DAYLIGHT AND SUNLIGHT REPORT

43 GRAYS INN ROAD

Prepared by: GIA

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CONTENTS PAGE

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AUTHOR FOR AND BEHALF OF GIA:	Barry Hood
AUTHORISATION FOR GIA :	.....

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1.0 INSTRUCTIONS

You have instructed this Practice to provide you with a technical survey based analysis in respect of the daylight and sunlight implications of the proposed scheme at the 43 Gray's Inn Road site to the surrounding properties and the daylight and sunlight amenity within the proposed accommodation.

2.0 INTRODUCTION

DAYLIGHT AND SUNLIGHT

In considering the development potential and the quality of amenity for the surrounding properties once the scheme has been implemented, the analysis is based upon the Building Research Establishment (BRE) guidelines ***'Site Layout Planning for Daylight and Sunlight'*** which provides the criteria and methodology for calculation in connection with daylight and sunlight. This handbook is the primary authority for this matter and therefore it is not only this Practice, but also the Local Authority, who will be considering your application by reference to these guidelines.

The BRE guidelines provide three main methods of calculation for daylight. The first is known as the Vertical Sky Component (VSC) method which considers the potential for daylight by calculating the angle of vertical sky at the centre of each of the windows serving the residential buildings which look towards the site. This is a more simplistic approach and it could be considered as a "rule of thumb" to highlight whether there are any potential concerns to the amenity serving a particular property.

The second method is the No Sky Line or Daylight Distribution method.

This simply assesses the change in position of the No Sky Line between the existing and proposed situations. It does take into account the number and size of windows to a room, but still does not give any qualitative or quantitative assessment of the light in the room, only where sky can or cannot be seen.

The third method of calculation is the Average Daylight Factor (ADF). This is a more detailed and thus more accurate method which considers not only the amount of sky visibility on the vertical face of the window, but also the window size, room size and room use.

Where dimensions of the room to be assessed are available this is the best method of assessment, but even where they are not, it provides a very informative result. It gives guidance as to the qualitative and quantitative change in daylight and is related to the British Standard BS 8206 Part II.

In relation to sunlight, the criteria given calculates the annual probable sunlight hours (APSH) which considers the amount of sun available in both the summer and winter for each given window which faces within 90° of due south. Summer is considered to be the six months between March 21st and September 21st and winter the remaining months.

3.0 SOURCES OF INFORMATION

GIA

Partial Site Survey
Site Photographs
Aerial Photographs
OS Map

VALUATION OFFICE AGENCY

Property Usage

AWW ARCHITECTURE

Proposed Scheme Dated 14th November 2011
Drawing Nos: 2957-2200-2208, 1001, 2210-2218

LONDON BOROUGH OF CAMDEN TOWN AND PLANNING

Proposed Drawings for 5 Kings Mews

PURCELL MILLER TRITTON

Proposed Drawings for 5 King's Mews

HEBERT PERCY AND PARKER ARCHITECTS

Proposed Drawings for 7 & 8 King's Mews

4.0 ASSUMPTIONS

1. A partial site survey has been made available, however, due to the complexity of the site and difficulty in gaining access, this does not cover all neighbouring elevations completely and therefore it has been necessary to indicatively model, from photographs, the windows which were beyond the scope of the survey. This is satisfactory where there is a need to understand the light sensitivity of rooms served by these windows. However, more accurate information should be sought if this indicative analysis indicates that the rooms are in fact vulnerable to small changes in the light.

2. We have not sought or obtained access to any of the adjoining properties and therefore have made reasonable assumptions as to the internal layouts of the rooms behind the fenestration. This is normal practice where access to adjoining properties is undesirable in terms of development confidentiality. Unless the building form dictates otherwise, we assume a standard 4.2m deep room (14ft) for residential properties and the 6m (20ft) deep from for commercial properties.

3. Floor levels have been assumed for adjoining properties as access has not been obtained. This dictates the level of the working plane which is the point at which rights of light assessments are carried out. It is also relevant for the No Sky Line and ADF daylight assessments.

4. We have made best estimates as to the uses which are carried out legally within the adjoining properties in terms of commercial and residential. We have estimated these from external observation and the uses are identified in the report below.

5.0 THE SITE

The site comprises 43 Grays Inn Road which is currently a 4 storey commercial property.

Our understanding of the existing building on the site is depicted in drawings 6349/01, 02 and 03 which can be found within Appendix 2.

6.0 THE PROPOSAL

The proposed scheme involves an increase in the massing by 1 extra storey which is set back on the Grays Inn Road elevation.

Our understanding of the AWW Architecture proposal is depicted in drawings 6349/04, 05 and 06 which can be found within Appendix 2.

7.0 SURROUNDING PROPERTIES

The majority of neighbouring buildings are commercial in usage or light industrial warehouses and have been omitted from technical analysis due to their expectation for natural light and reliance upon artificial light. There are a number of residential properties in the vicinity and the surrounding properties material for consideration are:

51 GRAY'S INN ROAD
49 GRAY'S INN ROAD
47 GRAY'S INN ROAD
41 GRAY'S INN ROAD
39 GRAY'S INN ROAD
37 GRAY'S INN ROAD
35 GRAY'S INN ROAD
4 – 10 THEOBALDS ROAD
12 THEOBALDS ROAD
1 KING'S MEWS
2 – 4 KING'S MEWS
5 KING'S MEWS
7 – 8 KING'S MEWS
9 – 11 KING'S MEWS
12 – 13 KING'S MEWS
144 – 148 GRAY'S INN ROAD

To deal with these properties in turn, I will begin in the north and move clockwise.

51 GRAY'S INN ROAD

It is out understanding that this property at first floor and above, residential usage and enjoys a rear terrace to the west of the building which contains a glass conservatory.

In daylight terms and for planning purposes, this property will experience no alteration in its daylight or sunlight and all windows comply with the BRE Guidelines. It will therefore be BRE compliant for daylight and sunlight matters.

49 GRAY'S INN ROAD

All rooms relating to residential accommodation will experience no alteration in their daylight and sunlight and all windows comply with the BRE Guidelines in relation to sunlight. Therefore this property will be BRE compliant in daylight and sunlight terms.

47 GRAY'S INN ROAD

It is our understanding that this property at first floor and above relates to residential usage, the rear elevation contains windows.

There is either no change to the daylight enjoyed by this property or a tiny and imperceptible alteration which is entirely BRE compliant. There is no change in sunlight.

This property is entirely BRE compliant.

41 GRAY'S INN ROAD

It is our understanding that this property at first floor and above is in residential usage, the rear elevation contains windows.

It has been possible to obtain floor layout plans for 41 Gray's Inn Road which confirms that only one of the windows which face the development site is considered material for consideration in daylight and sunlight terms. I.e. the majority of windows serve circulation space, bathrooms or WC's. The one room material for consideration serves a kitchen, and the daylight to this room is not altered beyond the level considered acceptable by the BRE Guidelines. This building will therefore be BRE compliant in daylight terms.

The same holds true for Sunlight with the one window material for consideration serving a kitchen and this room will retain an APSH of 47% for the whole year, against a target value of 25% as set down in the BRE Guidelines.

This property will therefore be BRE compliant in terms of daylight and sunlight.

39 GRAY'S INN ROAD

It is our understanding that this property at first floor and above is in residential usage, the rear elevation contains windows.

It has been possible to obtain floor layout plans for the residential floors of 39 Gray's Inn Road which confirm that only two of the windows which face the development site are considered material for consideration in daylight and sunlight terms.

All windows and rooms material for consideration will comfortably satisfy BRE Guidance and are either entirely unaffected for barely affected by the scheme proposal in both daylight and sunlight terms.

This property will be BRE compliant in terms of daylight and sunlight.

37 GRAY'S INN ROAD

It is our understanding that this property at first floor and above is in residential usage, the rear elevation contains windows.

The property is barely affected in daylight and sunlight terms and entirely BRE compliant.

35 GRAY'S INN ROAD

It is our understanding that this property at first floor and above is in residential usage, the rear elevation contains windows.

The property is barely affected in daylight and sunlight terms and entirely BRE compliant.

4 – 10 THEOBALDS ROAD

It is our understanding that this property at first floor and above relates to residential usage, the rear elevation contains windows.

This property lies to the south of the site and consists of a lightwell punctuated by three columns of windows. Whilst the measured site survey did not extend this far due to restrictions in terms of visibility, it has been possible to understand the location of windows in this area and room usage, based upon a site inspection from a vantage point on a neighbouring adjacent terrace and therefore create a detailed indicative model.

This property is entirely unaffected in daylight and sunlight terms and is therefore BRE compliant.

12 THEOBALDS ROAD

The Local Planning Authority (LPA) is unlikely to be concerned with daylight and sunlight matters and commercial buildings, thus we have not assessed this building.

1 KING'S MEWS

The Local Planning Authority (LPA) is unlikely to be concerned with daylight and sunlight matters and commercial buildings, thus we have not assessed this building.

2 – 4 KING'S MEWS

The property is barely affected in daylight terms and entirely BRE compliant.

This elevation does not face within 90° of due south and is therefore not material for consideration in sunlight terms.

5 KING'S MEWS

The property is barely affected in daylight terms and entirely BRE compliant.

None of the windows within this property face within 90° of due south and therefore are necessary to consider in sunlight terms.

7 – 8 KING'S MEWS

The property is barely affected in daylight and sunlight terms and entirely BRE compliant.

9 – 11 KING'S MEWS

The rear of this property appears to be in commercial usage and is therefore not material for consideration in BRE terms for daylight and sunlight compliance.

12 – 13 KING'S MEWS

At first floor, there are rooms within this property which could potentially be within residential usage, though it is more likely that they are actually ancillary to the commercial use below. However, for sake of completeness, we have considered these in daylight and sunlight terms. Both rooms within this property will comply with the BRE Guidelines in terms of daylight.

144 – 48 GRAY'S INN ROAD – TEST WINDOWS

We have inserted test windows in this block for the sake of completeness.

At ground floor, this mansion block is in commercial/retail usage, with the area below the test windows in use by the Sevenoaks Sound and Vision retail company. The floors above are divided into residential apartments and we have placed test windows within these properties to ensure that daylight and sunlight compliance is possible.

