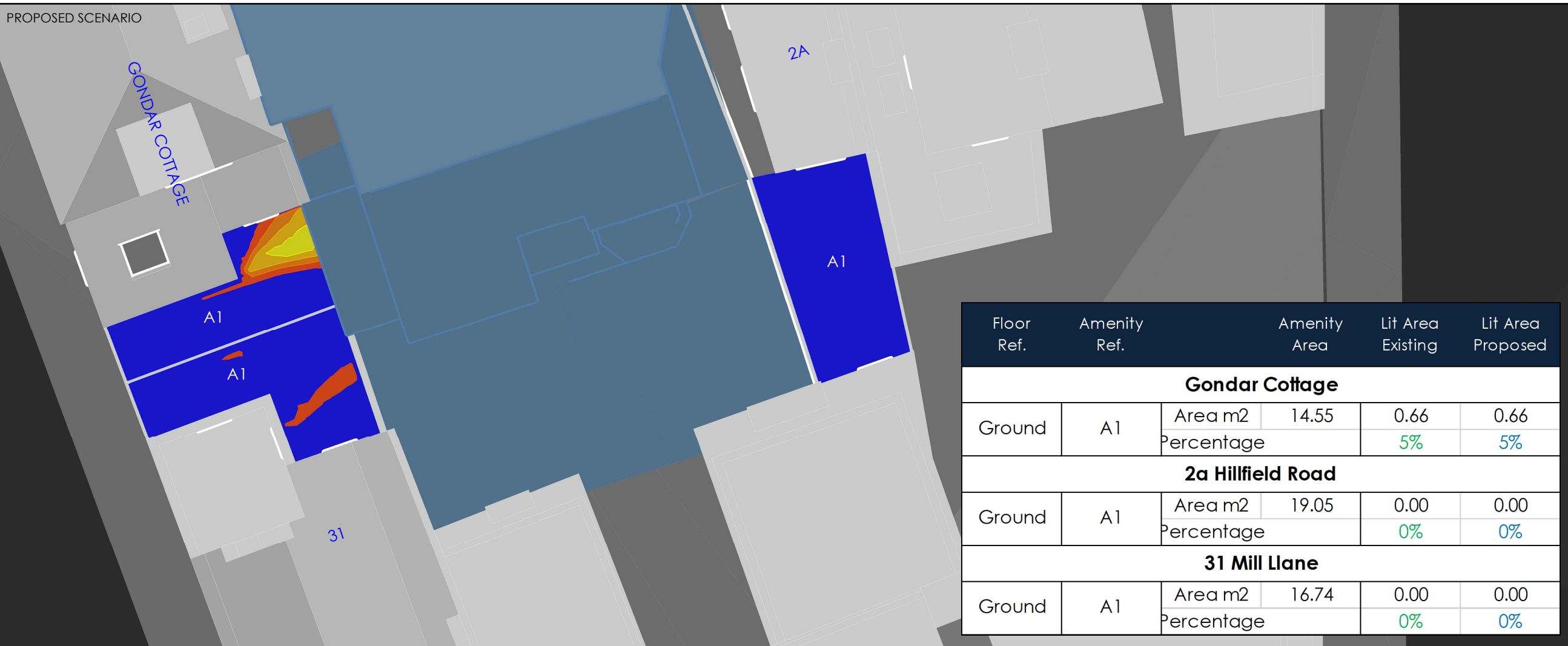


**waldrams**  
daylight & sunlight

EXISTING SCENARIO



PROPOSED SCENARIO



| Floor Ref.               | Amenity Ref. | Amenity Area | Lit Area Existing | Lit Area Proposed |
|--------------------------|--------------|--------------|-------------------|-------------------|
| <b>Gondar Cottage</b>    |              |              |                   |                   |
| Ground                   | A1           | Area m2      | 14.55             | 0.66              |
|                          |              | Percentage   |                   | 5%                |
| <b>2a Hillfield Road</b> |              |              |                   |                   |
| Ground                   | A1           | Area m2      | 19.05             | 0.00              |
|                          |              | Percentage   |                   | 0%                |
| <b>31 Mill Lane</b>      |              |              |                   |                   |
| Ground                   | A1           | Area m2      | 16.74             | 0.00              |
|                          |              | Percentage   |                   | 0%                |

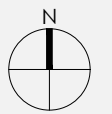
**SOURCES OF INFORMATION:**

- ACCUCITIES  
IR01 (RECEIVED ON 13.07.2020)
- CHAR-A-BANC  
IR02 (RECEIVED ON 29.07.2020)  
IR03 (RECEIVED ON 31.07.2020)
- SITE PHOTOGRAPHS

**NOTES:**

EXISTING SCENARIO SHOWN IN GREEN  
PROPOSED SCENARIO SHOWN IN BLUE

- MORE THAN 2 HOURS OF SUN
- 1.5 TO 2 HOURS OF SUN
- 1 TO 1.5 HOURS OF SUN
- 0.5 TO 1 HOURS OF SUN
- LESS THAN 0.5 HOURS OF SUN



**PROJECT**  
2 HILLFIELD ROAD  
LONDON NW6

**DRAWING**  
AMENITY ANALYSIS  
EXISTING VS PROPOSED SCENARIO

**SCALE @ A3**      **DATE**  
NTS                      14.08.2020

**MODELLED BY**      **DRAWN BY**  
MZ                      MZ

**PROJECT No.**      **REL No. - DWG No.**  
**2536**                      **01-15**