CONSIL

Daylight and Sunlight Report

37 Gray's Inn Road
London
WC1X 8PQ

Client	Rodell Properties
Architect	Fresson and Tee
Prepared by	James Williamson
Dated	12 April 2019
Version	2

Contents

Appendices

1 INSTRUCTIONS AND BRIEF

1.1 In accordance with instructions received from Rodell Properties, we have analysed the effect of the proposed redevelopment of 37 Gray's Inn Road, including partial demolition and reconstruction to provide a rear extension and new fourth floor ('the extension') on the daylight and sunlight amenity to the neighbouring properties.

1.2 We have received the following documents and used them in preparing this report:

- Z-map of the existing and surrounding properties received 24 January 2019
- Fresson and Tee's proposed scheme drawings received 29 January 2019

1.3 Our study has been undertaken by preparing a three-dimensional computer model of the site and surrounding buildings and analysing the effect of the extension on the daylight and sunlight levels received by the neighbouring buildings using our bespoke software. Our assessment is based on a visual inspection, the information detailed above and estimates of relevant distances, dimensions and levels which are as accurate as the circumstances allow.

2 THE DEVELOPMENT SITE

2.1 The site comprises of a mid-terrace, four-storey building on the western side of Gray's Inn Road. The front elevation of the property faces commensurate massing across Gray's Inn Road. The rear of the property faces into a lightwell which places constraints on the daylight and sunlight amenity available, this is demonstrated by the relatively low levels of daylight and sunlight received by the existing windows on all properties overlooking this area.

2.2 The site and surrounding context is shown in Image 1 below.

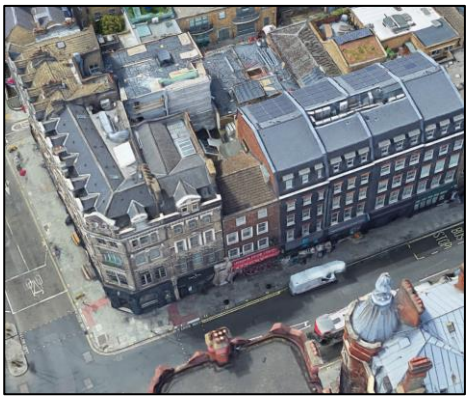

Image 1 – Site and surrounding context

3 PLANNING POLICY

3.1 National Policy

3.1.1 The revised National Planning Policy Framework ('NPPF') 2018 addresses the need for the flexible application of guidance relating to daylight and sunlight under Section 11 'Making effective use of land' of the revised National Planning Policy Framework now. Paragraph 123. c) under subsection "Achieving appropriate densities" states the following;

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).

3.2 Regional Policy – Greater London Authority

3.2.1 On a regional level, the Greater London Authority's 'The London Plan' highlights the need for amenity to be considered on balance with an area's capacity for growth, ensuring the most efficient use of land is made. Section B of Policy 7.6 'Architecture' states;

"Buildings and structures should:

b be of a proportion, composition, scale and orientation that enhances, activates and appropriately defines the public realm…

d "not cause unacceptable harm to the amenity of surrounding land and buildings, particularly residential building, in relation to privacy, overshadowing, wind and microclimate. This is particularly important for tall buildings.…

i optimise the potential of sites"

3.2.2 The Greater London Authority's Housing Supplementary Planning Guidance (published March 2016 ('the Mayor of London's SPG') states the following with regard to daylight and sunlight amenity at paragraphs 2.3.45 to 2.3.47;

".....Daylight enhances residents' enjoyment of an interior and reduces the energy needed to provide light for everyday activities, while controlled sunlight can help to meet part of the winter heating requirement. Sunlight is particularly desirable in living areas and kitchen dining spaces. The risk of overheating should be taken into account when designing for sunlight alongside the need to ensure appropriate levels of privacy. In addition to the above standards, BRE good practice guidelines and

methodology can be used to assess the levels of daylight and sunlight achieved within new developments...."

"Where direct sunlight cannot be achieved in line with Standard 32, developers should demonstrate how the daylight standards proposed within a scheme and individual units will achieve good amenity for residents. They should also demonstrate how the design has sought to optimise the amount of daylight and amenity available to residents, for example, through the design, colour and landscaping of surrounding buildings and spaces within a development."

"BRE guidelines on assessing daylight and sunlight should be applied sensitively to higher density development in London, particularly in central and urban settings, recognising the London Plan's strategic approach to optimise housing output (Policy 3.4) and the need to accommodate additional housing supply in locations with good accessibility suitable for higher density development (Policy 3.3). Quantitative standards on daylight and sunlight should not be applied rigidly, without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London".

3.2.3 The document also states at paragraph 1.3.45 in relation to 'Standards for privacy, daylight and sunlight';

"Policy 7.6Bd requires new development to avoid causing 'unacceptable harm' to the amenity of surrounding land and buildings, particularly in relation to privacy and overshadowing and where tall buildings are proposed. An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time"

3.2.4 The document continues at paragraph 1.3.46;

"The degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London. Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced but which still achieve satisfactory levels of residential amenity and avoid unacceptable harm."

3.3 Policy at national or regional level does not provide further detail in relation to daylight and sunlight amenity, whereas Local policy is more specific, as detailed below.

3.4 Local Policy – Camden Council

3.4.1 Policy A1: 'Managing the impact of development' of Camden Council's Local Plan (adopted 3 July 2017) states the following in relation to daylight and sunlight amenity;

"The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity."

"The factors we will consider include: (f) sunlight, daylight and overshadowing."

3.4.2 Camden Council's Local Plan goes on to state:

"Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011). Further detail can be found within our supplementary planning document Camden Planning Guidance on amenity."

3.4.3 Camden Planning Guidance: Amenity (dated March 2018) contains the following key messages regarding Daylight and Sunlight amenity:

- *"The Council expects applicants to consider the impact of development schemes on daylight and sunlight levels. Where appropriate a daylight and sunlight assessment should submitted which should be follow the guidance in the BRE's Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice.*
- *The 45 degree and 25 degree tests cited in the BRE guidance should be used to assess ('screen') whether a sunlight and daylight report is required.*
- *Levels of reported daylight and sunlight will be considered flexibly taking into account site-specific circumstances and context."*

4 BRE REPORT "SITE LAYOUT PLANNING FOR DAYLIGHT AND SUNLIGHT: A GUIDE TO GOOD PRACTICE" SECOND EDITION (2011) ('THE REPORT')

4.1 Principles

4.1.1 The Second Edition of the Report replaces the 1991 document of the same name with effect from October 2011.

4.1.2 It is important to note that the introduction to the report stresses that the document is provided for guidance purposes only and it is not intended to be interpreted as a strict set of rules. It also suggests that it may be appropriate to adopt a flexible approach and alternative target values in dealing with "special circumstances" for example "in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings." This is amplified by the following extracts from the introduction (P1, para. 6) and Section 2.2:

"The advice given here is not mandatory and 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 many factors in site layout design…" (P1, para. 1.6)

"In special circumstances the Developer or Planning Authority may wish to use different target values." (P1, para. 1.6)

"Note that numerical values given here are purely advisory. Different criteria may be used, based upon 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 no more than its fair share of light". (P7 para. 2.2.3)

4.1.3 The examples given in the Report can be applied to any part of the country: suburban, urban and rural areas. The inflexible application of the target values given in the Report may make reaching the BRE criteria difficult in a tight, urban environment where there is unlikely to be the same expectation of daylight and sunlight amenity as in a suburban or rural environment.

4.2 Daylight

4.2.1 In summary, the BRE Report states that:

"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 degrees to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- *the vertical sky component ['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 (0.85m above floor level in residential properties) in a room which can receive direct skylight is reduced to less than 0.8 times its former value.*

The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, store rooms, circulation areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include, schools, hospitals, hotels and hostels, small workshops and some offices."

4.2.2 The Report also states that:

"Where room layouts are known, the impact on the daylighting distribution in the existing building can be found by plotting the 'no-sky line' in each of the main rooms. For houses this would include living rooms, dining rooms and kitchens; bedrooms should also be analysed, although they are less important. In non-domestic buildings each main room where daylight is expected should be investigated."

…Windows to bathrooms, toilets, store rooms, circulation areas and garages need not be analysed."

4.2.3 Guidance has been provided in the Second Edition of the report in relation to existing windows with balconies:

"Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction may result in a large relative impact on the VSC, and on the area receiving direct skylight. One way to demonstrate this would be to carry out an additional calculation of the VSC and area receiving direct skylight, for both the existing and proposed situations, without the balcony in place. For example, if the proposed VSC with the balcony was under 0.8 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of light." (2.2.11)

A larger relative reduction in VSC may also be unavoidable if the existing window has projecting wings on one or both sides of it, or is recessed into the building so that it is obstructed on both sides as well as above." (2.2.12)

4.2.4 Further guidance is provided in Appendix F on the types of tests to be applied when considering the loss of light to an existing building. F6 states the following:

"In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC depends only on obstruction, and is therefore a measure of the daylit environment as a whole. The average daylight factor (ADF) (Appendix C) also depends on the room and window dimensions, the reflectance of interior surfaces and the type of glass, as well as the obstruction outside. It is an appropriate measure to use in new buildings because most of these factors are within the developer's control."

"Use of the ADF for loss of light to existing buildings is not generally recommended. The use of the ADF as a criterion tends to penalise well-daylit existing buildings, because they can take a much bigger and closer obstruction and still remain above the minimum ADFs recommended in BS 8206-2. Because BS 8206-2 quotes a number of recommended ADF values for different qualities of daylight provision, such a reduction in light would still constitute a loss of amenity to the rooms. Conversely if the ADF in an existing building were only just over the recommended minimum, even a tiny reduction in light from a new development would cause it to go below the minimum, restricting what could be built nearby." (F6 and F7)

4.3 Sunlight

4.3.1 The BRE Report advises that new development should take care to safeguard access to sunlight for existing buildings and any non-domestic buildings where there is a particular requirement for sunlight. In summary, the report states:

"If a living room of an existing dwelling has a main window facing within 90 degrees of due south, and any part of a new development subtends an angle of more than 25 degrees to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

- *receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and*
- *receives less than 0.8 times its former sunlight hours during either period and*
- *has a reduction in sunlight over the whole year greater than 4% of annual probable sunlight hours"*

4.3.2 The report also states that:

"…It is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within ninety-degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun. In non-domestic buildings any spaces which are deemed to have a special requirement for sunlight should be checked; they will normally face within ninety-degrees of due south anyway." (3.2.3)

5 ASSESSMENT RESULTS

5.1 We have analysed the effect of the extension on the daylight and sunlight amenity to the properties with a reasonable expectation of daylight and sunlight amenity situated around the site. Properties further afield would satisfy the preliminary 25-degree line test recommended by the BRE Report, and therefore do not require further assessment.

5.2 The full list of assessed properties is as follows;

- 2-4 Kings Mews
- 35 Gray's Inn Road
- 132-134 Gray's Inn Road
- 138-140 Gray's Inn Road
- 29-30 King's Mews
- 28 King's Mews

5.3 Daylight amenity for the above properties has been assessed using the Vertical Sky Component (VSC) test, which is undertaken per window.