In relation to daylight, all rooms are able to meet and satisfy the daylight criteria as stipulated by the BRE Guidelines and all are able to satisfy the sunlight criteria too. This building will therefore continue to be BRE complaint, notwithstanding the proposed scheme being constructed.

8.0 CONCLUSIONS

The proposed scheme implies universal BRE compliance in daylight and sunlight terms for all neighbouring residential properties. The majority of buildings are entirely unaffected and where there is some small change in daylight this will not be perceptible to the occupier.

Appendix 1

Principles of Daylight and Sunlight

PRINCIPLES OF DAYLIGHT AND SUNLIGHT

BACKGROUND

The quality of amenity for buildings and open spaces is increasingly becoming the subject of concern and attention for many interested parties.

Historically the Department of Environment provided guidance of these issues and, in this country, this role has now been taken on by the Building Research Establishment (BRE), the British Standards Institution (BSI) and the Chartered Institute of Building Services Engineers (CIBSE). Fortunately they have collaborated in many areas to provide as much unified advice as possible in these areas.

Further emphasis has been placed on these issues through the European Directive that require Environmental Impact Assessments (EIA's) for large projects. Part of these assessments include the consideration of the micro-climate around and within a proposal. The EIA requires a developer to advise upon, amongst other matters, the quality of and impact to daylight, sunlight, overshadowing, solar glare and light pollution.

It is also clear, particularly through either adopted or emerging Unitary Development Plans (UDP's), that local Authorities take this matter far more seriously than they previously did. There are many instances of planning applications being refused due to impact on daylight and sunlight to neighbouring properties and proportionately more of these refusals are appealed by applicants.

Where developers are seeking to maximise their development value, it is often in the area of daylight and sunlight issues that they may seek to 'push the boundaries'. Local Authorities vary in their attitude of how flexible they can be with worsening the impact on the amenity enjoyed by neighbouring owners. In city centres, where there is high density, it can be the subject of hot debate as to whether further loss of amenity is material or not. There are many factors that need to be taken into account and therefore each case has to be considered on its own merits. Clearly, though, there are governing principles which direct and inform on the approach that is taken.

These principles are effectively embodied within the UDP's and the guidance they expressly rely upon. For example, in central London, practically all of the Local Authorities expressly state they will not permit or encourage developments which create a material impact to neighbouring buildings or amenity areas. Often the basis on what is constituted as 'material' will be derived specifically from the BRE Guidelines. The guidelines were produced in 1991, as a direct commission from the Department of the Environment, and entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'.

These guidelines are normally the only official document used by local Authorities and consequently they are referred to extensively by designers, consultants and planners. Whilst they are expressly not mandatory and state that they should not be used as an instrument of planning policy, they are heavily relied upon as they advise on the approach, methodology evaluation of impact in daylight and sunlight matters.

THE BRE GUIDELINES

The BRE give criteria and methods for calculating daylight, and sunlight and to some degree overshadowing and through that approach define what they consider as a material impact. As these different methods of calculation vary in their depth of analysis, it is often arguable as to whether the BRE definition of 'material' is applicable in all locations and furthermore if it holds under the different methods of calculation.

As the majority of the controversial daylight and sunlight issues occur within city centres these explanatory notes focus on the relevant criteria and parts of the Handbook which are applicable in such locations.

In the Introduction of 'Site Layout Planning for Daylight and Sunlight' it states that:-

> *"The guide is intended for building designers and their clients, consultants and planning officials. 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 (see Section 5). In special circumstances the developer or Planning Authority may wish to use different target values. For example, in an historic city centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".*

Again, the second paragraph of Chapter 2.2 of the document 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'.*

The reason for including these statements in the Report is to appreciate that when quoting the criteria suggested by the BRE, they should not necessarily be considered as appropriate. However, rather than suggest alternative values, consultants in this field often remind local Authorities that this approach is supportable and thus flexibility applied.

MEASUREMENT AND CRITERIA FOR DAYLIGHT & SUNLIGHT

The BRE handbook provides two main methods of measurement for calculating daylight which we use for the assessment in our Reports. In addition, in conjunction with the BSI and CIBSE it provides a further method in Appendix C of the Handbook. In relation to sunlight only one method is offered for calculating sunlight availability for buildings. There is an overshadowing test offered in connection with open spaces.

DAYLIGHT

In the first instance, if a proposed development falls beneath a 25° angle taken from a point two metres above ground level, then the BRE say that no further analysis is required as there will be adequate skylight (i.e. sky visibility) availability.

The three methods for calculating daylight are as follows:

(a) Vertical Sky Component (VSC)

(b) No Sky Contours (NSC)

(c) Average Daylight Factor (ADF)

Each are briefly described below.

(a) Vertical Sky Component

Methodology

This is defined in the Handbook as:-

"Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE Standard Overcast Sky, to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky."

"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".

The ratio referred to in the above definition is the percentage of the total unobstructed view that is available, once obstructions, in the form of buildings (trees are excluded) are placed in front of the point of view. The view is always taken from the centre of the outward face of a window.

This statement means, in practice, that if one had a totally unobstructed view of the sky, looking in a single direction, then just under 40% of the complete hemisphere would be visible.

The measurement of this vertical sky component is undertaken using two indicators, namely a skylight indicator and a transparent direction finder. Alternatively a further method of measuring the vertical sky component, which is easier to understand both in concept and analysis, is often more precise and can deal with more complex instructions, is that of the Waldram diagram.

The point of reference is the same as for the skylight indicator. Effectively a snap shot is taken from that point of the sky in front of the window, together with all the relevant obstructions to it, i.e. the buildings.

An unobstructed sky from that point of reference would give a vertical sky component of 39.6%, corresponding to 50% of the hemisphere, and therefore the purpose of the diagram is to discover how much sky remains once obstructions exist in front of that point.

The diagram comes on an A4 sheet (landscape) and this sheet represents the unobstructed sky, which in one direction equates to a vertical sky component of 39.6%. The obstructions in front of a point of reference are then plotted onto the diagram and the resultant area remaining is proportional to the vertical sky component from that point.

Criteria

The BRE Handbook provides criteria for:

(a) New Development

(b) Existing Buildings

A summary of the criteria for each of these elements is given and these are repeated below:-

New Development

Summary

In general, a building will retain the potential for good interior diffuse daylighting provided that on all its main faces:-

(a) no obstruction, measured in a vertical section perpendicular to the main face, from a point 2m above ground level, subtends an angle of more than 25 degrees to the horizontal;

(b) If (a) is not satisfied, then all points on the main face on a line 2m above ground level are within 4m (measured sideways) of a point which has a vertical sky component of 27% or more.

Existing Buildings

Summary

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

(a) the vertical sky component measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value;

or

(b) 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 VSC calculation has, like the other two methods, both advantages and disadvantages. In fact they are tied together. It is a quick simple test which looks to give an early indication of the potential for light. However, it does not, in any fashion, indicate the quality of actual light within a space. It does not take into account the window size, the room size or room use. It helps by indicating that if there is an appreciable amount of sky visible from a given point there will be a reasonable potential for daylighting.

(b) No Sky Contours

This is the part (b) of the alternative method of analysis which is given under the Vertical Sky Component heading in this Appendix. It is similar to the VSC approach in that a reduction of 0.8 times in the area of sky visibility at the working plane may be deemed to adversely affect daylight. It is however, very dependent upon knowing the actual room layouts or having a reasonable understanding of the likely layouts. The contours are also known as daylight distribution contours. They assist in helping to understand the way the daylight is distributed within a room and the comparisons of existing and limitations of proposed circumstances within neighbouring properties. Like the VSC method, it relates to the amount of visible sky but does not consider the room use in its criteria, it is simply a test to assess the change in position of the No Sky Line, between the existing and proposed situation. It does take into account the number and size of windows to a room, but does not give any quantative or qualative assessment of the light in the rooms, only where sky can or cannot be seen.

(c) Average Daylight Factor

This is defined in Appendix H of the BRE Document as:

"*Ratio of total daylight flux incident on the working plane, expressed as a percentage of the outdoor illuminance on a horizontal plane due to an unobstructed CIE Standard Overcast Sky.*"

This factor considers interior daylighting to a room and therefore is a more accurate indication of available light in a given room, if details of the room size and use are available.

Criteria

The British Standard, BS8206 Part II gives the following recommendations for the average daylight factor (ADF) in dwellings.

The BRE Handbook provides the formula for calculating the average daylight factor. If the necessary information can be obtained to use the formula then this criteria would be more useful.

Room	**Percentage**
Kitchen	2%
Living Rooms	1.5%
Bedrooms	1%

It is sometimes questioned whether the use of the ADF is valid when assessing the impact on neighbouring buildings. Firstly, it is often the case that room layouts and uses may not have been established with certainty. Additionally this method is not cited in the main body of text in the BRE Guidelines but only in Appendix C of that document. It is however, the principal method used by both the British Standard and CIBSE in their detailed daylight publications with which the BRE guide recommends that it should be read.

The counter-argument to this view is that whilst room uses and layouts may be not definitely established, reasonable assumptions can easily be made to give sufficient understanding of the likely quality of light. Building types and layouts for certain buildings, particularly residential, are often similar. In these circumstances reasonable conclusions can be drawn as to whether a particular room will have sufficient light against the British Standards. In addition, the final result is less sensitive to changes in the room layout that the No Sky Contour method as it is an average and this element represents only one of the input factors. It is in cases where rooms sizes have been assumed a more reliable indicator than the No Sky Line method.

Clearly if a room which is being designed for a new development is deemed to have sufficient light against the British Standards, then it should equally follow for a room assessed in a neighbouring existing building.

The average daylight factor considers the light within the room behind the fenestration which serves it. The latter is therefore likely to be more accurate because it takes into account the following:-

a) All the windows serving the room in question.

b) The room use.

c) The size and layout of the room.

d) The finishes of the room surfaces.

SUMMARY

The VSC (which forms part of the ADF formula) is helpful as an initial first guide, especially where access to the rooms in question is not available. Where the room layouts and uses are established or can be reasonably estimated we consider it appropriate to analyse the average daylight factor as well as the vertical sky component.

