DAYLIGHT, SUNLIGHT & OVERSHADOWING REPORT

31-34 ALFRED PLACE

Prepared by: GIA

Reference: 6816

Date: 22nd September 2014

CONTENTS PAGE

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6816-jw-13-0922-ry(DaySun&OvershadowReport)
Principles of Daylight & Sunlight
Existing Drawings: 6816/01, 03, and 05 (Rel 01 Rev A)
Proposed Drawings: 6816/21-23 (Rel 06 Rev A)
Window Maps: 6816/19-20 (Rel 04 Rev A)
Daylight & Sunlight Tabulated Results: VSC, NSL & APSH
Overshadowing Assessment

AUTHOR FOR AND ON BEHALF OF GIA: Jerome Webb

AUTHORISATION FOR GIA : .....

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1.0 INSTRUCTIONS

GIA have been instructed to provide a Survey Based Analysis in respect of Daylight and Sunlight for the site at 31-34 Alfred Place.

This report is based on the proposed scheme for the site received from Matt Architecture.

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 (NSL) 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

IR01 – 6816

MALTBY LAND SURVEYS LTD.

IR02 – 6816

IR08 – 6816

MATT ARCHITECTURE

IR15 – 6816

DP9 (FLOOR PLANS)

IR04 – 6816

IR06 – 6816

IR7 – 6816

4.0 ASSUMPTIONS

1. Floor levels have been assumed for those adjoining properties where 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.

2. We have fully resolved the uses which are carried out legally within the adjoining properties in terms of commercial and residential. We have established these from internal observation and Local Authority records

5.0 THE SITE

The site (31 – 34 Alfred Place) is located on the eastern side of Alfred Place to the north of Store Street. The site is currently occupied by two office buildings 7 storeys in height with the two uppermost floors set back. This is shown on our drawings numbered. 6816 01,03,05 in Appendix 2.

6.0 PROPOSED DEVELOPMENT

The proposed scheme comprises the redevelopment of the site for a mix of residential and commercial accommodation. This is shown on our drawings 6816/21-23 in Appendix 2.

7.0 SURROUNDING PROPERTIES

We have quantitatively assessed the daylight and sunlight impact of the proposed development upon all of those residential properties within the vicinity of the site that have the potential to be materially affected in terms of daylight and sunlight.

Our analysis covers the following property:

ADDRESS		USE
1.	Rosetti Court	Residential

The location of this property is illustrated on the drawings contained in Appendix 2 of this report. Detailed results of the daylight and sunlight impact to this property are contained in the tables in Appendix 3 of this report. The analysis in daylight and sunlight terms has been carried out in accordance with the methodology defined by the BRE Guidelines.

We summarise the impact to this relevant property below:

ROSSETTI COURT

DAYLIGHT

The Vertical Sky Component (VSC) results show that, of the 80 windows assessed, all 80 achieve the BRE recommended VSC levels following completion of the proposed development. There will be no impact therefore on the existing VSC values from the proposed development when this is compared against the existing situation.

It is of course materially relevant to note that consent has already been granted for a development on the site and as this proposed building is no greater in bulk mass than the consented scheme, it is clear that there will be virtually no difference in impact, if anything there may be some small improvements in daylight resulting from this proposal when considered against the consent.

We have also undertaken the NSL assessment for Rossetti Court and this again shows full BRE compliance.

SUNLIGHT

The sunlight analysis shows that this proposal does not give rise to any breach of the BRE guidelines in respect of any of the windows in Rossetti Court and that all will achieve BRE compliance.

Again, taking the comments referred to above in respect to the consented scheme as well, it is clear that this proposal will have no additional impact over the consented scheme in fact may well may perform slightly better.

As such, full BRE compliance is clearly demonstrated.

8.0 OVERSHADOWING

An Overshadowing assessment was undertaken for the now consented scheme and that demonstrated that the amenity area within Rossetti Court retained two hours of sun to significantly over 50% of its area on 21st March following the completion of that consented scheme. The consented scheme was therefore compliant in respect of the Sun Hours on the Ground assessment.