5.4 Whilst the BRE does not specify a set of characteristics to define the 'main window' within a habitable room, in our opinion the main window would be either;

a) Significantly larger than all other windows serving the room, or;

b) Providing the main source of daylight into the room.

5.5 To determine habitable rooms within a neighbouring property; floorplans are consulted, where available. Floorplans are obtained from publicly accessible sources such as Camden Council's online planning database, letting agent's websites or historic letting / sales particulars held on property market websites such as Zoopla and Rightmove. Whilst we cannot verify the accuracy of such floorplans, it is usually possible to confirm whether they are indicative of the interior through external observation. Particularly in the case of terraced houses or a block of flats; such floor plans can also be used to inform our assumptions as to the general internal layout of a neighbouring property for which floorplans were not available.

5.6 If no floorplans are available for a property or its immediate neighbours, it is usually possible to determine whether a window serves habitable space through external observation and our professional experience. If still unclear whether a window serves habitable space, it is included for the avoidance of doubt.

5.7 For properties where floorplans are obtained and deemed to be of a reasonable degree of accuracy (such as scaled drawings obtained from a planning application), Daylight Distribution (DD) assessment has also been undertaken within the habitable rooms in-line with BRE guidance.

5.8 For sunlight amenity, the BRE considers that sunlight obstruction may only become an issue if any part of a new development lies within 90 degrees due south in relation to an existing main window, when viewed in plan. Any property wholly south of the site therefore does not require further testing, in-line with BRE advice.

5.9 For those properties located wholly, or in-part to the north of the site, any main living-room windows that face within 90 degrees of due south have been assessed for sunlight amenity using the Annual Probable Sunlight Hours (APSH) test. If the main living-room window does not face within 90 degrees due south, any secondary windows with southerly aspect also serving this room have been assessed instead, in-line with BRE guidance. The BRE considers bedrooms and kitchens to be less important but states that *"care should be taken not to block too much sun".*

5.10 When assessing a room with multiple windows for sunlight amenity; the BRE advises that the highest value should be taken from windows on the same or adjacent walls. If a room has windows on opposite walls, the values to each can be combined.

5.11 The results of our assessment are set out overleaf on a property by property basis.

5.12 2-4 Kings Mews

5.12.1 These terraced mews houses are located to the west of the extension. We have obtained floor plans for 4 Kings Mews from Camden Council's online planning database.

Image 2: 2-4 Kings Mews

5.12.2 We have assessed the windows at ground and first floor levels, which face the site. These windows are not orientated with 90-degress of due south and therefore, in accordance with the BRE Report guidance, do not require assessment for sunlight amenity.

5.12.3 As can be seen from the appended VSC results spreadsheet, all of the windows facing the site will comply with the numerical targets for daylight amenity detailed in the BRE Report guidance. With reference to the appended Daylight Distribution (DD) results spreadsheet, it can be seen that the distribution of light within all habitable rooms in 4 Kings Mews would be unaffected by the extension.

5.12.4 In summary, these properties would not be adversely affected for daylight and sunlight amenity.

5.13 35 Gray's Inn Road

5.13.1 This property is located immediately south of the site and contains a ground floor retail unit with four flats above.

Image 3: 35 Gray's Inn Road

5.13.2 We have assessed all of the windows on the rear elevation. We have not seen floor plans for this property and have assumed the room uses based on our site inspection.

5.13.3 With regard to sunlight amenity, all of the windows tested would meet the BRE Report guidance, retaining at least 0.80 times the amount of sunlight in the existing conditions.

5.13.4 The VSC results show that 7 of the 9 windows assessed would meet the BRE report guidance, retaining at least 0.80 times the amount of VSC in the existing conditions.

5.13.5 The two windows that transgress the guidance are first floor window W1 and second floor window W1. The VSC to these windows would be reduced from 15.57% and 22.47% to 10.27% and 16.74% respectively. First floor window W1 is the glazed part of the rear door from this flat and is likely to serve a utility room or circulation area. Second floor window W1 has opaque manifestation applied to it, indicating that this may be a bathroom. Neither of these rooms would be considered habitable rooms, as defined by the BRE Report guidelines. However, as we have been unable to verify the internal arrangements, we have included the results in our report.

5.13.6 In summary, this property would not be adversely affected for sunlight amenity. The extension would have a limited effect to daylight amenity to two windows.

5.14 Gray's Inn Buildings, 132-134 Gray's Inn Road

5.14.1 This property is located to the east of the site on Gray's Inn Road and contains residential accommodation to the upper floors. We have obtained floor plans for this property from Camden Council's online planning database.

Image 4: 132-134 Gray's Inn Road

5.14.2 We have assessed the windows at first and second floor levels, which face the site. The windows to the third, fourth and fifth floors will meet the 25-degree line test and therefore do not require assessment.

5.14.3 With regard to sunlight amenity, all of the windows orientated with 90 degrees of due south would meet the BRE Report guidance.

5.14.4 The VSC and DD results spreadsheets show that all of the windows and rooms assessed would comply with the BRE Report guidance for daylight amenity.

5.14.5 In summary, these properties would not be adversely affected for daylight and sunlight amenity.

5.15 <u>138-140 Gray's Inn Road</u>

5.15.1 This property is located on opposite the site on Gray's Inn Road and is understood to contain residential accommodation on the upper floors.

Image 5: 2-4 Kings Mews

5.15.2 We have assessed the windows at first and second floor levels, which face the site. The windows to the third, fourth and fifth floors will meet the 25-degree line test and therefore do not require assessment.

5.15.3 With regard to sunlight amenity, all of the windows orientated within 90 degrees of due south would meet the BRE Report guidance.

5.15.4 As can be seen from the appended VSC and DD result spreadsheets, all of the windows facing the extension will comply with the numerical targets for daylight amenity detailed in the BRE Report guidance.

5.15.5 In summary, these properties would not be adversely affected for daylight and sunlight amenity.

5.16 29-30 King's Mews

5.16.1 This new building is located to the rear of the site and is currently under construction. We have used the floor plans from planning application 2018/5696/P to model the internal configurations of the proposed flats.

Image 6: 29-30 King's Mews

5.16.2 We have assessed the windows from ground to third floors which face the site.

5.16.3 All of the windows orientated within 90 degrees of due south would meet the BRE Report guidance for sunlight amenity.

5.16.4 We have assessed 29 windows serving 7 habitable rooms. As can be seen from the VSC results spreadsheet, 25 of the windows assessed will comply with the BRE Report guidance. The four windows that transgress the guidance retain VSC values of between 0.67 and 0.79 times the amount of VSC in the existing conditions, compared to the 0.80 guidance figure. It is important to note that all of these windows serve rooms that are dual aspect, with at least one other window that complies with the guidance.

5.16.5 This is supported by the DD results, which show 6 of the 7 rooms assessed are compliant with the BRE Report guidance for this test. The one room transgressing this test is ground floor room R1, a studio flat. This room only marginally transgresses the BRE Report guidelines retaining 0.79 times the lit area on the existing conditions, only marginally below the guidance figure of 0.80.

5.16.6 It is worth noting that, if using the Average Daylight Factor (ADF) test which was used in the daylight and sunlight report submitted as part of the planning application for 29-30 King's Mews, all of these rooms would retain similar values to the ADF figures presented as part of that planning application, with only negligible reductions (up to 4%).

5.16.7 In summary, this property would meet the BRE guidelines for sunlight amenity. The extension would have a limited effect on daylight amenity. However, the retained levels of daylight would be commensurate with occupier expectations in a dense urban environment.

5.17 28 King's Mews

5.17.1 This property is located to the north-west of the site and comprises of a single dwelling house. We have obtained floor plans from Camden Council's online planning database.

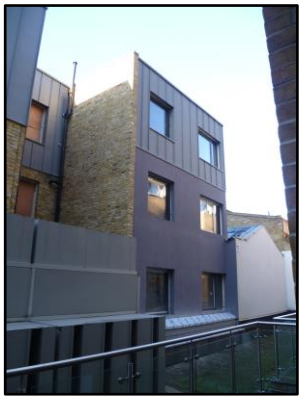

Image 7: 28 Kings Mews

5.17.2 We have assessed all of the rooms with windows facing towards the site.

5.17.3 As can be seen from the appended VSC/APSH and DD result spreadsheets, all of the windows and rooms would comply with the BRE Report guidelines for both daylight and sunlight amenity in the proposed conditions.

5.17.4 In summary, this property would not be adversely affected for daylight and sunlight amenity.

6 CONCLUSION

6.1.1 Our analysis demonstrates that the proposed extension to 37 Gray's Inn Road would have a limited effect on the daylight and sunlight amenity receive to the surrounding residential properties when assessed in accordance with the guidelines set-out in the BRE Report.

6.1.2 There would be marginal losses of daylight to two rooms in 35 Gray's Inn Road and to a scheme currently under construction to 29-30 King's Mews. However, these properties would retain daylight and sunlight levels which are commensurate for a dense urban environment and in line with the expectations of occupants of such an area.

6.1.3 All other neighbouring properties assessed would comply with the BRE Report guidance for daylight and sunlight amenity.

APPENDIX A

Drawings for Surrounding Properties

DO NOT SCALE
CONTRACTORS MUST VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND ANY DISCREPANCIES ARE TO BE REPORTED TO CONSIL. NO DIMENSIONS SHOULD BE SCALED FROM THIS DRAWING.