SUNLIGHT

(a) Annual Probable Sunlight Hours (APSH) method

Sunlight is measured in the Handbook in a similar manner to the first method given for measuring the VSC.

A separate indicator is used which contains 100 spots, each representing 1% of annual probable sunlight hours.

The BRE calculated that where no obstructions exist, the total annual probable sunlight hours would amount to 1486. Therefore, each dot on the indicator equates to 14.86 hours of the total annual probable sunlight. Again, to use this indicator the obstructions need to be scaled down and overlaid onto the sunlight indicator.

Those spots which remain uncovered by the scaled obstructions are counted and this gives the percentage of total annual probable sunlight hours for that particular reference point. Again, like the VSC, the reference point is taken to be the centre of the window.

Criteria

Again, the BRE Handbook gives criteria for:

(a) New Development

(b) Existing Buildings

A summary is given in the handbook on page 12 and this is as follows:-

New Development

Summary

In general, a dwelling or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided that:

(a) at least one main window wall faces within 90 degrees of due south;

and

(b) on this window wall, all points on a line 2m above ground level are within 4m (measured sideways) of a point which receives at least a quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months, between 21 September and 21 March.

Existing Buildings

Summary

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 a point at the centre of the window, in the plane of the inner window wall, receives in the year less than one quarter of annual probable sunlight hours including at least 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.8 times its former sunlight hours during either period.

It will be noted that the BRE clearly separate summer from winter and indicate that a 20% reduction for either may be material. The Handbook also states that *"To find out whether an existing building still receives enough sunlight, the British Standard can be used. It is suggested that all main living rooms of dwellings and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun ……..... The British Standard recommends that a 'window reference point', at the centre of each window on the plane of the inside surface of the wall, should be used for the calculations"* and thus this practice gives greater consideration to the effect on the main window of a living room.

(b) Area of Permanent Shadow

The BRE Handbook, 'Site Layout Planning for Daylight and Sunlight' also provides criteria for open spaces.

In particular it gives guidance for calculating any areas of open space that may be in permanent shadow on 21 March. There is no criteria for the overshadowing of buildings.

In summary the BRE document states the following:-

"It is suggested that, for it to appear adequately sunlit throughout the year, no more than two-fifths and preferably no more than a quarter of any garden or amenity area should be prevented by buildings from

receiving any sun at all on 21 March. If, as a result of new development, an existing garden or amenity area does not meet these guidelines, and the area which can receive some sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable".

In relation to general overshadowing we often provide, where appropriate, an hourly record for existing and proposed situations, the effect of overshadowing on December 21st, March 21st and June 21st.

For open spaces the permanent shadow criteria is naturally adopted but this offers limited understanding of how a space will feel or appear generally.

CITY CENTRES

The introduction of the BRE document gives the example of *'historic city centres'* being a case where there is the need for flexibility and altering the target values for criteria when appropriate, to reflect other site and layout constraints.

To explain why it is appropriate to alter these values, one needs to go further into the BRE Handbook to examine how the criteria for the vertical sky component criteria was determined and the reason therefore for varying the criteria in City Centres.

Appendix G of the document is dedicated to the use of alternative values and, it also demonstrates the manner in which the criteria for skylight was determined for the Summary given above, i.e. the need for 27% vertical sky component for adequate daylighting.

This figure of 27% was achieved in the following manner:

A theoretical road was created with two storey terraced houses upon either side, approximately twelve metres apart. The houses have windows at ground and first floor level, and a pitched roof with a central ridge.

Thereafter, a reference point was taken at the centre of a ground floor window of one of the properties and a line was drawn from this point to the central ridge of the property on the other side of the road. The angle of this line equated to 25 degrees (the 25 degrees referred to in the summaries given with reference to the criteria for skylight).

This 25 degrees line obstructs 13% of the totally unobstructed sky available, leaving a resultant figure of 27% which is deemed to give adequate daylighting. This figure of 27% is the recommended criteria referred to earlier in this report. It will be readily appreciated that in a City Centre, this kind of urban form is unlikely and is

impractical. It would therefore be inappropriate to consider values for two storey terraced housing in a City Centre.

It is therefore sometimes necessary to apply different target criteria or at least acknowledge that the recommendations in the BRE cannot be achieved.

In addition, it is often the case that residential buildings within city centres are served by balconies. Balconies restrict lighting levels even more and thus if they were to be rigidly taken into account, a neighbouring proposal would be artificially and inappropriately constrained. This view is supported by the BRE and is equally another reason for flexible and sensible interpretation of the guidelines.

Appendix 2

Existing and Proposed Drawings

Sources of Information

GIA
Partial Site Survey
SIte Photographs

PURCELL MILLER TRITTON
Proposal Drawings for 5 King's Mews

HEBER PERCY & PARKER ARCHITECTS
Proposal Drawings for 7&8 King's Mews

BRANSON COATES ARCHITECTURE
2-4 Kings Mews Plans

AWW ARCHITECTURE
43 Gray's Inn Road scheme dated 14-11-11
Dwgs Nos. 2957-2200-2208, 1001, 2210-2218

Notes

Existing Development
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project
43 GRAY'S INN ROAD
LONDON WC1