Given that this proposed development is in effect, of a very similar bulk and mass to the consented scheme, in fact is slightly reduced in mass and areas, the Overshadowing will therefore be very similar if not better than, the consented situation. We are confident therefore that the Sun Hours on the Ground assessment for this proposal would equally achieve full BRE compliance in respect to the two hours on the ground test on 21st March.

9.0 CONCLUSION

Having carried out a survey based technical analysis of the daylight and sunlight implications of the proposed scheme prepared by Matt Architects in accordance with the BRE methodology as set out in their handbook, *Site Layout Planning for Daylight and Sunlight* (2011), we have considered all of those properties within the immediate vicinity which are residential in nature.

It is clear from the analysis which we have undertaken that the proposed development will not give rise to any notable change in daylight or sunlight to the residential accommodation in Rossetti Court and given the assessments undertaken previously in respect of the now consented scheme for the Overshadowing of the Rossetti Courtyard study, it is clear that this proposal will also be full BRE compliant in respect of Overshadowing matters.

Appendix 1

Principles of Daylight & 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. Parts 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'. In October 2011, the BRE Guidelines were updated and the revised edition states the 2011 BRE "… supersedes the 1991 edition which is now withdrawn".

These guidelines are normally recognised as being the main source for which amenity issues can be considered. The document is used by the majority of local Authorities (adopted within the policy) 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 – a key consideration through the planning policy.

THE BRE GUIDELINES

The BRE give criteria and methods for calculating daylight, and sunlight as well as overshadowing and through each 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 (2011)', Section 1.6 (page 1), 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 third paragraph of Chapter 2.2 (page 7) 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 two methods for calculating daylight to existing surrounding residential properties are as follows:

- Vertical Sky Component (VSC) and
- No Sky Contours (NSC)

The main method for calculating daylight to proposed residential properties is:

- Average Daylight Factor (ADF)

Each is 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 qualitative 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 than 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 16 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';-

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

(b) the centre of at least one window to a main living room can receive 25% of annual probable sunlight hours, including at least 5% of annual probable sunlight hours in the winter months between 21 September and 21 March.

Existing Buildings

Summary (page 17)

> *'If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° 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;*
>
> - *receives less than 25% of annual probable sunlight hours , or less than 5% of annual probable sunlight hours between 21 September and 21 March;*
> - *receives less than 0.8 times its former sunlight hours during either period; and*
> - *has a reduction in sunlight received over the whole year greater than 4% annual probable sunlight hours.*

It will be noted that the BRE clearly separates summer from winter and indicates that a 20% reduction for either may be material. The Handbook also states that- *"To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings and conservatories, should be checked if they have a window facing within 90º of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun... A point at the centre of each window on the outside face of the window wall may be taken".*

(b) Area of Permanent Shadow- Sun Hours on Ground

The 2011 BRE Handbook, 'Site Layout Planning for Daylight and Sunlight' (Second edition) also provides criteria for open spaces where sunlight will be required, including; gardens, parks, children's playgrounds, public squares etc.

The BRE Guidance acknowledges that sunlight in the space between buildings has an important effect on the overall appearance and ambience of a development. The worst situation is to have significant areas on which the sun only shines for a limited part of the year.

In summary the BRE document states the following:-

"It is suggested that, for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If, as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive some two hours of 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 sun hours on ground 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 F 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.