SOURCES OF INFORMATION:
Fresson and Tee proposed scheme drawings received on 29/01/2019

Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

N

KEY
- Existing buildings
- Analysed properties
- Surrounding buildings

Ordnance Datum Heights

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Existing plan view

SCALE	DATE
Not to Scale	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
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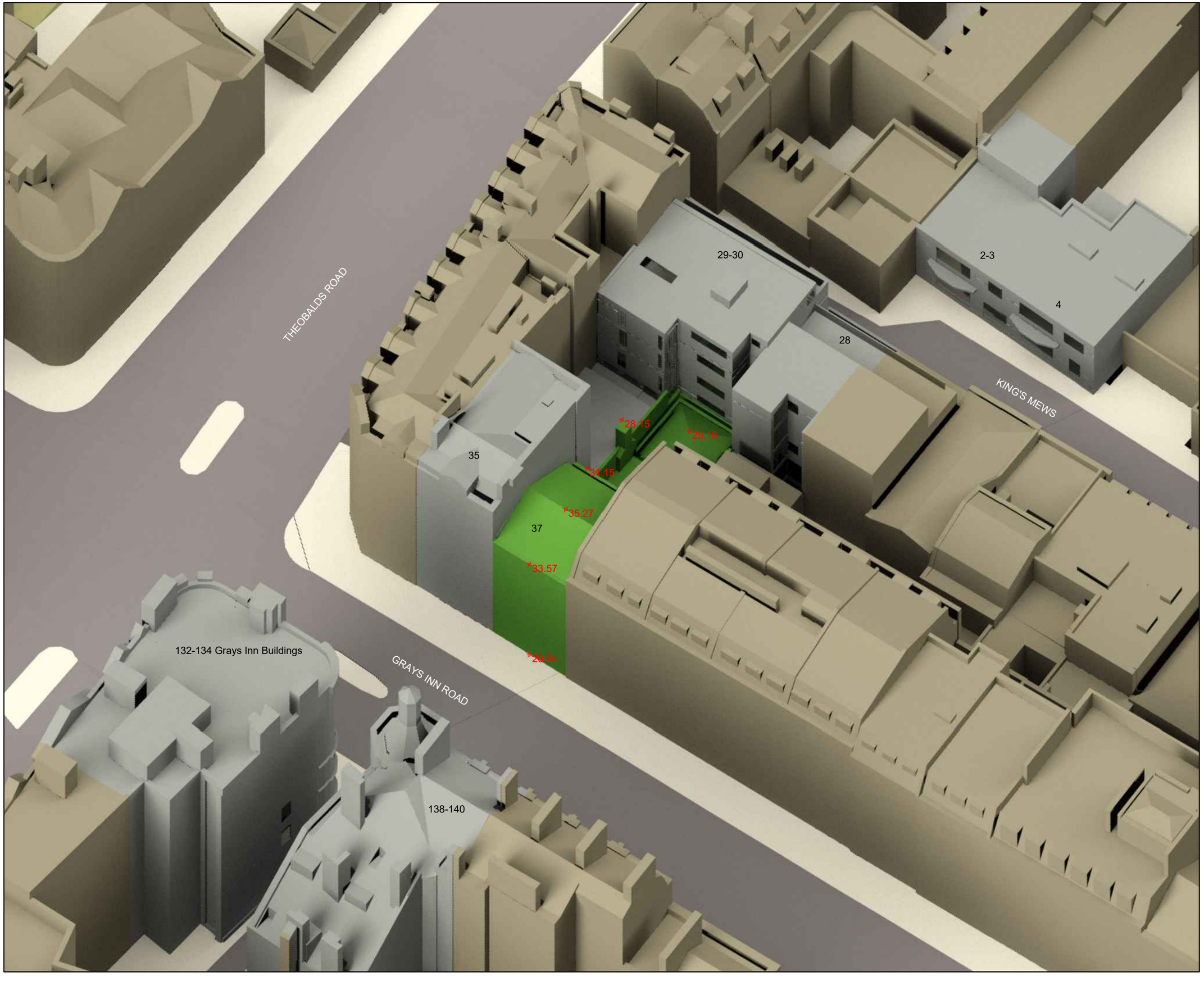

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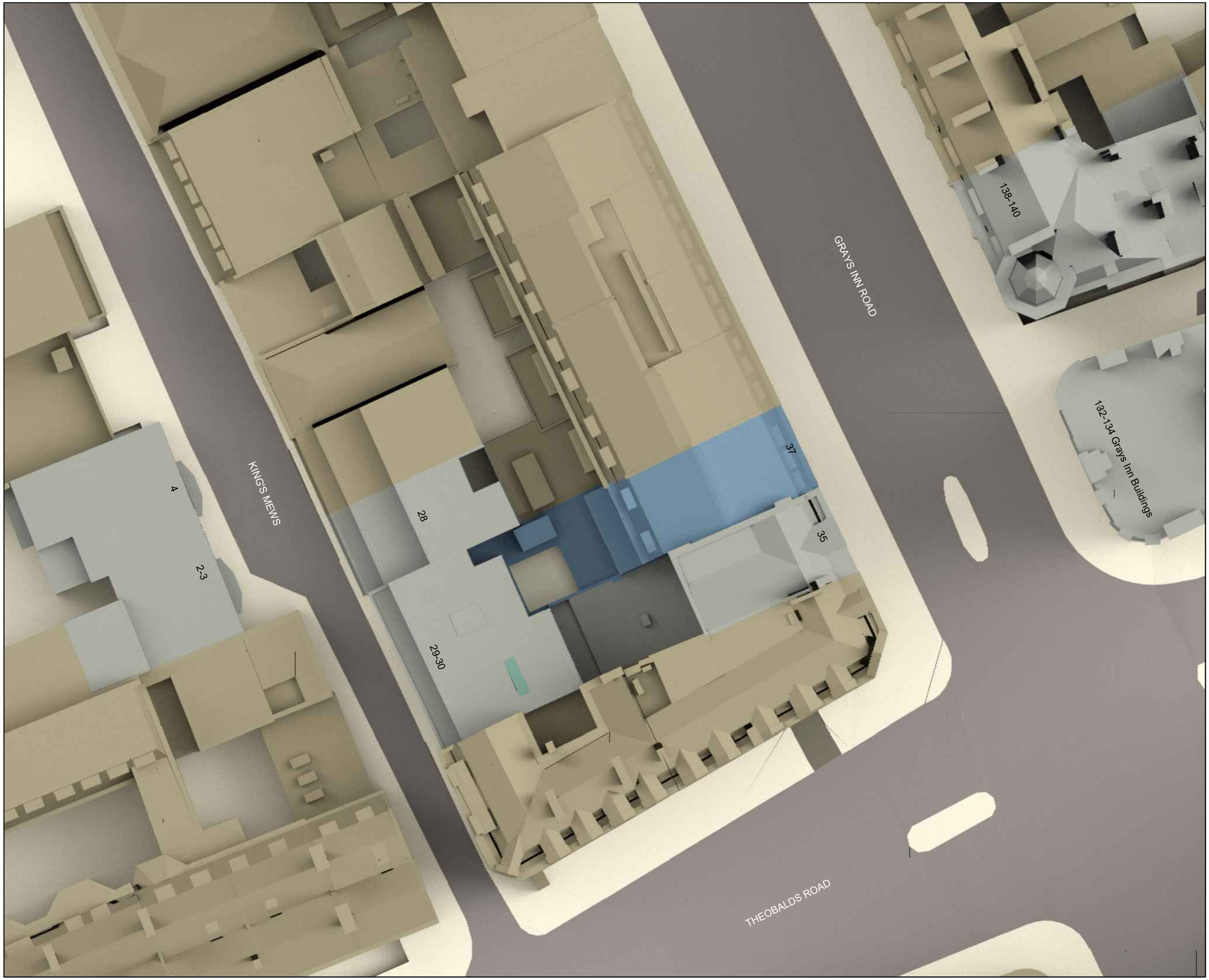

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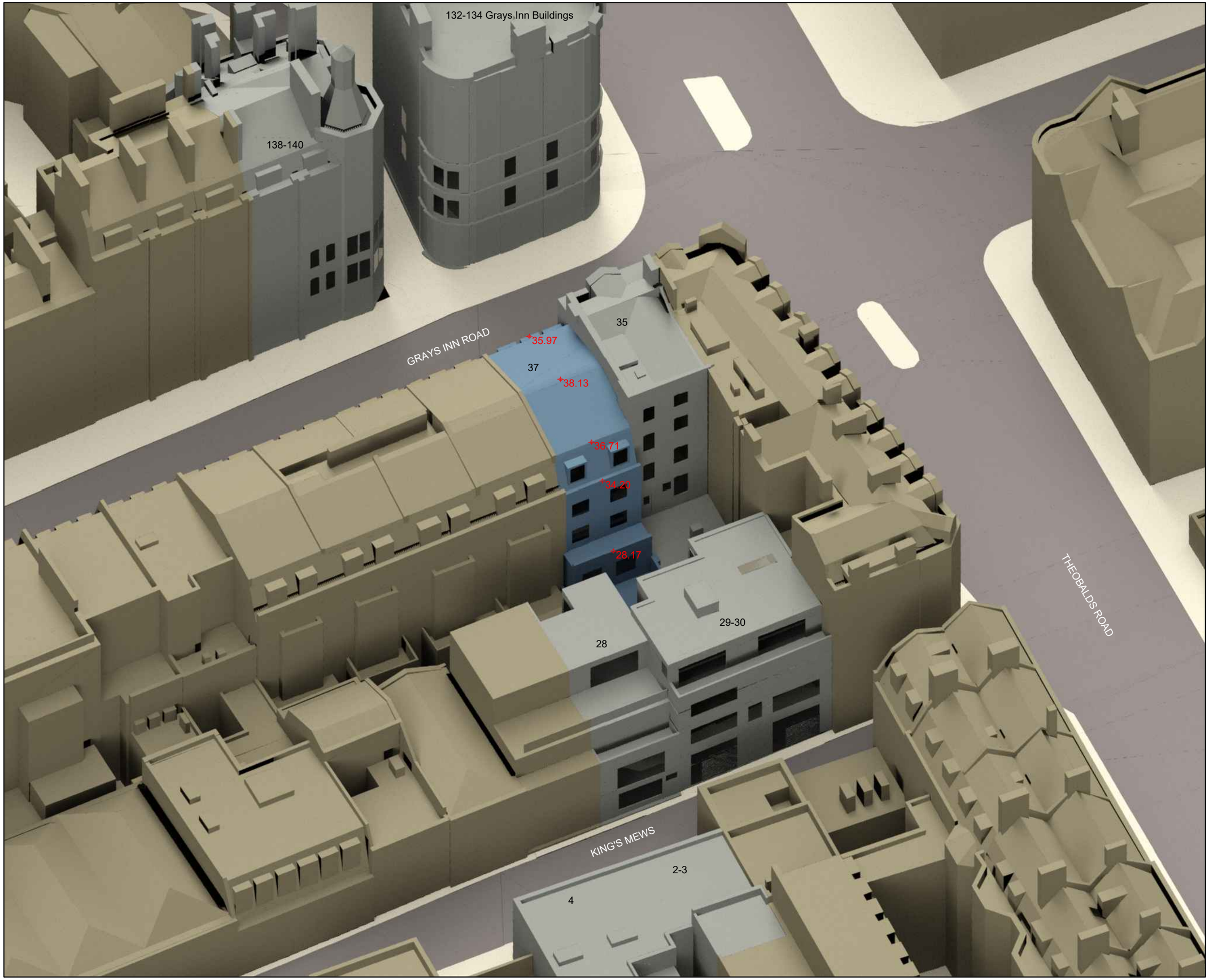