Title
SITE PLAN
EXISTING BUILDINGS

Scale
1:500 @A3

Date
DEC 11

Drawn
SL

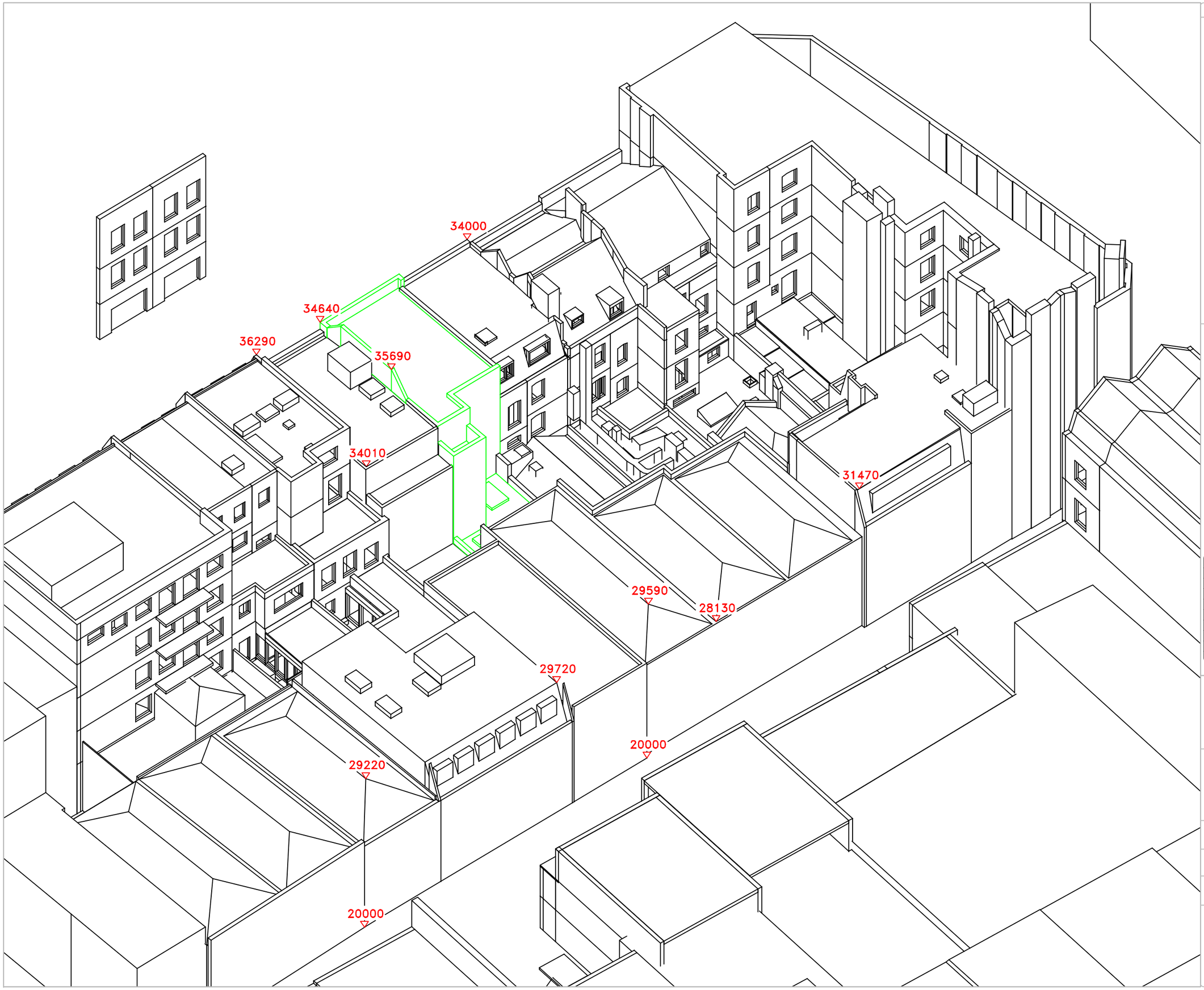
Checked
-

Drawing No.
6349/1

Rel No.
1

Revision
A

The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com



Sources of Information

GIA
Partial Site Survey
Site Photographs

PURCELL MILLER TRITTON
Proposal Drawings for 5 King's Mews

HEBER PERCY & PARKER ARCHITECTS
Proposal Drawings for 7&8 King's Mews

BRANSON COATES ARCHITECTURE
2-4 Kings Mews Plans

AWW ARCHITECTURE
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Notes

Existing Development
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

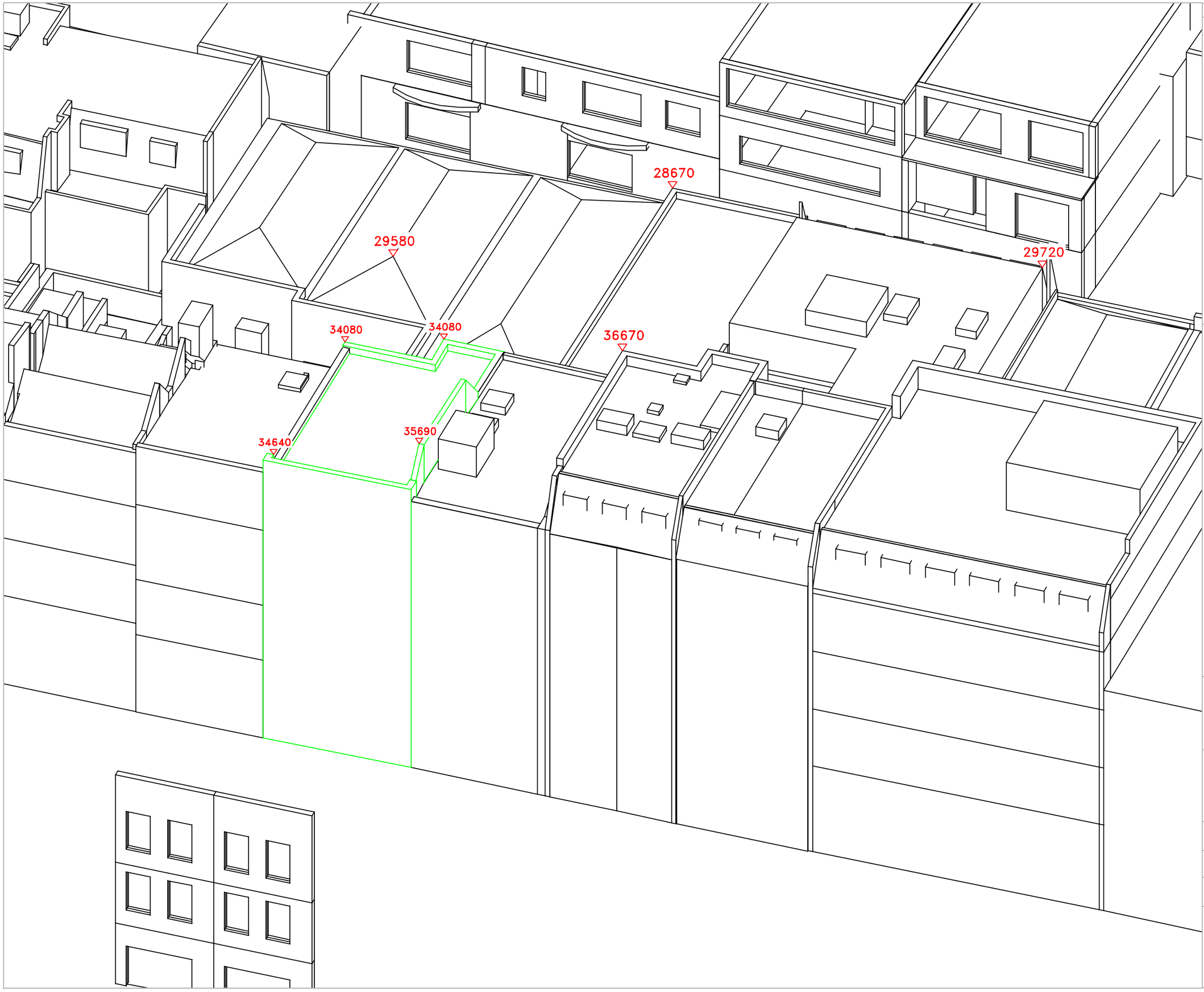
Project
43 GRAY'S INN ROAD
LONDON WC1

Title
3D VIEW
EXISTING BUILDINGS

Scale		Date
N/S	@A3	DEC 11
Drawn		Checked
SL		-

Drawing No.	Rel No.	Revision
6349/2	1	A

gia
The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com



Sources of Information

GIA
Partial Site Survey
Site Photographs

PURCELL MILLER TRITTON
Proposal Drawings for 5 King's Mews

HEBER PERCY & PARKER ARCHITECTS
Proposal Drawings for 7&8 King's Mews

BRANSON COATES ARCHITECTURE
2-4 Kings Mews Plans

AWW ARCHITECTURE
43 Gray's Inn Road scheme dated 14-11-11
Dwgs Nos. 2957-2200-2208, 1001, 2210-2218

Notes

Existing Development
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project
43 GRAY'S INN ROAD
LONDON WC1

Title
3D VIEW
EXISTING BUILDINGS

Scale N/S @A3
Date DEC 11
Drawn SL
Checked -
Drawing No. 6349/3
Rel No. 1
Revision A

gia
The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com

PROPOSED

Sources of Information

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43 Gray's Inn Road scheme dated 14-11-11
Dwgs Nos. 2957-2200-2208, 1001, 2210-2218

Notes

Proposed scheme

Rev	Date	Description	Initials
A		Initial Issue	

Project

43 GRAY'S INN ROAD
LONDON WC1

Title

SITE PLAN
PROPOSED SCHEME 14-11-11

Scale
1:500 @A3

Date
DEC 11

Drawn
SL

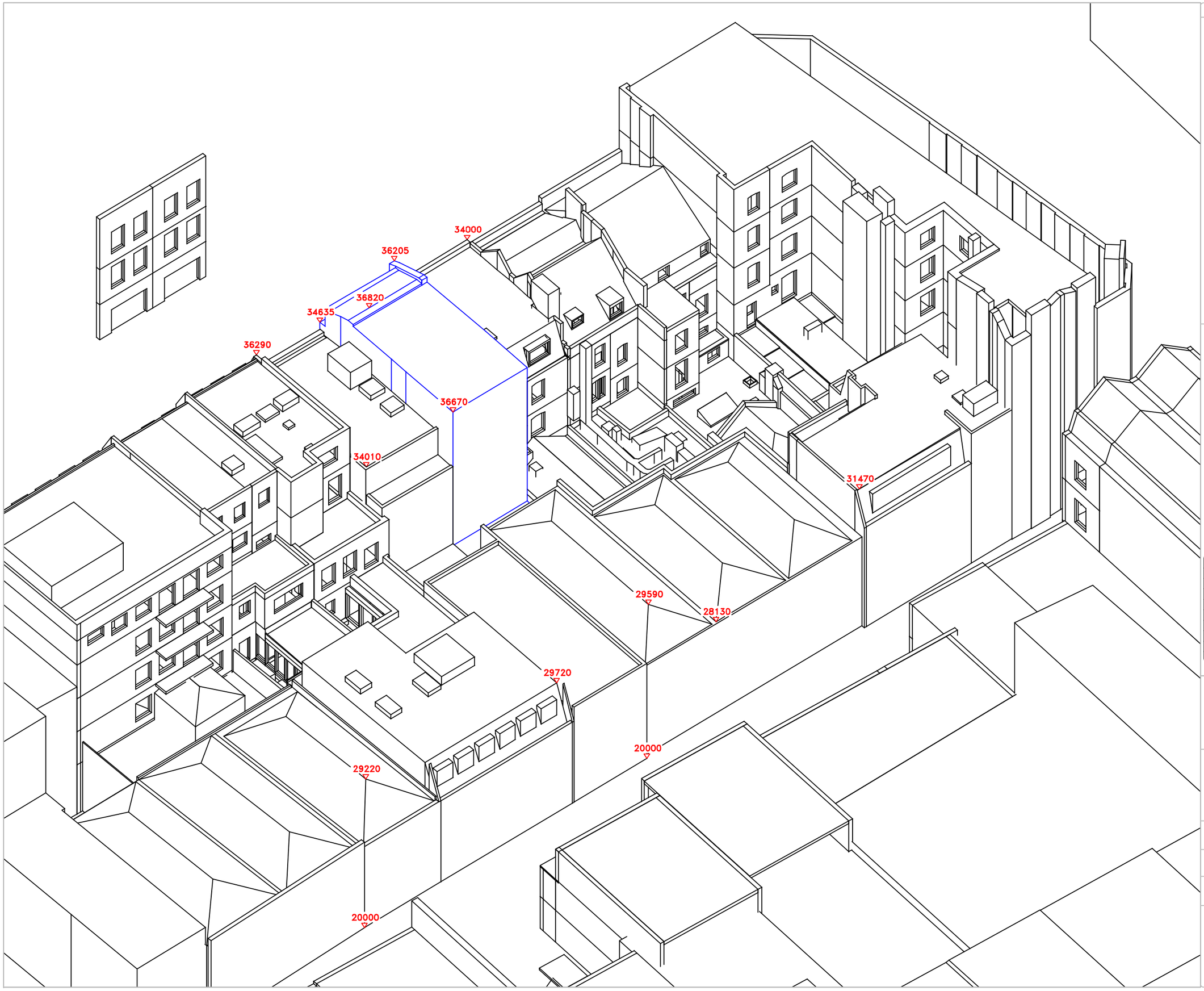
Checked
-

Drawing No.
6349/4

Rel No.
1

Revision
A

gia
The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com



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2-4 Kings Mews Plans

AWW ARCHITECTURE
43 Gray's Inn Road scheme dated 14-11-11
Dwgs Nos. 2957-2200-2208, 1001, 2210-2218

Notes

Proposed scheme

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project

43 GRAY'S INN ROAD
LONDON WC1

Title

3D VIEW
PROPOSED SCHEME 14-11-11

Scale: N/S @A3
Date: DEC 11
Drawn: SL
Checked: -
Drawing No.: 6349/5
Rel No.: 1
Revision: A