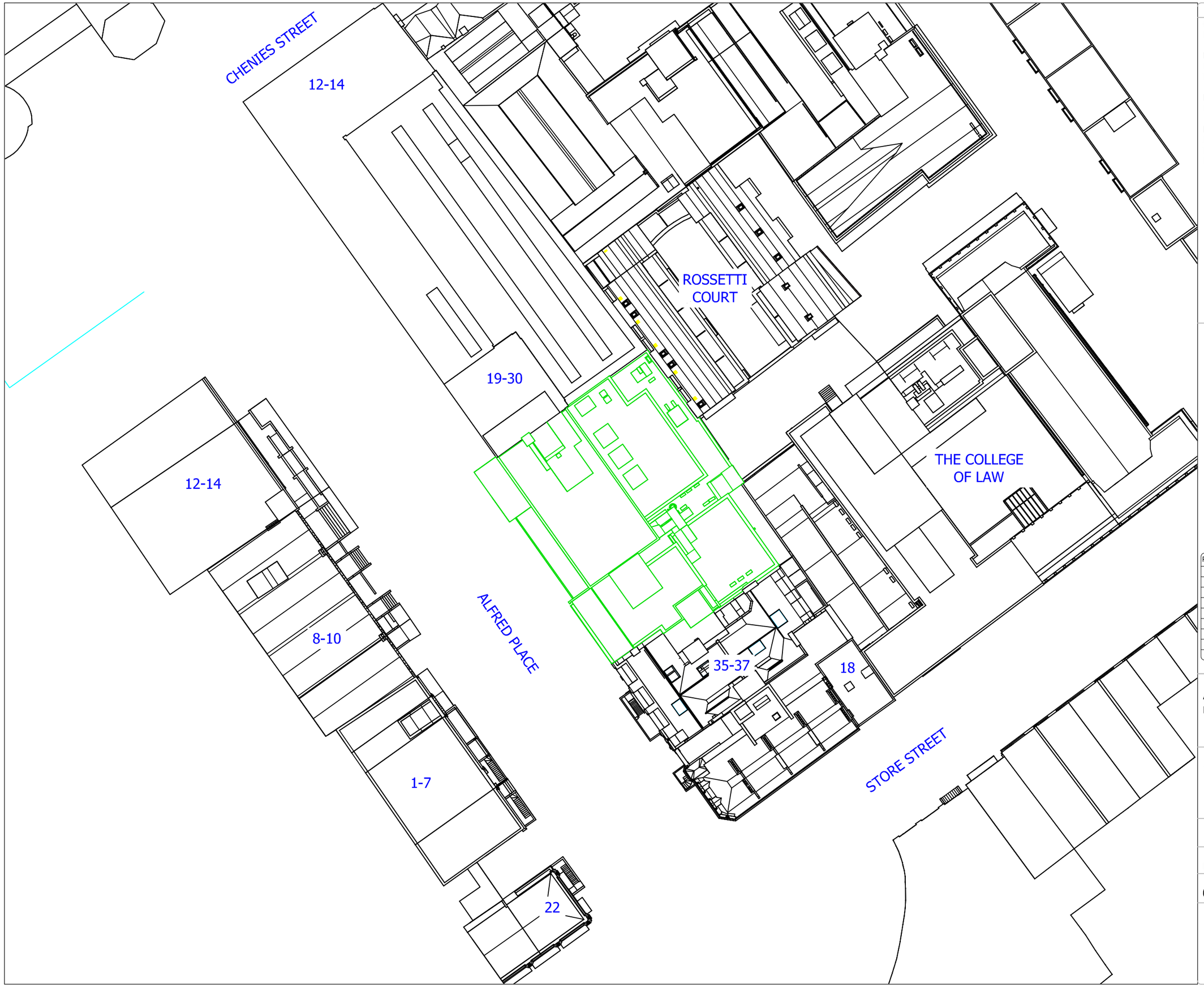
It is therefore sometimes necessary to apply different target criteria or at least acknowledge that the recommendations in the BRE cannot be achieved.

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, Proposed & Window Map Drawings

Existing Drawings



Sources of Information

GIA
IR01-9999

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

BFLS-LONDON
IR03-6816

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

N
Indicative Only

EXISTING SCENARIO SHOWN IN GREEN

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project

ALFRED PLACE
LONDON WC1

Title

SITE PLAN
EXISTING SCENARIO

Scale: 1:500@A3
Date: SEPT '12
Drawn: MF
Checked:

Drawing No.: 6816-01
Rel No.: 01
Revision: A

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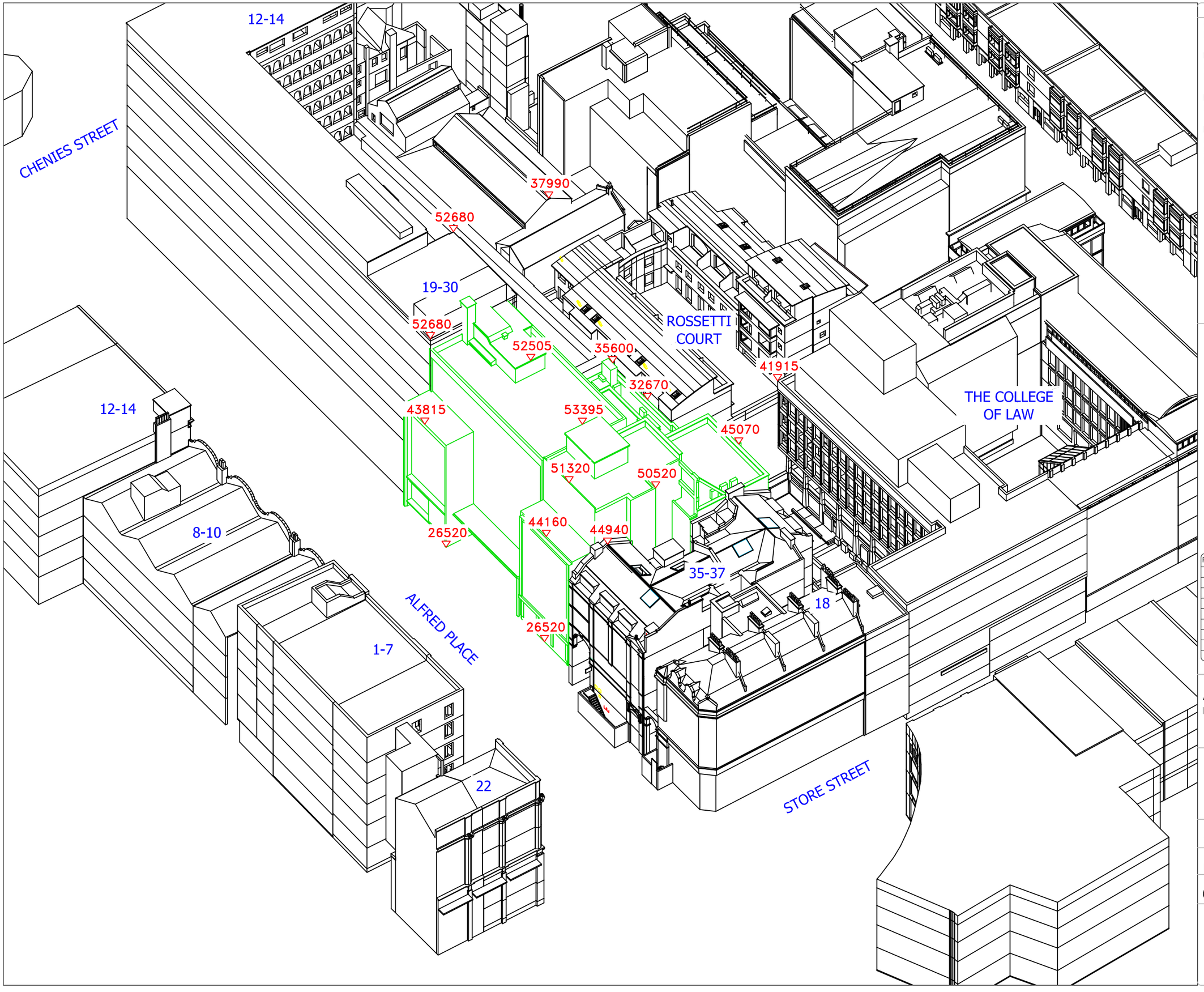

Sources of Information

GIA
IR01-9999

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

BFLS-LONDON
IR03-6816

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

DATUM HEIGHTS SHOWN IN RED
EXISTING SCENARIO SHOWN IN GREEN
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project

ALFRED PLACE
LONDON WC1

Title

3D VIEW
EXISTING SCENARIO

Scale: 1:500@A3
Date: SEPT '12
Drawn: MF
Checked:
Drawing No.: 6816-03
Rel No.: 01
Revision: A