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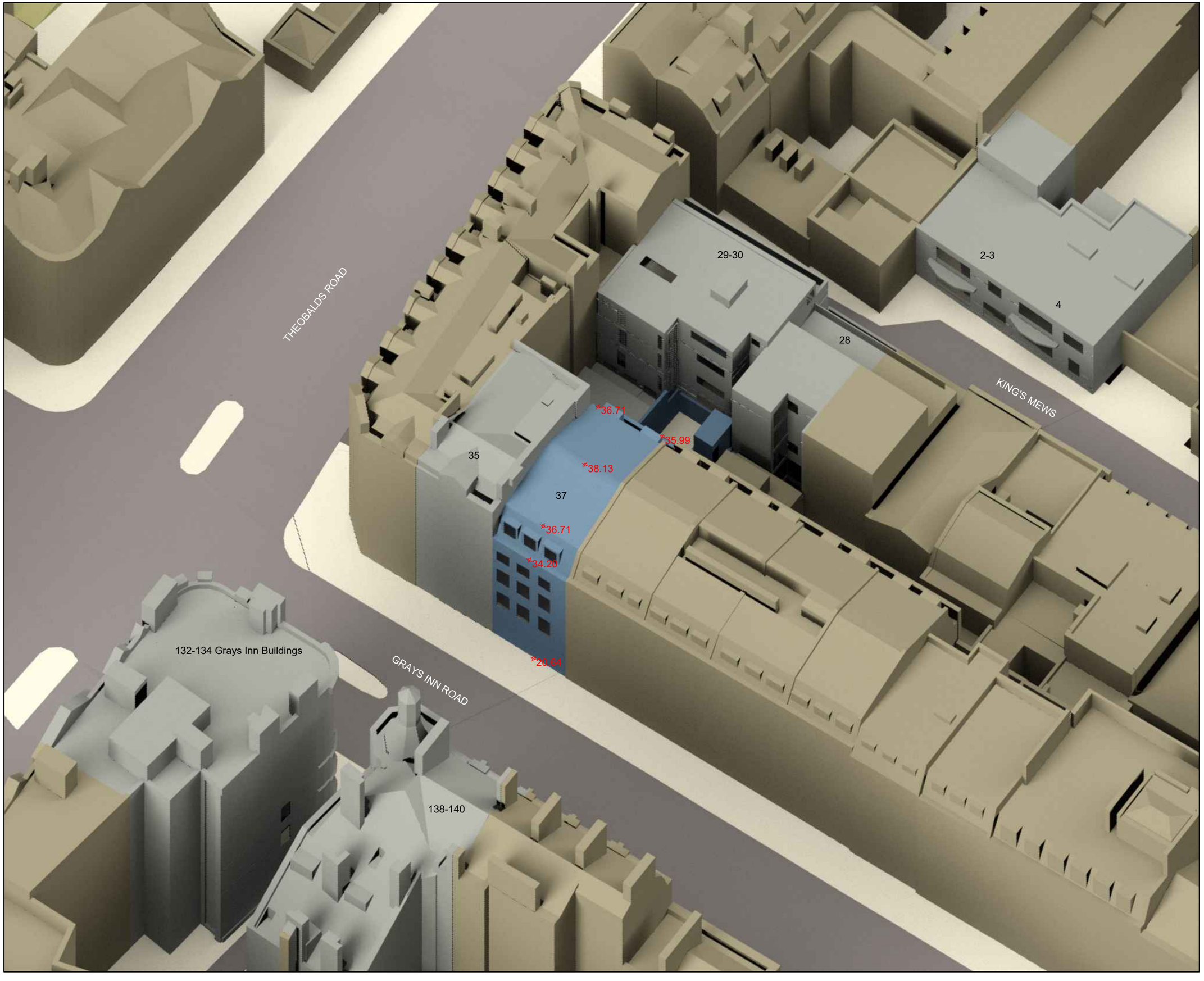

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- Surrounding buildings

Ordnance Datum Heights

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

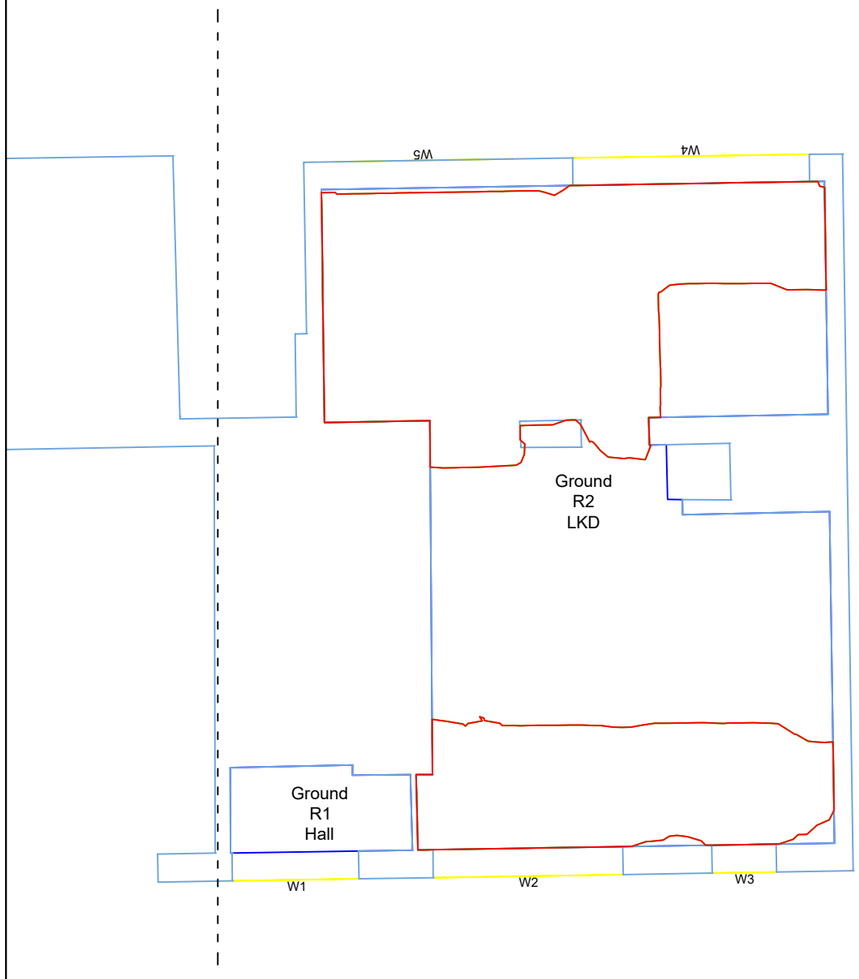
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Proposed 3D view

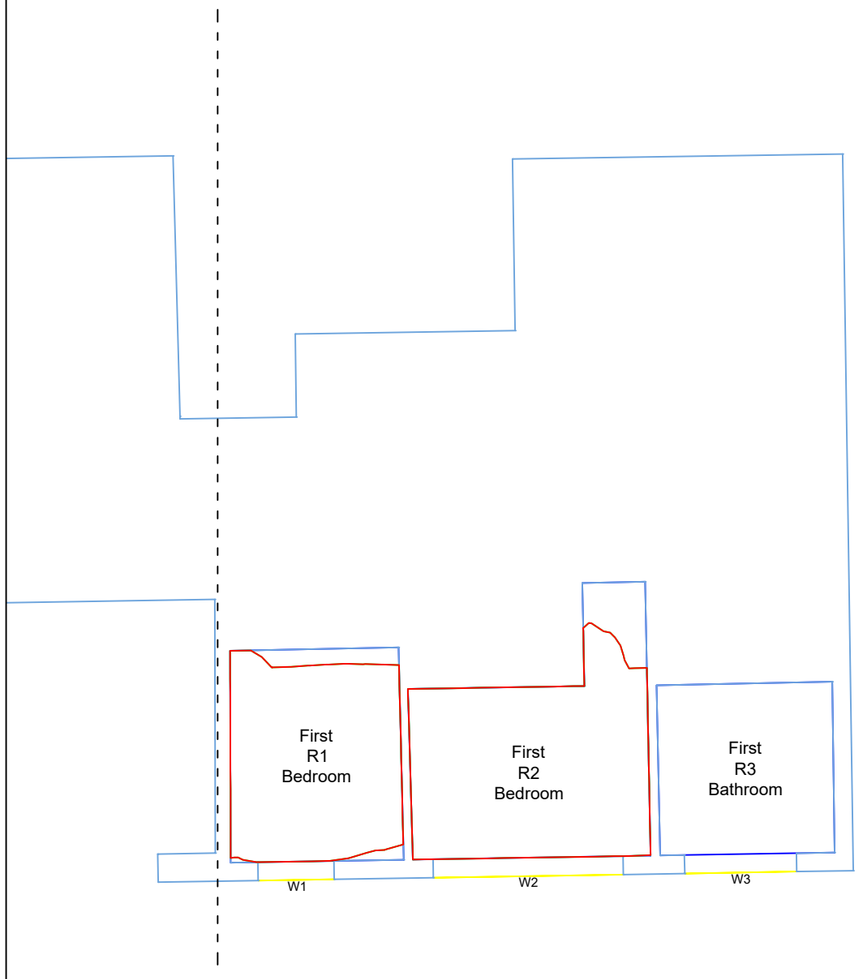
SCALE	DATE
Not to Scale	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/016	

CONSIL



Ground Floor



First Floor

DO NOT SCALE
CONTRACTORS MUST VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND ANY DISCREPANCIES ARE TO BE REPORTED TO CONSIL.
NO DIMENSIONS SHOULD BE SCALED FROM THIS DRAWING.

SOURCES OF INFORMATION:
Fresson and Tee proposed scheme drawings received on 29/01/2019

Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

KEY
R1 Room area
Existing no-skyline
Proposed no-skyline
Area of loss / gain

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

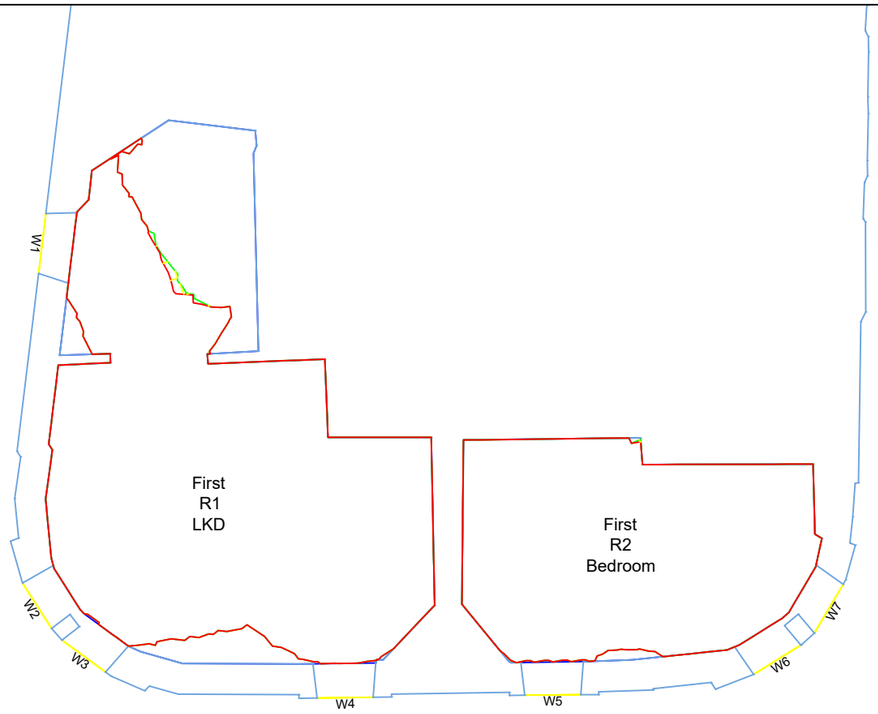
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Daylight Distribution contours
4 Kings Mews