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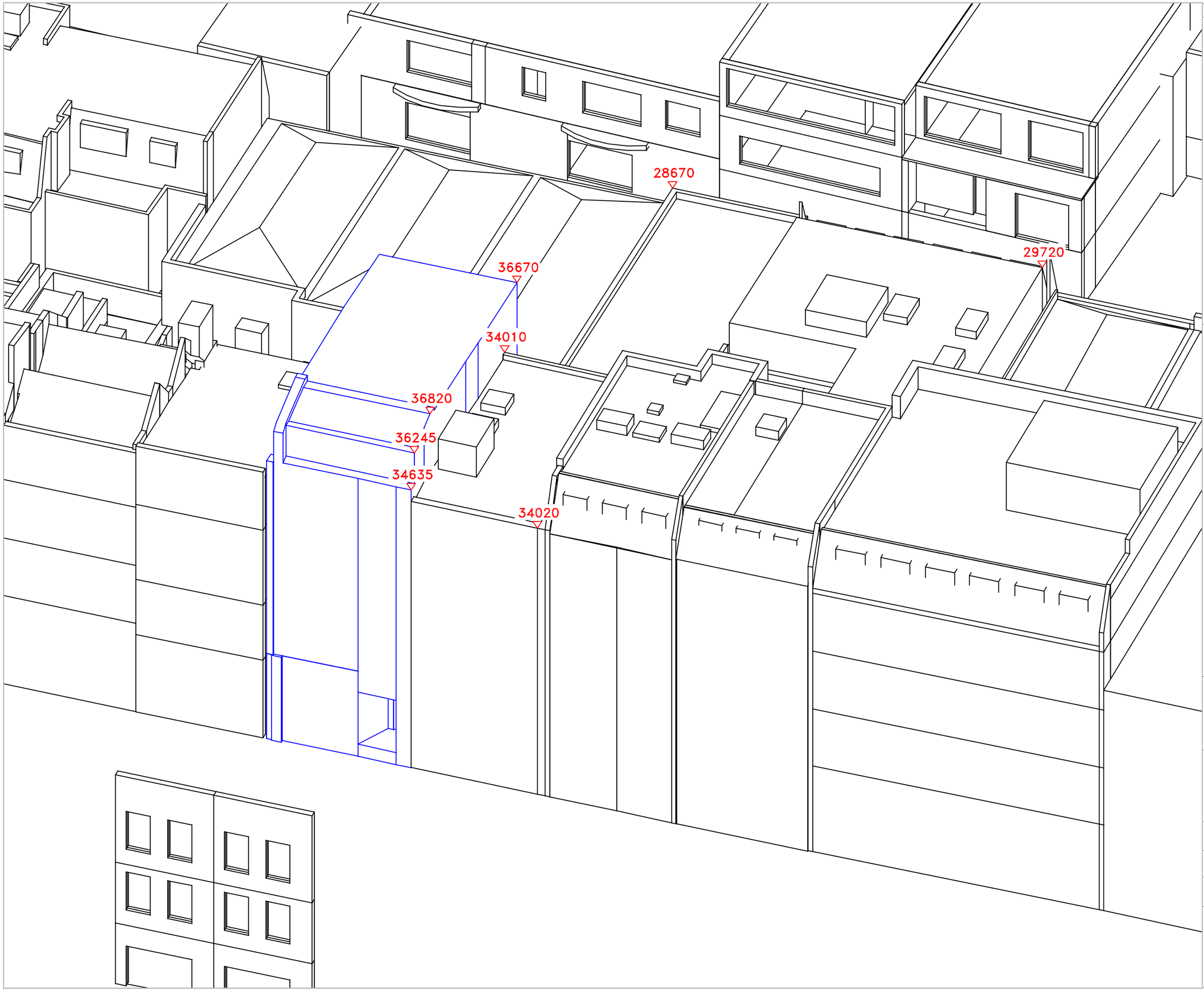
The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com



Sources of Information

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Proposal Drawings for 7&8 King's Mews

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2-4 Kings Mews Plans

AWW ARCHITECTURE
43 Gray's Inn Road scheme dated 14-11-11
Dwgs Nos. 2957-2200-2208, 1001, 2210-2218

Notes

Proposed scheme

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project

43 GRAY'S INN ROAD
LONDON WC1

Title

3D VIEW
PROPOSED SCHEME 14-11-11

Scale		Date
N/S	@A3	DEC 11
Drawn		Checked
SL		-

Drawing No.	Rel No.	Revision
6349/6	1	A

gia
The Whitehouse
Belvedere Road
London SE1 8GA
t 020 7202 1400
f 020 7202 1401
mail@gia.uk.com
www.gia.uk.com

Appendix 3

Daylight and Sunlight Tables of Results

VERTICAL SKY COMPONENT (VSC) & AVERAGE DAYLIGHT FACTOR (ADF)

		Vertical Sky Component							Average Daylight Factor					
									Existing		Proposed			
Room	Window	Existing	Proposed	Loss	%	Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
51 GRAY'S INN ROAD						**51 GRAY'S INN ROAD**								
R1/11	**W1/11**	26.25	26.25	0.00	0.00	**R1/11**	**W1/11**		1.49	1.49	1.49	1.49	0.00	0.00
R2/11	**W2/11**	22.89	22.89	0.00	0.00	**R2/11**	**W2/11**		1.33	1.33	1.33	1.33	0.00	0.00
R1/12	**W1/12**	33.44	33.44	0.00	0.00	**R1/12**	**W1/12**		1.76		1.76			
R1/12	**W2/12**	26.78	26.78	0.00	0.00	**R1/12**	**W2/12**		1.47	3.23	1.47	3.23	0.00	0.00
R2/12	**W3/12**	29.04	29.04	0.00	0.00	**R2/12**	**W3/12**		2.11		2.11			
R2/12	**W4/12**	33.39	33.39	0.00	0.00	**R2/12**	**W4/12**		1.74	3.85	1.74	3.85	0.00	0.00
R1/13	**W1/13**	35.53	35.53	0.00	0.00	**R1/13**	**W1/13**		1.81		1.81			
R1/13	**W2/13**	28.58	28.58	0.00	0.00	**R1/13**	**W2/13**		1.49	3.30	1.49	3.30	0.00	0.00
R2/13	**W3/13**	30.91	30.90	0.01	0.03	**R2/13**	**W3/13**		2.21		2.21			
R2/13	**W4/13**	35.51	35.51	0.00	0.00	**R2/13**	**W4/13**		1.76	3.97	1.76	3.97	0.00	0.00
R1/14	**W1/14**	38.78	38.78	0.00	0.00	**R1/14**	**W1/14**		0.84		0.84			
R1/14	**W2/14**	38.70	38.70	0.00	0.00	**R1/14**	**W2/14**		1.27	2.11	1.27	2.11	0.00	0.00
R2/14	**W3/14**	38.71	38.71	0.00	0.00	**R2/14**	**W3/14**		1.34		1.34			
R2/14	**W4/14**	38.53	38.53	0.00	0.00	**R2/14**	**W4/14**		2.39	3.74	2.39	3.74	0.00	0.00
R3/14	**W5/14**	38.50	38.50	0.00	0.00	**R3/14**	**W5/14**		2.34		2.34			
R3/14	**W6/14**	38.65	38.65	0.00	0.00	**R3/14**	**W6/14**		1.31	3.64	1.31	3.64	0.00	0.00
49 GRAY'S INN ROAD						**49 GRAY'S INN ROAD**								
R1/21	**W1/21**	15.70	15.70	0.00	0.00	**R1/21**	**W1/21**		0.75	0.75	0.75	0.75	0.00	0.00
R2/21	**W2/21**	12.51	12.51	0.00	0.00	**R2/21**	**W2/21**		0.59		0.59			
R2/21	**W3/21**	13.91	13.91	0.00	0.00	**R2/21**	**W3/21**		0.63		0.63			
R2/21	**W4/21**	14.63	14.63	0.00	0.00	**R2/21**	**W4/21**		0.66		0.66			
R2/21	**W5/21**	14.17	14.17	0.00	0.00	**R2/21**	**W5/21**		0.65		0.65			
R2/21	**W6/21**	11.10	11.10	0.00	0.00	**R2/21**	**W6/21**		0.56	3.08	0.56	3.08	0.00	0.00
R1/22	**W1/22**	30.80	30.80	0.00	0.00	**R1/22**	**W1/22**		1.39	1.39	1.39	1.39	0.00	0.00
R2/22	**W2/22**	35.60	35.60	0.00	0.00	**R2/22**	**W2/22**		3.00	3.00	3.00	3.00	0.00	0.00
R1/23	**W1/23**	26.46	26.46	0.00	0.00	**R1/23**	**W1/23**		1.00		1.00			
R1/23	**W2/23**	31.86	31.86	0.00	0.00	**R1/23**	**W2/23**		1.15	2.15	1.15	2.15	0.00	0.00
R1/24	**W1/24**	27.56	27.56	0.00	0.00	**R1/24**	**W1/24**		0.93		0.93			
R1/24	**W2/24**	35.06	35.06	0.00	0.00	**R1/24**	**W2/24**		1.12	2.05	1.12	2.05	0.00	0.00
R1/33	**W1/33**	28.70	28.70	0.00	0.00	**R1/33**	**W1/33**	STAIR	1.10	1.10	1.10	1.10	0.00	0.00
R1/34	**W1/34**	32.02	32.02	0.00	0.00	**R1/34**	**W1/34**	STAIR	2.00	2.00	2.00	2.00	0.00	0.00
47 GRAY'S INN ROAD						**47 GRAY'S INN ROAD**								
R1/39	**W1/39**	0.96	0.96	0.00	0.00	**R1/39**	**W1/39**		0.22	0.22	0.22	0.22	0.00	0.00
R2/39	**W2/39T**	0.73	0.73	0.00	0.00	**R2/39**	**W2/39T**		0.25		0.25			
R2/39	**W3/39T**	0.70	0.70	0.00	0.00	**R2/39**	**W3/39T**		0.25		0.25			
R2/39	**W4/39T**	0.62	0.62	0.00	0.00	**R2/39**	**W4/39T**		0.23	0.73	0.23	0.73	0.00	0.00
R1/40	**W1/40**	3.42	3.42	0.00	0.00	**R1/40**	**W1/40**		0.21	0.21	0.21	0.21	0.00	0.00
R2/40	**W2/40**	2.15	2.15	0.00	0.00	**R2/40**	**W2/40**		0.58		0.58			

Vertical Sky Component						Average Daylight Factor								
									Existing		Proposed			
Room	Window	Existing	Proposed	Loss	%	Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R2/40	W3/40	2.12	2.12	0.00	0.00	R2/40	W3/40		0.57		0.57			
R2/40	W4/40	1.79	1.79	0.00	0.00	R2/40	W4/40		0.53	1.68	0.53	1.68	0.00	0.00
R1/41	W1/41	17.47	17.47	0.00	0.00	R1/41	W1/41		0.56	0.56	0.56	0.56	0.00	0.00
R2/41	W2/41	8.82	8.82	0.00	0.00	R2/41	W2/41		1.27		1.27			
R2/41	W3/41	9.51	9.51	0.00	0.00	R2/41	W3/41		1.34		1.34			
R2/41	W4/41	7.43	7.43	0.00	0.00	R2/41	W4/41		1.18	3.79	1.18	3.79	0.00	0.00
R1/42	W1/42	35.30	35.30	0.00	0.00	R1/42	W1/42		1.30		1.30			
R1/42	W2/42	35.28	35.28	0.00	0.00	R1/42	W2/42		1.30		1.30			
R1/42	W3/42	34.84	34.84	0.00	0.00	R1/42	W3/42		1.24	3.84	1.24	3.84	0.00	0.00
R1/43	W1/43	22.89	22.89	0.00	0.00	R1/43	W1/43		1.30		1.30			
R1/43	W2/43	28.33	28.33	0.00	0.00	R1/43	W2/43		1.85	3.15	1.85	3.15	0.00	0.00
R1/44	W1/44	34.99	34.87	0.12	0.34	R1/44	W1/44		1.70	1.70	1.70	1.70	0.00	0.12
41 GRAY'S INN ROAD						41 GRAY'S INN ROAD								
R1/51	W1/51	28.04	21.52	6.52	23.25	R1/51	W1/51	STAIRS	0.51	0.51	0.44	0.44	0.07	12.97
R1/52	W1/52	32.35	24.49	7.86	24.30	R1/52	W1/52	STAIRS	2.83	2.83	2.32	2.32	0.50	17.83
R1/53	W1/53	32.72	24.08	8.64	26.41	R1/53	W1/53	STAIRS	1.32	1.32	1.09	1.09	0.24	17.75
R2/53	W3/53	34.95	26.44	8.51	24.35	R2/53	W3/53	WC	2.07	2.07	1.81	1.81	0.27	12.97
R3/53	W2/53	35.92	32.75	3.17	8.83	R3/53	W2/53	KITCHEN	1.93	1.93	1.80	1.80	0.14	6.98
R2/61	W1/61	29.52	26.37	3.15	10.67	R2/61	W1/61	BATHROOM	3.61	3.61	3.36	3.36	0.25	7.00
R2/62	W1/62	33.65	30.02	3.63	10.79	R2/62	W1/62	BATHROOM	3.18	3.18	2.97	2.97	0.20	6.39
39 GRAY'S INN ROAD						39 GRAY'S INN ROAD								
R1/71	W1/71	24.68	24.64	0.04	0.16	R1/71	W1/71	KITCHEN	1.18	1.18	1.18	1.18	0.00	0.00
R2/71	W2/71	25.66	25.63	0.03	0.12	R2/71	W2/71	BATHROOM	1.23	1.23	1.23	1.23	0.00	0.00
R1/72	W1/72	30.24	30.18	0.06	0.20	R1/72	W1/72	BATHROOM	2.94	2.94	2.94	2.94	0.00	0.00
R1/73	W1/73	35.23	34.40	0.83	2.36	R1/73	W1/73	BATHROOM	0.77	0.77	0.77	0.77	0.00	0.00
R2/73	W2/73	33.98	33.62	0.36	1.06	R2/73	W2/73	BEDROOM	0.74	0.74	0.74	0.74	0.00	0.00
R1/81	W1/81	20.40	20.28	0.12	0.59	R1/81	W1/81	STAIRS	1.23	1.23	1.23	1.23	0.00	0.00
R1/82	W1/82	25.22	25.10	0.12	0.48	R1/82	W1/82	STAIRS	1.94	1.94	1.94	1.94	0.00	0.00
37 GRAY'S INN ROAD						37 GRAY'S INN ROAD								
R1/90	W1/90	20.66	20.65	0.01	0.05	R1/90	W1/90	COMMERCIAL	0.46		0.46			
R1/90	W2/90	4.67	4.67	0.00	0.00	R1/90	W2/90	COMMERCIAL	0.00	0.46	0.00	0.46	0.00	0.00
R1/91	W1/91	26.89	26.88	0.01	0.04	R1/91	W1/91	BED/STUDY	3.09	3.09	3.09	3.09	0.00	0.00
R2/91	W2/91	11.94	11.94	0.00	0.00	R2/91	W2/91	OFFICE/STUDY	1.28	1.28	1.28	1.28	0.00	0.00
R1/92	W1/92	31.52	31.51	0.01	0.03	R1/92	W1/92	BEDROOM	2.67	2.67	2.67	2.67	0.00	0.00
R2/92	W2/92	16.16	16.16	0.00	0.00	R2/92	W2/92	BEDROOM	1.18	1.18	1.18	1.18	0.00	0.00

Vertical Sky Component						Average Daylight Factor							
									Existing		Proposed		
Room	Window	Existing	Proposed	Loss	%	Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R1/93	W1/93	30.19	30.19	0.00	0.00	R1/93	W1/93	BEDROOM	0.60	0.60	0.60	0.60	0.00	0.00
R2/93	W2/93	20.28	20.25	0.03	0.15	R2/93	W2/93	BEDROOM	0.39	0.39	0.39	0.39	0.00	0.00
R1/230	W1/230	12.13	12.13	0.00	0.00	R1/230	W1/230	STORE	0.43		0.43			
R1/230	W2/230	18.16	18.16	0.00	0.00	R1/230	W2/230	STORE	0.93	1.36	0.93	1.36	0.00	0.00
R1/231	W2/230	18.16	18.16	0.00	0.00	R1/231	W2/230	OFFICE/STUDY	0.44		0.44			
R1/231	W1/231	16.94	16.94	0.00	0.00	R1/231	W1/231	OFFICE/STUDY	0.29	0.73	0.29	0.73	0.00	0.00
R1/232	W1/232	20.38	20.38	0.00	0.00	R1/232	W1/232	BEDROOM	1.16	1.16	1.16	1.16	0.00	0.00
35 GRAY'S INN ROAD						35 GRAY'S INN ROAD								
R1/101	W1/101	22.24	22.24	0.00	0.00	R1/101	W1/101	HALLWAY	0.38	0.38	0.38	0.38	0.00	0.00
R2/101	W3/101	20.47	20.47	0.00	0.00	R2/101	W3/101	STORE	0.24	0.24	0.24	0.24	0.00	0.00
R3/101	W2/101	17.83	17.83	0.00	0.00	R3/101	W2/101	KITCHEN	1.84	1.84	1.84	1.84	0.00	0.00
R1/102	W1/102	26.12	26.11	0.01	0.04	R1/102	W1/102	BATHROOM	1.55	1.55	1.55	1.55	0.00	0.00
R1/103	W1/103	29.96	29.96	0.00	0.00	R1/103	W1/103	BATHROOM	1.71	1.71	1.71	1.71	0.00	0.00
R1/104	W1/104	35.54	35.54	0.00	0.00	R1/104	W1/104	BEDROOM	1.60	1.60	1.60	1.60	0.00	0.00
R2/112	W1/112	20.97	20.96	0.01	0.05	R2/112	W1/112	BEDROOM	1.32	1.32	1.32	1.32	0.00	0.00
R2/113	W1/113	23.78	23.78	0.00	0.00	R2/113	W1/113	BEDROOM	1.23	1.23	1.23	1.23	0.00	0.00
R2/114	W1/114	30.19	30.19	0.00	0.00	R2/114	W1/114	BEDROOM	1.29	1.29	1.29	1.29	0.00	0.00
4-10 THEOBALD'S ROAD						4-10 THEOBALD'S ROAD								
R2/123	W2/123	22.00	21.77	0.23	1.05	R2/123	W2/123	KITCHEN	1.16	1.16	1.15	1.15	0.01	0.60
R2/124	W2/124	23.95	23.85	0.10	0.42	R2/124	W2/124	KITCHEN	1.22	1.22	1.22	1.22	0.00	0.25
R2/125	W2/125	29.97	29.97	0.00	0.00	R2/125	W2/125	KITCHEN	1.04	1.04	1.04	1.04	0.00	0.00
R1/132	W1/132	5.37	5.37	0.00	0.00	R1/132	W1/132	STAIRS	0.91	0.91	0.91	0.91	0.00	0.00
R1/133	W1/133	14.37	14.24	0.13	0.90	R1/133	W1/133	STAIRS	1.62	1.62	1.61	1.61	0.01	0.62
R1/134	W1/134	22.22	22.19	0.03	0.14	R1/134	W1/134	STAIRS	2.14	2.14	2.14	2.14	0.00	0.09
4-10 THEOBALD'S ROAD (Test Windows)						4-10 THEOBALD'S ROAD (Test Windows)								
R1/123	W1/123	12.40	12.40	0.00	0.00	R1/123	W1/123	KITCHEN	0.96	0.96	0.96	0.96	0.00	0.00
R1/124	W1/124	15.54	15.54	0.00	0.00	R1/124	W1/124	KITCHEN	1.12	1.12	1.12	1.12	0.00	0.00
R1/125	W1/125	25.52	25.52	0.00	0.00	R1/125	W1/125	KITCHEN	1.15	1.15	1.15	1.15	0.00	0.00
12 THEOBALD'S ROAD						12 THEOBALD'S ROAD								
R1/140	W1/140	7.98	7.98	0.00	0.00	R1/140	W1/140		0.83	0.83	0.83	0.83	0.00	0.00
R1/141	W2/141	13.52	13.52	0.00	0.00	R1/141	W2/141		1.12		1.12			
R1/141	W3/141	32.46	32.46	0.00	0.00	R1/141	W3/141		2.22	3.34	2.22	3.34	0.00	0.00