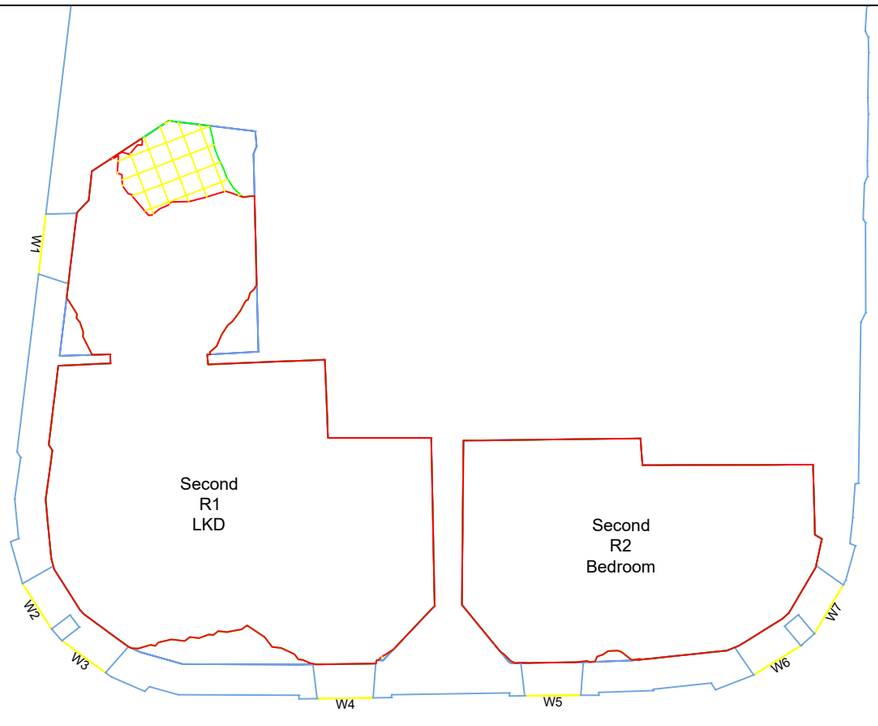
SCALE	DATE
1:100	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/ 201	

CONSIL



First Floor



Second Floor

DO NOT SCALE
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Consil Ltd site photography taken on 30/01/2019

KEY
R1 Room area
Existing no-skyline
Proposed no-skyline
Area of loss / gain

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

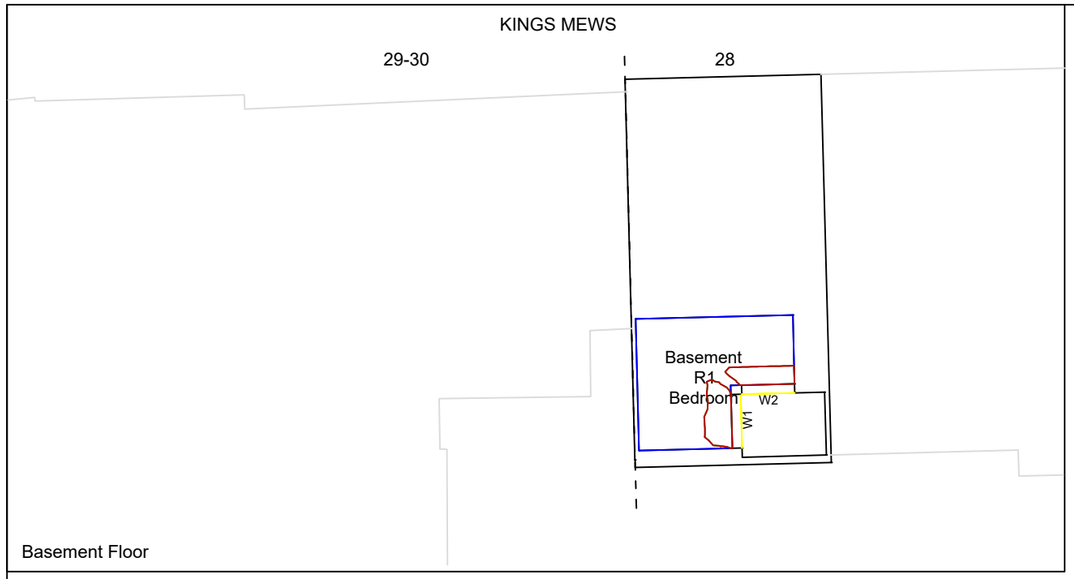
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Daylight Distribution contours
132-134 Grays Inn Buildings

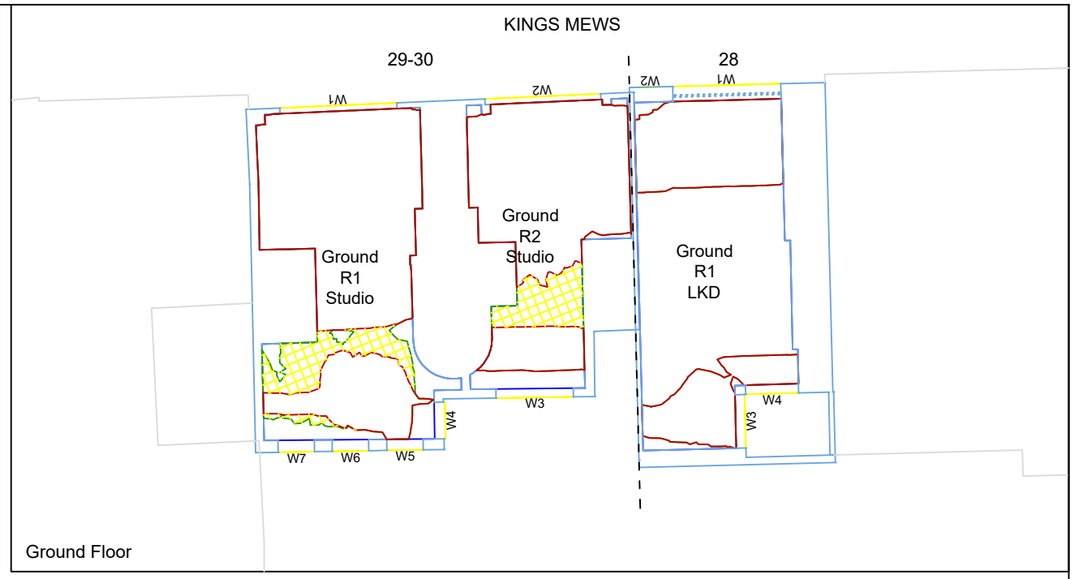
SCALE	DATE
1:100	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/ 202	

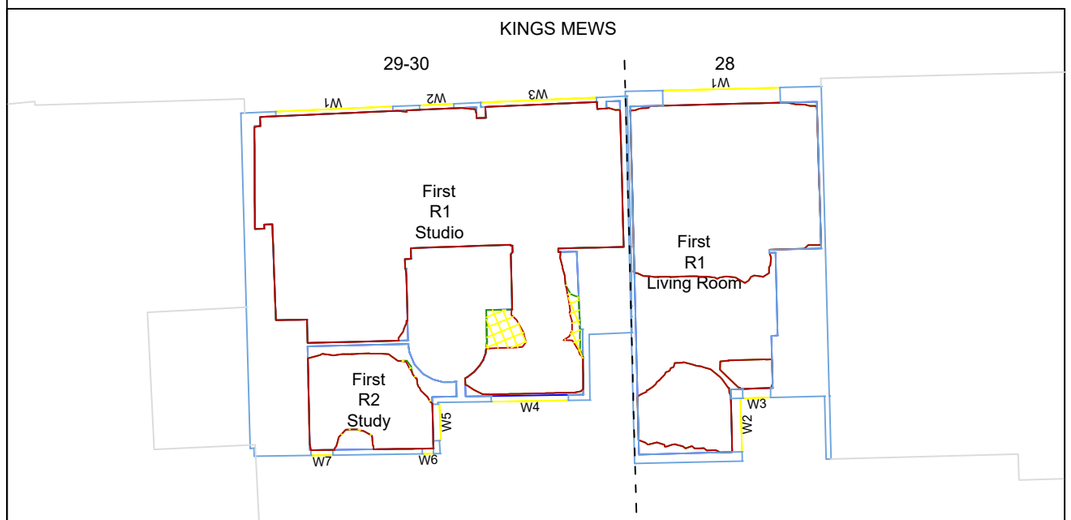
CONSIL



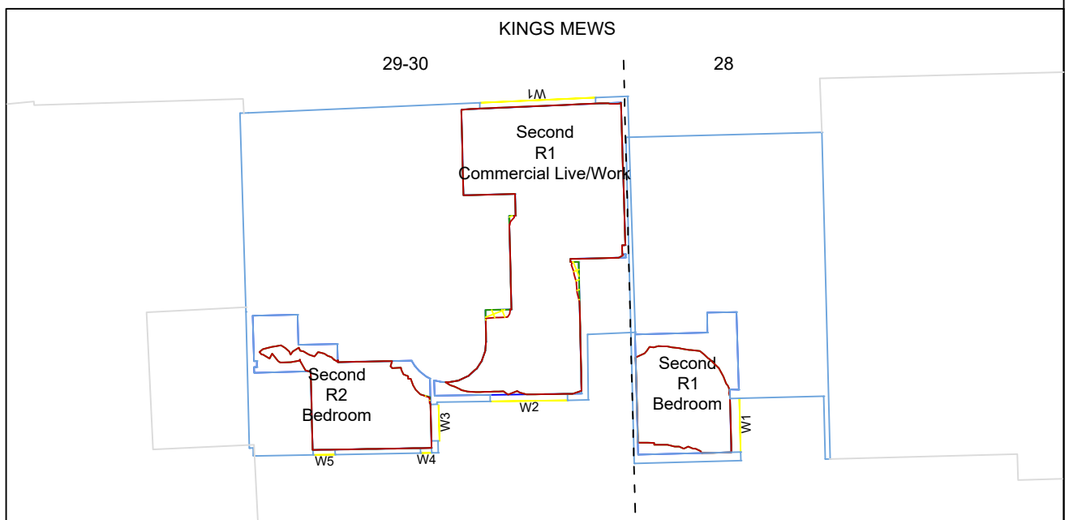
Basement Floor



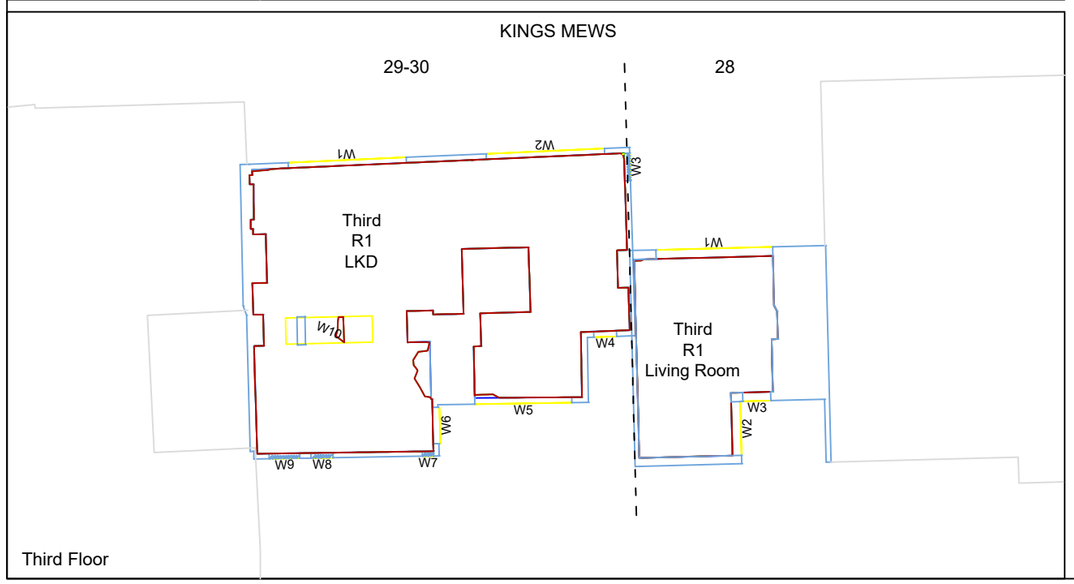
Ground Floor



First Floor



Second Floor



Third Floor

DO NOT SCALE
CONTRACTORS MUST VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND ANY DISCREPANCIES ARE TO BE REPORTED TO CONSIL.
NO DIMENSIONS SHOULD BE SCALED FROM THIS DRAWING.