Vertical Sky Component						Average Daylight Factor								
									Existing		Proposed			
Room	Window	Existing	Proposed	Loss	%	Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R2/141	W1/141	12.77	12.77	0.00	0.00	R2/141	W1/141		1.00	1.00	1.00	1.00	0.00	0.00
R1/142	W2/142	20.54	20.38	0.16	0.78	R1/142	W2/142		1.20		1.20			
R1/142	W3/142	36.99	36.84	0.15	0.41	R1/142	W3/142		1.93	3.13	1.92	3.11	0.02	0.48
R2/142	W1/142	17.61	17.54	0.07	0.40	R2/142	W1/142		1.01	1.01	1.00	1.00	0.00	0.30
R1/150	W1/150	8.66	8.66	0.00	0.00	R1/150	W1/150		0.52		0.52			
R1/150	W2/150	9.66	9.66	0.00	0.00	R1/150	W2/150		0.57		0.57			
R1/150	W3/150	10.50	10.50	0.00	0.00	R1/150	W3/150		0.61	1.70	0.61	1.70	0.00	0.00
1 KING'S MEWS						1 KING'S MEWS								
R1/160	W1/160	9.70	9.70	0.00	0.00	R1/160	W1/160		0.88	0.88	0.88	0.88	0.00	0.00
R2/160	W2/160	10.76	10.76	0.00	0.00	R2/160	W2/160		0.85	0.85	0.85	0.85	0.00	0.00
R1/161	W1/161	15.86	15.86	0.00	0.00	R1/161	W1/161		0.50	0.50	0.50	0.50	0.00	0.00
2 KING'S MEWS						2 KING'S MEWS								
R1/170	W1/170	14.52	14.52	0.00	0.00	R1/170	W1/170	L/K/D	1.24	1.24	1.24	1.24	0.00	0.00
R4/171	W1/171	27.93	27.56	0.37	1.32	R4/171	W1/171	BEDROOM	3.66	3.66	3.63	3.63	0.04	1.01
4 KING'S MEWS						4 KING'S MEWS								
R2/170	W2/170	17.34	17.34	0.00	0.00	R2/170	W2/170	LIVINGROOM	1.36	1.36	1.36	1.36	0.00	0.00
R1/171	W4/171	29.89	29.53	0.36	1.20	R1/171	W4/171	BEDROOM	1.97	1.97	1.95	1.95	0.02	1.01
R2/171	W3/171	29.49	29.09	0.40	1.36	R2/171	W3/171	BEDROOM	3.10	3.10	3.07	3.07	0.03	1.10
R3/171	W2/171	29.19	28.81	0.38	1.30	R3/171	W2/171	BEDROOM	1.28	1.28	1.26	1.26	0.01	1.10
5 KING'S MEWS (AS PROPOSED)						5 KING'S MEWS (AS PROPOSED)								
R1/181	W1/181	27.33	27.33	0.00	0.00	R1/181	W1/181	LIVING/KITCHE	3.43	3.43	3.43	3.43	0.00	0.00
R1/182	W1/182	32.47	32.05	0.42	1.29	R1/182	W1/182	BEDROOM	6.66	6.66	6.59	6.59	0.07	1.05
7-8 KING'S MEWS (AS PROPOSED)						7-8 KING'S MEWS (AS PROPOSED)								
R1/191	W1/191	14.70	14.69	0.01	0.07	R1/191	W1/191	LIVING/KITCHE	0.55		0.55			
R1/191	W2/191	26.75	26.75	0.00	0.00	R1/191	W2/191	LIVING/KITCHE	2.34	2.89	2.34	2.89	0.00	0.03
R1/192	W1/192	31.08	30.71	0.37	1.19	R1/192	W1/192	LIVING/KITCHE	4.20		4.16			
R1/192	W2/192	32.32	32.00	0.32	0.99	R1/192	W2/192	LIVING/KITCHE	3.08	7.28	3.06	7.21	0.07	0.89
12-13 KING'S MEWS						12-13 KING'S MEWS								
R1/211	W1/211	29.12	29.12	0.00	0.00	R1/211	W1/211		1.62	1.62	1.62	1.62	0.00	0.06
R2/211	W2/211	29.04	28.99	0.05	0.17	R2/211	W2/211		1.18	1.18	1.17	1.17	0.00	0.17
9-11 KING'S MEWS						9-11 KING'S MEWS								
R1/201	W1/201	18.93	18.93	0.00	0.00	R1/201	W1/201		1.46	1.46	1.46	1.46	0.00	0.00
144-148 GRAY'S INN ROAD TEST WINDOWS						144-148 GRAY'S INN ROAD TEST WINDOWS								
R1/220	W1/220	21.15	20.91	0.24	1.13	R1/220	W1/220		3.82	3.82	3.79	3.79	0.03	0.76

Vertical Sky Component						Average Daylight Factor								
									Existing		Proposed			
Room	Window	Existing	Proposed	Loss	%	Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R2/220	W2/220	21.22	20.98	0.24	1.13	R2/220	W2/220		3.83	3.83	3.79	3.79	0.03	0.81
R1/221	W1/221	26.02	25.69	0.33	1.27	R1/221	W1/221		1.51		1.50			
R1/221	W2/221	26.05	25.72	0.33	1.27	R1/221	W2/221		1.51	3.03	1.50	3.00	0.03	1.06
R2/221	W3/221	26.08	25.74	0.34	1.30	R2/221	W3/221		1.52		1.50			
R2/221	W4/221	26.10	25.77	0.33	1.26	R2/221	W4/221		1.52	3.04	1.50	3.00	0.03	1.02
R1/222	W1/222	30.31	29.92	0.39	1.29	R1/222	W1/222		1.70		1.68			
R1/222	W2/222	30.35	29.96	0.39	1.29	R1/222	W2/222		1.70	3.41	1.69	3.37	0.04	1.06
R2/222	W3/222	30.40	29.99	0.41	1.35	R2/222	W3/222		1.71		1.69			
R2/222	W4/222	30.40	30.01	0.39	1.28	R2/222	W4/222		1.71	3.41	1.69	3.38	0.04	1.03

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
51 GRAY'S INN ROAD						
R1/11		183.3	173.0	173.0	0.0	0.0
R2/11		189.3	162.5	162.5	0.0	0.0
R1/12		183.3	182.6	182.6	0.0	0.0
R2/12		189.3	188.7	188.7	0.0	0.0
R1/13		183.3	182.3	182.3	0.0	0.0
R2/13		189.3	188.7	188.7	0.0	0.0
R1/14		196.6	191.7	191.7	0.0	0.0
R2/14		183.3	182.3	182.3	0.0	0.0
R3/14		189.3	188.7	188.7	0.0	0.0
49 GRAY'S INN ROAD						
R1/21		204.8	159.9	159.9	0.0	0.0
R2/21		241.4	240.3	240.3	0.0	0.0
R1/22		65.2	63.7	63.7	0.0	0.0
R2/22		130.0	128.1	128.1	0.0	0.0
R1/23		149.3	147.3	147.3	0.0	0.0
R1/24		145.4	141.4	141.4	0.0	0.0
R1/33	STAIR	54.8	50.3	50.3	0.0	0.0
R1/34	STAIR	55.6	49.6	49.6	0.0	0.0
47 GRAY'S INN ROAD						
R1/39		127.2	4.9	4.9	0.0	0.0
R2/39		136.7	9.4	9.4	0.0	0.0
R1/40		127.2	14.2	14.2	0.0	0.0
R2/40		136.7	28.5	28.5	0.0	0.0
R1/41		127.2	87.6	87.6	0.0	0.0
R2/41		136.7	136.3	136.3	0.0	0.0
R1/42		254.3	249.8	249.8	0.0	0.0
R1/43		155.5	154.1	154.1	0.0	0.0
R1/44		155.5	152.8	152.8	0.0	0.0
41 GRAY'S INN ROAD						

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R1/51	STAIRS	98.7	88.1	88.1	0.0	0.0
R1/52	STAIRS	85.0	82.7	82.7	0.0	0.0
R1/53	STAIRS	26.3	25.6	25.6	0.0	0.0
R2/53	WC	12.3	12.0	11.6	0.4	3.3
R3/53	KITCHEN	107.8	103.5	101.6	1.9	1.8
R2/61	BATHROOM	40.7	37.5	33.3	4.1	10.9
R2/62	BATHROOM	56.9	54.2	51.3	2.9	5.4
39 GRAY'S INN ROAD						
R1/71	KITCHEN	66.4	56.9	56.9	0.0	0.0
R2/71	BATHROOM	37.0	34.9	34.9	0.0	0.0
R1/72	BATHROOM	31.0	23.5	23.5	0.0	0.0
R1/73	BATHROOM	42.6	35.6	35.4	0.2	0.6
R2/73	BEDROOM	140.6	128.0	128.0	0.0	0.0
R1/81	STAIRS	78.7	77.9	77.9	0.0	0.0
R1/82	STAIRS	45.8	44.2	44.2	0.0	0.0
37 GRAY'S INN ROAD						
R1/90	COMMERCIAL	103.3	73.5	73.5	0.0	0.0
R1/91	BED/STUDY	62.1	59.4	59.4	0.0	0.0
R2/91	OFFICE/STUDY	116.3	109.4	109.4	0.0	0.0
R1/92	BEDROOM	62.1	59.4	59.4	0.0	0.0
R2/92	BEDROOM	116.3	111.3	111.3	0.0	0.0
R1/93	BEDROOM	183.2	149.4	149.4	0.0	0.0
R2/93	BEDROOM	101.2	51.6	51.6	0.0	0.0
R1/230	STORE	44.2	29.5	29.5	0.0	0.0
R1/231	OFFICE/STUDY	151.5	89.8	89.8	0.0	0.0
R1/232	BEDROOM	152.7	118.6	118.6	0.0	0.0
35 GRAY'S INN ROAD						
R1/101	HALLWAY	73.8	53.3	53.3	0.0	0.0
R2/101	STORE	70.6	41.8	41.8	0.0	0.0