SOURCES OF INFORMATION:

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Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

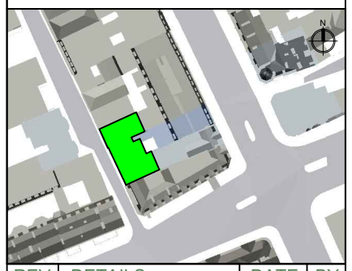
KEY

R1 Room area

Existing no-skyline

Proposed no-skyline

Area of loss / gain



REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

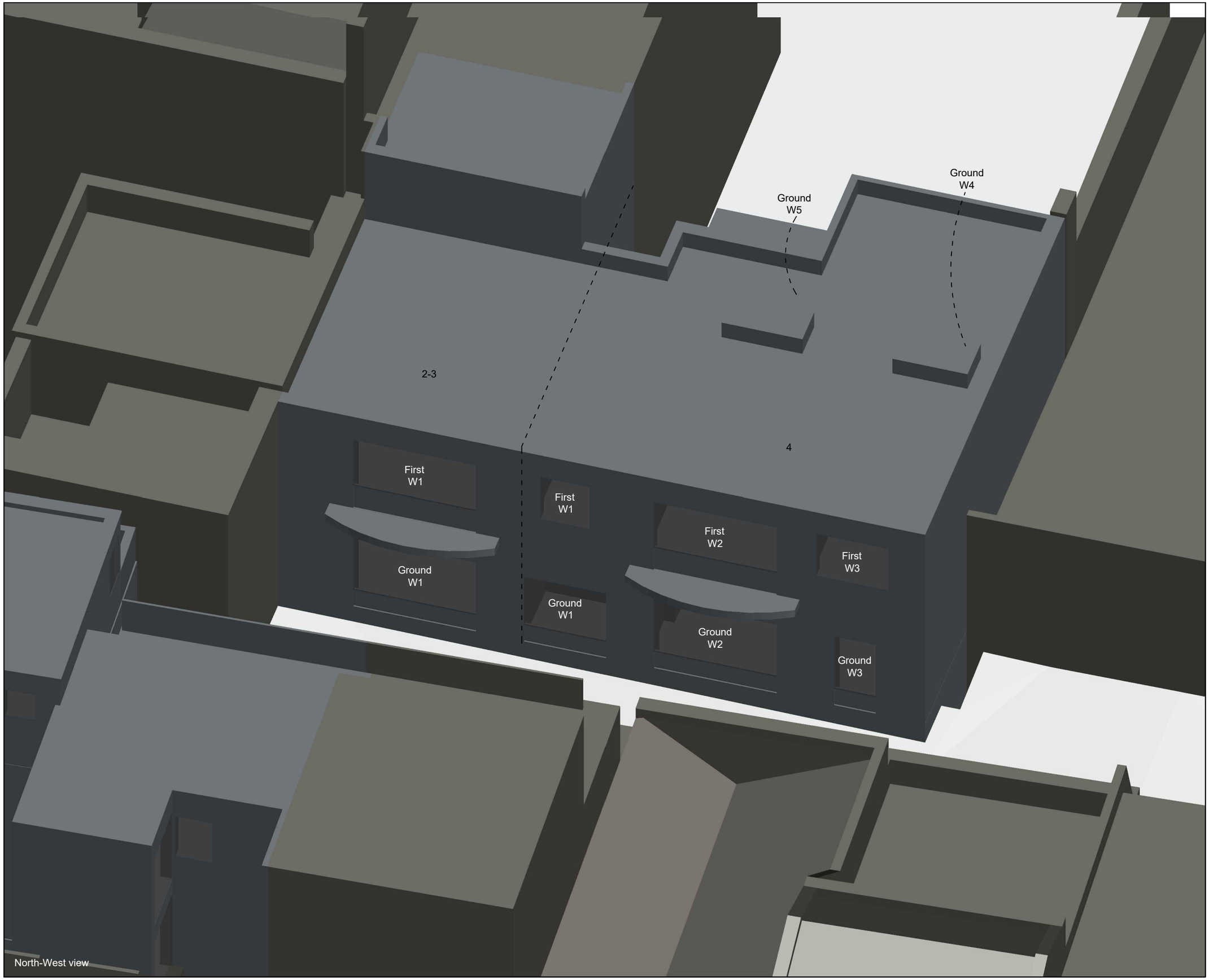
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Daylight Distribution contours
28; 29-30 Kings Mews

SCALE	DATE
1:200	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/ 203	

CONSIL



DO NOT SCALE
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SOURCES OF INFORMATION:
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Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

KEY
- Analysed properties
- Surrounding buildings
- XXXXX WX Window Location

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

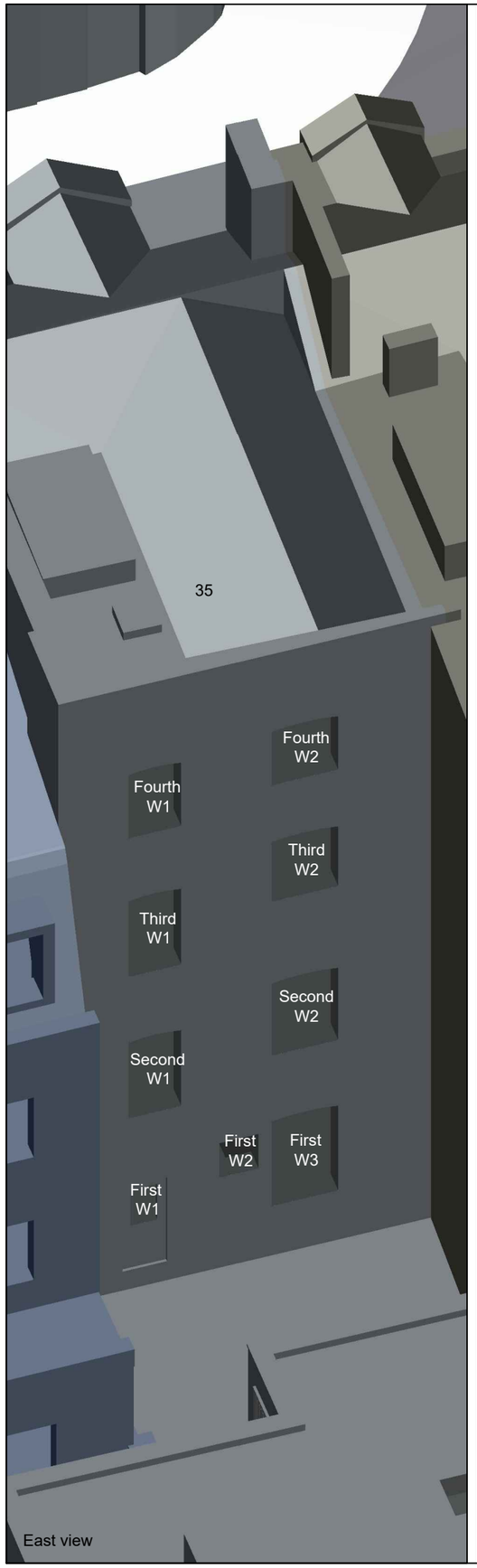
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

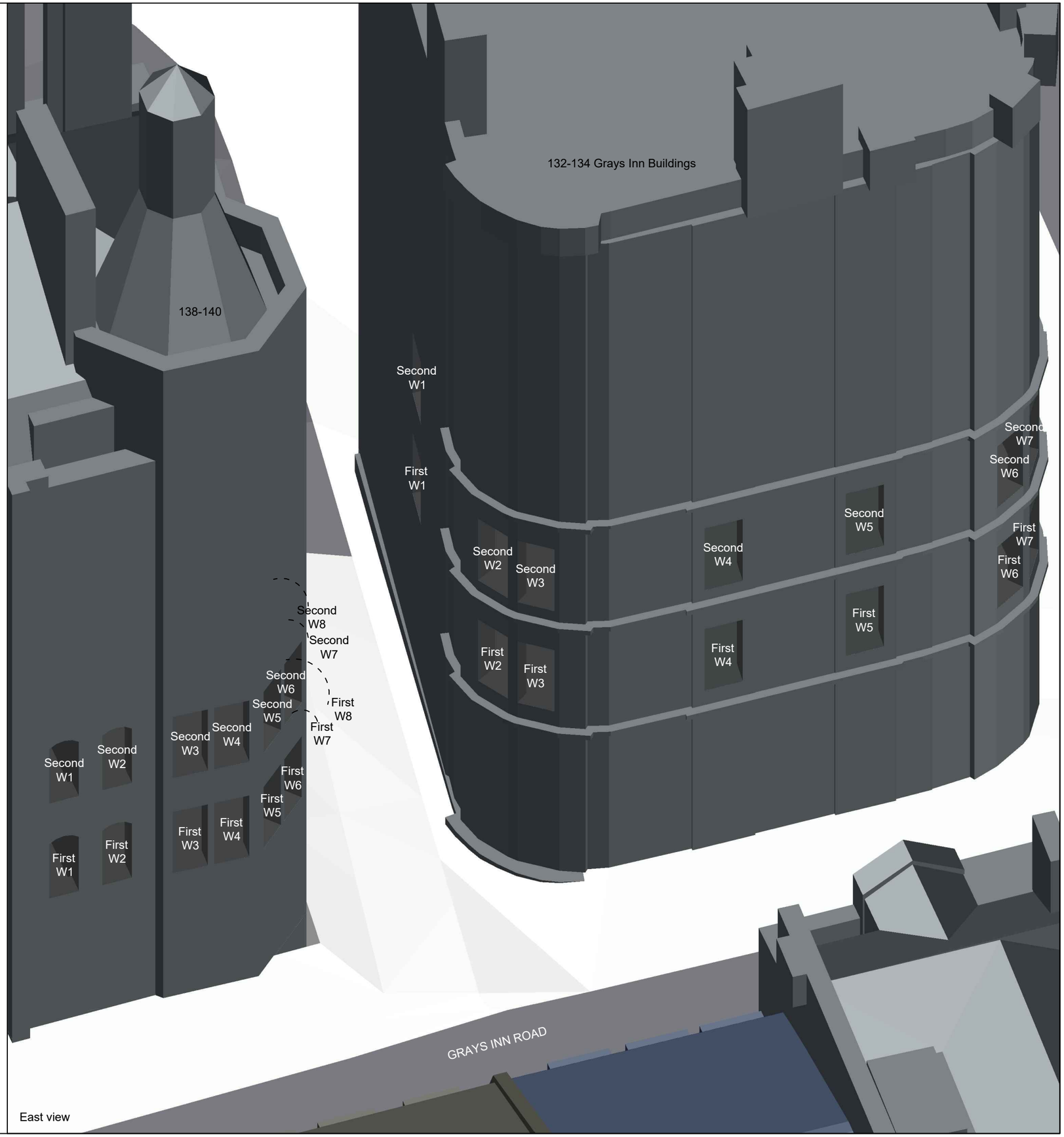
DRAWING TITLE
Window Maps
2-3; 4 Kings Mews

SCALE	DATE
Not to Scale	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/ 301	

CONSIL





DO NOT SCALE
CONTRACTORS MUST VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND ANY DISCREPANCIES ARE TO BE REPORTED TO CONSIL. NO DIMENSIONS SHOULD BE SCALED FROM THIS DRAWING.