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R3/101	KITCHEN	131.9	128.3	128.3	0.0	0.0
R1/102	BATHROOM	110.0	106.5	106.5	0.0	0.0
R1/103	BATHROOM	110.0	106.8	106.8	0.0	0.0
R1/104	BEDROOM	110.0	106.8	106.8	0.0	0.0
R2/112	BEDROOM	171.9	138.8	138.8	0.0	0.0
R2/113	BEDROOM	171.9	145.1	145.1	0.0	0.0
R2/114	BEDROOM	171.9	167.0	167.0	0.0	0.0
4-10 THEOBALD'S ROAD						
R2/123	KITCHEN	202.9	167.3	167.3	0.0	0.0
R2/124	KITCHEN	202.9	171.6	171.6	0.0	0.0
R2/125	KITCHEN	202.9	190.0	190.0	0.0	0.0
R1/132	STAIRS	104.6	73.9	73.9	0.0	0.0
R1/133	STAIRS	104.6	84.2	84.2	0.0	0.0
R1/134	STAIRS	104.6	101.3	101.3	0.0	0.0
4-10 THEOBALD'S ROAD (Test Windows)						
R1/123	KITCHEN	147.3	64.9	64.9	0.0	0.0
R1/124	KITCHEN	147.3	77.4	77.4	0.0	0.0
R1/125	KITCHEN	147.3	133.0	133.0	0.0	0.0
12 THEOBALD'S ROAD						
R1/140		151.0	43.1	43.1	0.0	0.0
R1/141		151.0	144.1	144.1	0.0	0.0
R2/141		164.9	60.6	60.6	0.0	0.0
R1/142		151.0	144.1	144.1	0.0	0.0
R2/142		164.9	69.5	69.5	0.0	0.0
R1/150		290.6	165.0	165.0	0.0	0.0
1 KING'S MEWS						
R1/160		51.6	13.8	13.8	0.0	0.0

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R2/160		62.1	17.8	17.8	0.0	0.0
R1/161		122.8	28.9	28.9	0.0	0.0
2 KING'S MEWS						
R1/170	L/K/D	465.5	191.7	191.7	0.0	0.0
R4/171	BEDROOM	165.8	165.0	165.0	0.0	0.0
4 KING'S MEWS						
R2/170	LIVINGROOM	489.8	184.5	184.5	0.0	0.0
R1/171	BEDROOM	141.7	136.9	136.9	0.0	0.0
R2/171	BEDROOM	191.0	190.5	190.5	0.0	0.0
R3/171	BEDROOM	141.4	138.6	138.6	0.0	0.0
5 KING'S MEWS (AS PROPOSED)						
R1/181	LIVING/KITCHEN	407.3	304.5	296.1	8.4	2.8
R1/182	BEDROOM	407.3	407.3	407.3	0.0	0.0
7-8 KING'S MEWS (AS PROPOSED)						
R1/191	LIVING/KITCHEN	353.6	320.5	320.5	0.0	0.0
R1/192	LIVING/KITCHEN	258.1	257.6	257.6	0.0	0.0
12-13 KING'S MEWS						
R1/211		129.2	115.8	115.8	0.0	0.0
R2/211		204.7	177.6	175.5	2.2	1.2
9-11 KING'S MEWS						
R1/201		164.6	157.9	157.9	0.0	0.0

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
144-148 GRAY'S INN ROAD TEST WINDOWS						
R1/220		171.0	72.4	72.4	0.0	0.0
R2/220		171.0	76.4	77.2	-0.8	-1.0
R1/221		155.5	154.9	154.9	0.0	0.0
R2/221		155.5	154.3	153.7	0.6	0.4
R1/222		155.5	154.9	154.9	0.0	0.0
R2/222		155.5	154.9	154.9	0.0	0.0

Annual Probable Sunlight Hours (APSH)

43 GRAYS INN ROAD
Proposed 43 Grays Inn Road Scheme dated 14/11/11
SUNLIGHT ANALYSIS

Position	Room Use	Existing			Proposed			% Loss	
		Summer	Winter	Total	Summer	Winter	Total	Winter	Total
51 GRAY'S INN ROAD									
W1/11		28	4	32	28	4	32	0.00	0.00
W2/11		27	5	32	27	5	32	0.00	0.00
W1/12		30	12	42	30	12	42	0.00	0.00
W2/12		22	11	33	22	11	33	0.00	0.00
W3/12		29	13	42	29	13	42	0.00	0.00
W4/12		33	13	46	33	13	46	0.00	0.00
W1/13		30	13	43	30	13	43	0.00	0.00
W2/13		22	13	35	22	13	35	0.00	0.00
W3/13		29	13	42	29	13	42	0.00	0.00
W4/13		33	14	47	33	14	47	0.00	0.00
W1/14		27	15	42	27	15	42	0.00	0.00
W2/14		32	15	47	32	15	47	0.00	0.00
W3/14		32	15	47	32	15	47	0.00	0.00
W4/14		35	15	50	35	15	50	0.00	0.00
W5/14		35	14	49	35	14	49	0.00	0.00
W6/14		32	15	47	32	15	47	0.00	0.00
49 GRAY'S INN ROAD									
W1/21		16	0	16	16	0	16	-	0.00
W1/22		26	5	31	26	5	31	0.00	0.00
W2/22		32	16	48	32	16	48	0.00	0.00
W1/23		25	14	39	25	14	39	0.00	0.00
W2/23		32	14	46	32	14	46	0.00	0.00
W1/24		24	15	39	24	15	39	0.00	0.00
W2/24		31	15	46	31	15	46	0.00	0.00
W1/33	STAIR	23	5	28	23	5	28	0.00	0.00

43 GRAYS INN ROAD
Proposed 43 Grays Inn Road Scheme dated 14/11/11
SUNLIGHT ANALYSIS

Position	Room Use	Existing			Proposed			% Loss	
		Summer	Winter	Total	Summer	Winter	Total	Winter	Total
W1/34	STAIR	29	7	36	29	7	36	0.00	0.00
47 GRAY'S INN ROAD									
W1/39		0	0	0	0	0	0	-	-
W1/40		1	0	1	1	0	1	-	0.00
W1/41		19	1	20	19	1	20	0.00	0.00
W1/42		35	13	48	35	13	48	0.00	0.00
W2/42		35	13	48	35	13	48	0.00	0.00
W3/42		34	13	47	34	13	47	0.00	0.00
W1/43		21	12	33	21	12	33	0.00	0.00
W2/43		28	7	35	28	7	35	0.00	0.00
W1/44		30	16	46	30	16	46	0.00	0.00
41 GRAY'S INN ROAD									
W1/51	STAIRS	20	6	26	16	6	22	0.00	15.38
W1/52	STAIRS	32	11	43	26	11	37	0.00	13.95
W1/53	STAIRS	27	10	37	21	10	31	0.00	16.22
W3/53	WC	28	10	38	21	10	31	0.00	18.42
W2/53	KITCHEN	31	17	48	30	17	47	0.00	2.08
W1/61	BATHROOM	31	7	38	31	7	38	0.00	0.00
W1/62	BATHROOM	32	11	43	31	11	42	0.00	2.33
39 GRAY'S INN ROAD									
W1/71	KITCHEN	25	6	31	25	6	31	0.00	0.00
W2/71	BATHROOM	23	3	26	23	3	26	0.00	0.00

Position	Room Use	Existing Summer	Existing Winter	Existing Total	Proposed Summer	Proposed Winter	Proposed Total	% Loss Winter	% Loss Total
W1/72	BATHROOM	29	6	35	29	6	35	0.00	0.00
W1/73	BATHROOM	23	12	35	23	12	35	0.00	0.00
W2/73	BEDROOM	29	12	41	29	12	41	0.00	0.00
W1/81	STAIRS	20	2	22	20	2	22	0.00	0.00
W1/82	STAIRS	23	3	26	23	3	26	0.00	0.00
37 GRAY'S INN ROAD									
W1/90	COMMERCIAL	10	0	10	10	0	10	-	0.00
W2/90	COMMERCIAL	0	0	0	0	0	0	-	-
W1/91	BED/STUDY	30	2	32	30	2	32	0.00	0.00
W2/91	OFFICE/STUDY	20	2	22	20	2	22	0.00	0.00
W1/92	BEDROOM	32	5	37	32	5	37	0.00	0.00
W2/92	BEDROOM	21	3	24	21	3	24	0.00	0.00
W1/93	BEDROOM	28	7	35	28	7	35	0.00	0.00
W2/93	BEDROOM	14	2	16	14	2	16	0.00	0.00
W1/230	STORE	14	0	14	14	0	14	-	0.00
W2/230	STORE	19	0	19	19	0	19	-	0.00
W1/231	OFFICE/STUDY	18	1	19	18	1	19	0.00	0.00
W1/232	BEDROOM	23	2	25	23	2	25	0.00	0.00
35 GRAY'S INN ROAD									
W1/101	HALLWAY	22	0	22	22	0	22	-	0.00

43 GRAYS INN ROAD
Proposed 43 Grays Inn Road Scheme dated 14/11/11
SUNLIGHT ANALYSIS

Position	Room Use	Existing			Proposed			% Loss	
		Summer	Winter	Total	Summer	Winter	Total	Winter	Total
W3/101	STORE	15	0	15	15	0	15	-	0.00
W2/101	KITCHEN	14	0	14	14	0	14	-	0.00
W1/102	BATHROOM	24	2	26	24	2	26	0.00	0.00
W1/103	BATHROOM	31	4	35	31	4	35	0.00	0.00
W1/104	BEDROOM	32	10	42	32	10	42	0.00	0.00
W1/112	BEDROOM	15	2	17	15	2	17	0.00	0.00
W1/113	BEDROOM	19	2	21	19	2	21	0.00	0.00
W1/114	BEDROOM	31	4	35	31	4	35	0.00	0.00
4-10 THEOBALD'S ROAD (Test Windows)									
W1/123	KITCHEN	8	0	8	8	0	8	-	0.00
W1/124	KITCHEN	9	0	9	9	0	9	-	0.00
W1/125	KITCHEN	28	0	28	28	0	28	-	0.00
144-148 GRAY'S INN ROAD TEST WINDOWS									
W1/220		22	9	31	20	9	29	0.00	6.45
W2/220		22	8	30	21	8	29	0.00	3.33
W1/221		25	6	31	24	6	30	0.00	3.23
W2/221		25	5	30	24	5	29	0.00	3.33
W3/221		24	7	31	24	7	31	0.00	0.00
W4/221		25	5	30	24	5	29	0.00	3.33
W1/222		29	9	38	29	8	37	11.11	2.63
W2/222		28	9	37	28	9	37	0.00	0.00
W3/222		28	8	36	27	8	35	0.00	2.78
W4/222		28	10	38	27	10	37	0.00	2.63