SOURCES OF INFORMATION:
Fresson and Tee proposed scheme drawings received on 29/01/2019

Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

KEY
- Analysed properties
- Surrounding buildings
- XXXXX WX — Window Location

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

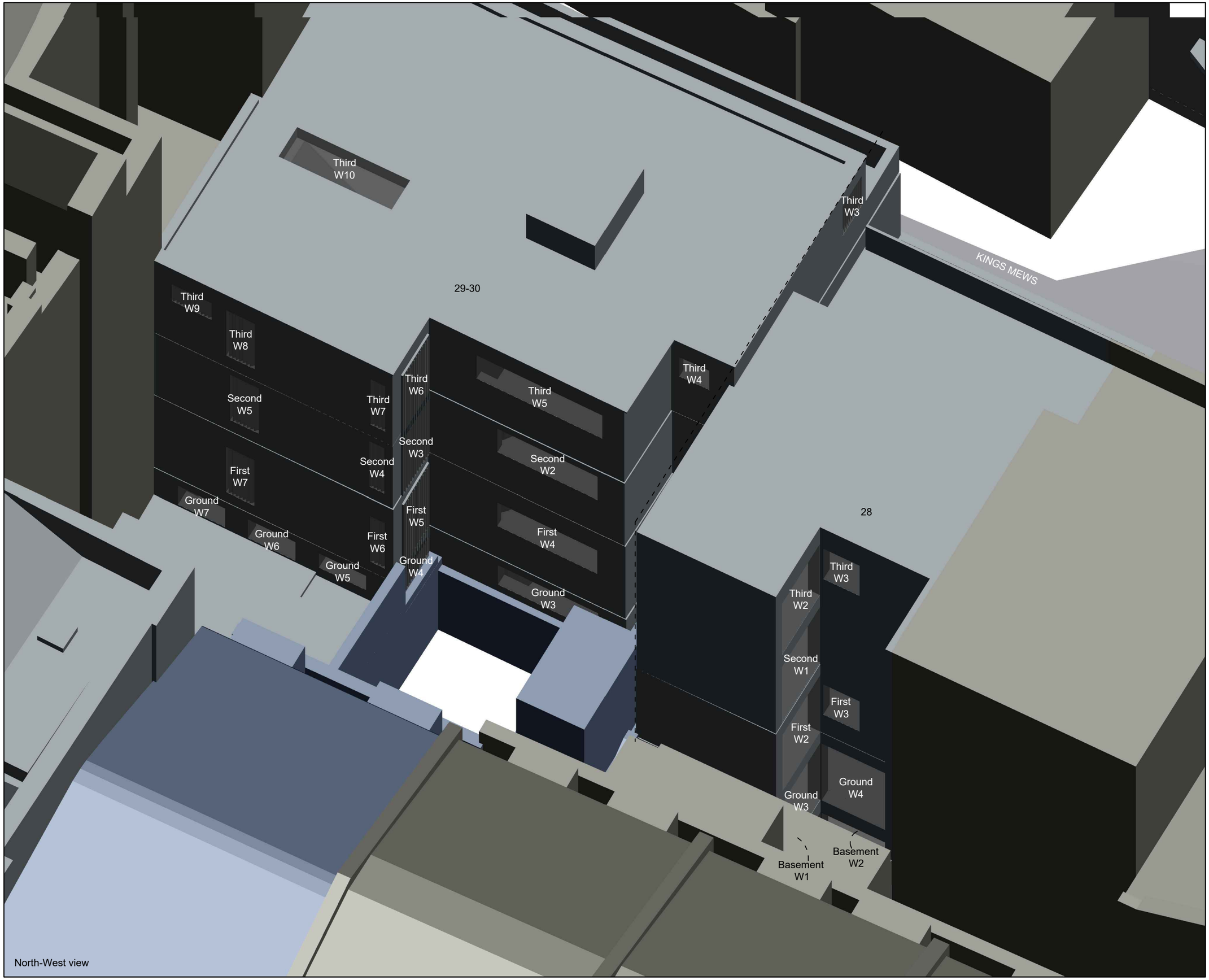
PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Window Maps
35; 138-140 Grays Inn Road
132-134 Grays Inn Buildings

SCALE	DATE
Not to Scale	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/ 302	

CONSIL



SOURCES OF INFORMATION:

Fresson and Tee proposed scheme drawings received on 29/01/2019

Accucities Ltd 3D survey model received on 24/01/2019

Consil Ltd site photography taken on 30/01/2019

KEY

- Analysed properties
- Surrounding buildings
- XXXXX WX — Window Location

REV	DETAILS	DATE	BY
A	*	*	*

CLIENT
Rodell Properties

PROJECT
37 Grays Inn Road, London, WC1X 8PQ

DRAWING TITLE
Window Maps
28; 29-30 Kings Mews

SCALE	DATE
Not to Scale	26/02/2019
DRAWN BY	CHECKED BY
DR	JW

DWG No.	REV.
DS/01/303	

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APPENDIX B

Vertical Sky Component, Annual Probable Sunlight Hours and Daylight Distribution Result Spreadsheets

VSC/APSH surrounding results

Floor Ref.	Room Ref.	Property Type	Room Use. (* = Assumed)	Window Ref.		VSC	Pr/Ex	Annual	Pr/Ex	Winter	Pr/Ex
2-3 Kings Mews											
Ground	R1	Residential	LKD*	W1	Existing	13.29	1.00		*North*		*North*
					Proposed	13.29					
First	R1	Residential	Bedroom*	W1	Existing	27.53	0.99		*North*		*North*
					Proposed	27.36					
4 Kings Mews											
Ground	R2	Residential	LKD	W2	Existing	14.17	1.00		*North*		*North*
					Proposed	14.17					
				W3	Existing	19.67	1.00		*North*		*North*
					Proposed	19.67					
				W4	Existing	5.77	1.00	12	1.00	2	1.00
					Proposed	5.77		12		2	
				W5	Existing	18.29	1.00	22	1.00	0	0.00
					Proposed	18.29		22		0	
First	R1	Residential	Bedroom	W1	Existing	26.33	1.00		*North*		*North*
					Proposed	26.33					
	R2	Residential	Bedroom	W2	Existing	27.24	1.00		*North*		*North*
					Proposed	27.24					
35 Grays Inn Road											
First	R1	Residential	Circulation*	W1	Existing	15.57	0.65	10	1.00	0	0.00
					Proposed	10.27		10		0	
	R2	Residential	WC*	W2	Existing	15.55	0.85	9	1.00	0	0.00
					Proposed	13.26		9		0	
	R3	Residential	Kitchen*	W3	Existing	13.67	0.90	4	1.00	0	0.00
					Proposed	12.38		4		0	
Second	R1	Residential	Bathroom*	W1	Existing	22.47	0.74	22	0.95	0	0.00
					Proposed	16.74		21		0	
	R2	Residential	Kitchen*	W2	Existing	19.93	0.94	17	1.00	0	0.00
					Proposed	18.86		17		0	
Third	R1	Residential	Bathroom*	W1	Existing	29.42	0.90	40	1.00	4	1.00
					Proposed	26.57		40		4	
	R2	Residential	Kitchen*	W2	Existing	25.17	0.99	24	1.00	2	1.00
					Proposed	24.97		24		2	
Fourth	R1	Residential	Bathroom*	W1	Existing	34.59	1.00	55	1.00	14	1.00
					Proposed	34.59		55		14	
	R2	Residential	Kitchen*	W2	Existing	30.54	1.00	41	1.00	3	1.00
					Proposed	30.54		41		3	
132-134 Grays Inn Buildings											
First	R1	Residential	LKD	W1	Existing	6.14	1.00		*North*		*North*
					Proposed	6.14					
				W2	Existing	17.73	0.98		*North*		*North*
					Proposed	17.46					
				W3	Existing	23.10	0.98		*North*		*North*
					Proposed	22.71					
				W4	Existing	26.55	0.98	42	1.00	15	1.00
					Proposed	26.28		42		15	
	R2	Residential	Bedroom	W5	Existing	27.21	0.99	43	1.00	16	1.00
					Proposed	27.07		43		16	
				W6	Existing	29.24	0.99	55	0.98	17	1.00
					Proposed	29.21		54		17	
				W7	Existing	28.39	1.00	60	1.00	15	1.00
					Proposed	28.39		60		15	

VSC/APSH surrounding results

Floor Ref.	Room Ref.	Property Type	Room Use. (* = Assumed)	Window Ref.		VSC	Pr/Ex	Annual	Pr/Ex	Winter	Pr/Ex
Second	R1	Residential	LKD	W1	Existing	9.31	1.00		*North*		*North*
					Proposed	9.31					
				W2	Existing	20.60	0.98		*North*		*North*
					Proposed	20.38					
				W3	Existing	26.58	0.98		*North*		*North*
					Proposed	26.27					
				W4	Existing	30.21	0.99	50	1.00	17	1.00
					Proposed	30.02		50		17	
	R2	Residential	Bedroom	W5	Existing	30.59	0.99	53	1.00	18	1.00
					Proposed	30.52		53		18	
				W6	Existing	31.81	0.99	63	1.00	19	1.00
					Proposed	31.80		63		19	
				W7	Existing	30.63	1.00	71	1.00	19	1.00
					Proposed	30.63		71		19	
138-140 Grays Inn Road											
First	R2	Residential	Kitchen*	W2	Existing	23.97	0.98	39	0.94	11	0.90
					Proposed	23.69		37		10	
	R3	Residential	Living Room*	W3	Existing	24.22	0.98	43	0.97	12	1.00
					Proposed	23.89		42		12	
				W4	Existing	24.20	0.98	43	0.97	12	1.00
					Proposed	23.83		42		12	
				W5	Existing	22.78	0.98	42	0.95	12	1.00
					Proposed	22.49		40		12	
				W6	Existing	22.13	0.98	44	0.97	14	1.00
					Proposed	21.85		43		14	
				W7	Existing	12.56	0.99	32	0.96	10	1.00
					Proposed	12.53		31		10	
				W8	Existing	10.50	0.99	29	0.96	8	1.00
					Proposed	10.47		28		8	
Second	R2	Residential	Kitchen*	W2	Existing	28.07	0.98	45	1.00	13	1.00
					Proposed	27.77		45		13	
	R3	Residential	Living Room*	W3	Existing	28.35	0.98	49	1.00	14	1.00
					Proposed	27.98		49		14	
				W4	Existing	28.33	0.98	48	1.00	13	1.00
					Proposed	27.91		48		13	
				W5	Existing	25.88	0.98	49	1.00	14	1.00
					Proposed	25.56		49		14	
				W6	Existing	25.08	0.98	47	1.00	14	1.00
					Proposed	24.78		47		14	
				W7	Existing	14.02	0.99	35	1.00	12	1.00
					Proposed	13.99		35		12	
				W8	Existing	11.86	0.99	31	1.00	9	1.00
					Proposed	11.83		31		9	

VSC/APSH surrounding results

Floor Ref.	Room Ref.	Property Type	Room Use. (* = Assumed)	Window Ref.		VSC	Pr/Ex	Annual	Pr/Ex	Winter	Pr/Ex
29-30 Kings Mews											
Ground	R1	Residential	Studio	W1	Existing	17.11	1.00	22	1.00	4	1.00
					Proposed	17.11		22		4	
				W4	Existing	7.49	0.85		*North*		*North*
					Proposed	6.39					
				W5	Existing	7.29	0.75		*North*		*North*
					Proposed	5.49					
				W6	Existing	6.97	0.79		*North*		*North*
					Proposed	5.56					
				W7	Existing	5.92	0.83		*North*		*North*
					Proposed	4.94					
	R2	Residential	Studio	W2	Existing	16.55	1.00	21	1.00	3	1.00
					Proposed	16.55		21		3	
				W3	Existing	9.80	0.67		*North*		*North*
					Proposed	6.62					
First	R1	Residential	Studio	W1	Existing	24.70	1.00	34	1.00	4	1.00
					Proposed	24.70		34		4	
				W2	Existing	27.11	1.00	40	1.00	5	1.00
					Proposed	27.11		40		5	
				W3	Existing	28.55	1.00	46	1.00	9	1.00
					Proposed	28.55		46		9	
				W4	Existing	13.18	0.82		*North*		*North*
					Proposed	10.93					
	R2	Residential	Study	W5	Existing	9.71	0.95		*North*		*North*
					Proposed	9.25					
				W6	Existing	11.20	0.77		*North*		*North*
					Proposed	8.68					
				W7	Existing	8.18	0.84		*North*		*North*
					Proposed	6.91					
Second	R1	Residential	Commercial Live/Work	W1	Existing	31.77	1.00	49	1.00	12	1.00
					Proposed	31.77		49		12	
				W2	Existing	19.17	0.90		*North*		*North*
					Proposed	17.38					
	R2	Residential	Bedroom	W3	Existing	14.65	0.97		*North*		*North*
					Proposed	14.27					
				W4	Existing	15.79	0.85		*North*		*North*
					Proposed	13.53					
				W5	Existing	11.59	0.90		*North*		*North*
					Proposed	10.51					
Third	R1	Residential	LKD	W1	Existing	30.91	1.00	42	1.00	8	1.00
					Proposed	30.91		42		8	
				W2	Existing	34.48	1.00	56	1.00	17	1.00
					Proposed	34.48		56		17	
				W3	Existing	36.23	1.00		*North*		*North*
					Proposed	36.23					
				W4	Existing	22.82	0.97		*North*		*North*
					Proposed	22.33					
				W5	Existing	26.11	0.96		*North*		*North*
					Proposed	25.26					
				W6	Existing	22.60	0.99		*North*		*North*
					Proposed	22.42					
				W7	Existing	21.02	0.93		*North*		*North*
					Proposed	19.65					
				W8	Existing	15.39	0.96		*North*		*North*
					Proposed	14.83					
				W9	Existing	13.89	0.98		*North*		*North*
					Proposed	13.63					
				W10	Existing	79.70	0.99	38	1.00	3	1.00
					Proposed	79.67		38		3	

VSC/APSH surrounding results

Floor Ref.	Room Ref.	Property Type	Room Use. (* = Assumed)	Window Ref.		VSC	Pr/Ex	Annual	Pr/Ex	Winter	Pr/Ex
28 Kings Mews											
Basement	R1	Residential	Bedroom	W1	Existing	0.64	1.00		*North*		*North*
					Proposed	0.64					
				W2	Existing	1.29	1.00		*North*		*North*
					Proposed	1.29					
Ground	R1	Residential	LKD	W1	Existing	20.42	1.00	27	1.00	3	1.00
					Proposed	20.42		27		3	
				W2	Existing	20.42	1.00	27	1.00	1	1.00
					Proposed	20.42		27		1	
				W3	Existing	3.19	1.00		*North*		*North*
					Proposed	3.19					
				W4	Existing	3.57	1.00		*North*		*North*
					Proposed	3.57					
First	R1	Residential	Living Room	W1	Existing	28.88	1.00	45	1.00	10	1.00
					Proposed	28.88		45		10	
				W2	Existing	4.86	1.00		*North*		*North*
					Proposed	4.86					
				W3	Existing	5.28	1.00		*North*		*North*
					Proposed	5.28					
Second	R1	Residential	Bedroom	W1	Existing	8.16	1.00		*North*		*North*
					Proposed	8.16					
Third	R1	Residential	Living Room	W1	Existing	32.00	1.00	45	1.00	5	1.00
					Proposed	32.00		45		5	
				W2	Existing	20.64	1.00		*North*		*North*
					Proposed	20.64					
				W3	Existing	16.11	1.00		*North*		*North*
					Proposed	16.11					

Daylight Distribution surrounding results

Floor Ref.	Room Ref.	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex
4 Kings Mews								
Ground	R2	Residential	LKD	Area m2	72.79	39.80	39.80	
				% of room		55%	55%	1.00
First	R1	Residential	Bedroom	Area m2	9.62	8.87	8.87	
				% of room		92%	92%	1.00
	R2	Residential	Bedroom	Area m2	12.55	11.50	11.50	
				% of room		92%	92%	1.00
132-134 Grays Inn Buildings								
First	R1	Residential	LKD	Area m2	37.60	30.77	30.67	
				% of room		82%	82%	0.99
	R2	Residential	Bedroom	Area m2	18.21	18.03	18.02	
				% of room		99%	99%	0.99
Second	R1	Residential	LKD	Area m2	37.60	35.29	33.41	
				% of room		94%	89%	0.94
	R2	Residential	Bedroom	Area m2	18.21	18.13	18.13	
				% of room		100%	100%	1.00
29-30 Kings Mews								
Ground	R1	Residential	Studio	Area m2	50.65	45.58	40.06	
				% of room		90%	79%	0.87
	R2	Residential	Studio	Area m2	36.54	33.81	29.58	
				% of room		93%	81%	0.87
First	R1	Residential	Studio	Area m2	79.50	78.21	76.34	
				% of room		98%	96%	0.97
	R2	Residential	Study	Area m2	13.51	10.90	10.87	
				% of room		81%	80%	0.99
Second	R1	Residential	Commercial Live/Work	Area m2	36.05	35.48	35.11	
				% of room		98%	97%	0.98
	R2	Residential	Bedroom	Area m2	14.41	11.03	11.02	
				% of room		77%	76%	0.99
Third	R1	Residential	LKD	Area m2	89.93	89.02	89.01	
				% of room		99%	99%	0.99
28 Kings Mews								
Basement	R1	Residential	Bedroom	Area m2	17.72	2.87	2.87	
				% of room		16%	16%	1.00
Ground	R1	Residential	LKD	Area m2	51.80	21.03	21.03	
				% of room		41%	41%	1.00
First	R1	Residential	Living Room	Area m2	55.90	41.18	41.18	
				% of room		74%	74%	1.00
Second	R1	Residential	Bedroom	Area m2	13.10	9.25	9.25	
				% of room		71%	71%	1.00
Third	R1	Residential	Living Room	Area m2	26.12	26.11	26.11	
				% of room		100%	100%	1.00

ADF results

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Below Working Plane Factor	ADF Existing	ADF Proposed	Req'd Value	Pr/Ex
				29-30 Kings Mews					
Ground	R1	Residential	Studio	W1-L	0.15	0.03	0.03		
				W1-U	1.00	1.10	1.10		
				W4	1.00	0.07	0.06		
				W5	1.00	0.05	0.03		
				W6	1.00	0.07	0.06		
				W7	1.00	0.06	0.05		
						1.38	1.33	2.00	0.96
Ground	R2	Residential	Studio	W2-L	0.15	0.03	0.03		
				W2-U	1.00	1.37	1.37		
				W3	1.00	0.29	0.23		
						1.69	1.63	2.00	0.96
First	R1	Residential	Studio	W1	1.00	0.88	0.88		
				W2	1.00	0.27	0.27		
				W3	1.00	0.97	0.97		
				W4	1.00	0.23	0.21		
						2.35	2.33	2.00	0.99
First	R2	Residential	Study	W5-L	0.15	0.03	0.03		
				W5-U	1.00	0.53	0.53		
				W6-L	0.15	0.00	0.00		
				W6-U	1.00	0.09	0.09		
				W7-L	0.15	0.00	0.00		
				W7-U	1.00	0.04	0.04		
						0.69	0.69	1.50	1.00
Second	R1	Residential	Commercial Live/Work	W1	1.00	1.59	1.59		
				W2	1.00	0.53	0.50		
						2.11	2.08	1.50	0.99
Second	R2	Residential	Bedroom	W3-L	0.15	0.03	0.03		
				W3-U	1.00	0.46	0.46		
				W4-L	0.15	0.00	0.00		
				W4-U	1.00	0.10	0.10		
				W5-L	0.15	0.00	0.00		
				W5-U	1.00	0.05	0.05		
						0.65	0.65	1.00	1.00
Third	R1	Residential	LKD	W1-L	0.15	0.06	0.06		
				W1-U	1.00	0.73	0.73		
				W2-L	0.15	0.06	0.06		
				W2-U	1.00	0.80	0.80		
				W3	1.00	0.01	0.01		
				W4	1.00	0.07	0.07		
				W5	1.00	0.39	0.38		
				W6-L	0.15	0.01	0.01		
				W6-U	1.00	0.14	0.14		
				W7-L	0.15	0.00	0.00		
				W7-U	1.00	0.03	0.03		
				W8-L	0.15	0.00	0.00		
				W8-U	1.00	0.02	0.02		
				W9	1.00	0.00	0.00		
				W10	1.00	0.62	0.62		
						2.94	2.93	2.00	1.00