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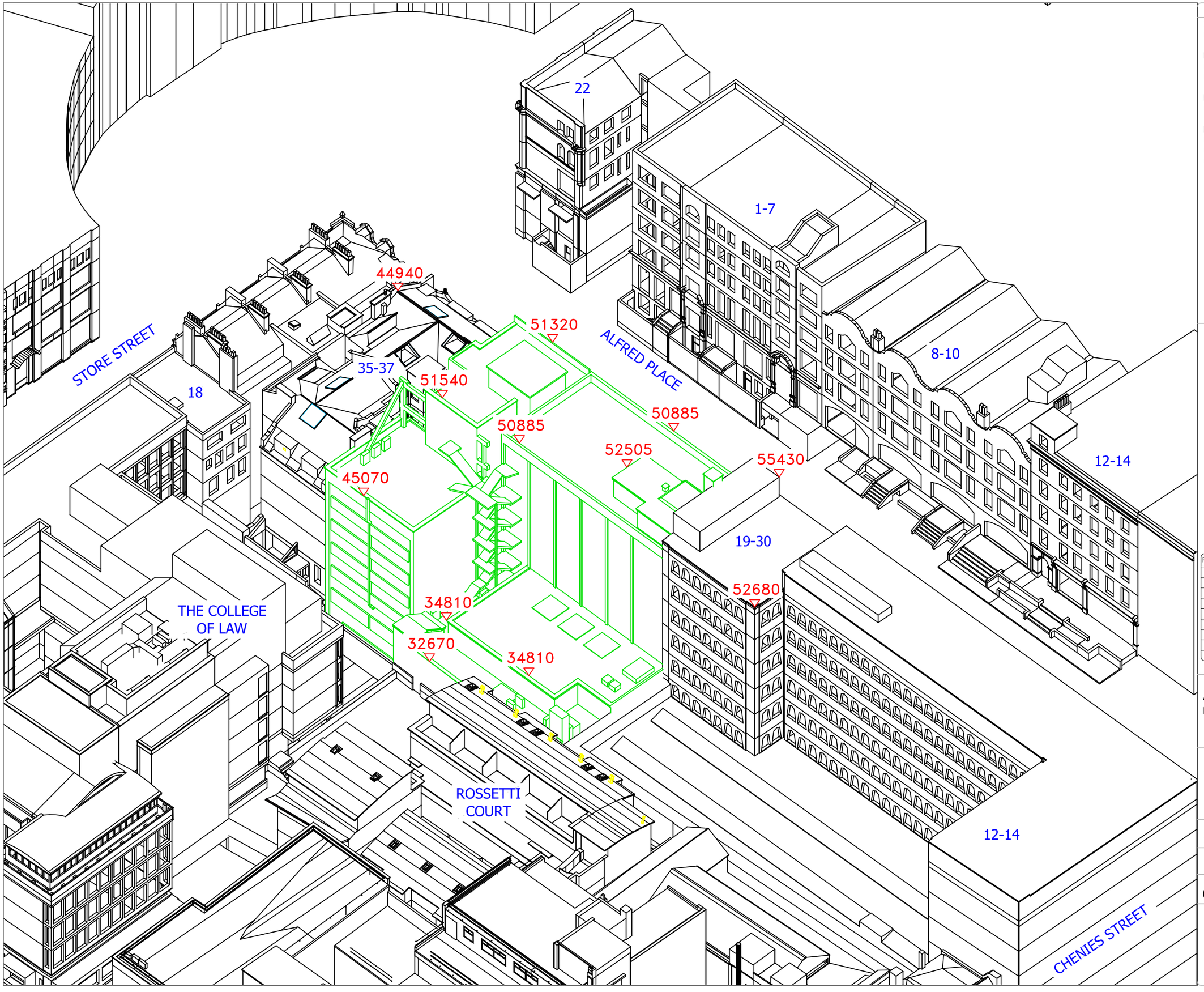

Sources of Information

GIA
IR01-9999

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IR02-6816
IR08-6816

BFLS-LONDON
IR03-6816

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

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EXISTING SCENARIO SHOWN IN GREEN
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	

Project

ALFRED PLACE
LONDON WC1

Title

3D VIEW
EXISTING SCENARIO

Scale: 1:500@A3
Date: SEPT '12
Drawn: MF
Checked:
Drawing No.: 6816-05
Rel No.: 01
Revision: A

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Sources of Information

GIA
IR01-3411

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

MATT ARCHITECTURE
IR15-6816
140829 Working Model External.dwg

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

N
Indicative Only

PROPOSED SCHEME SHOWN IN BLUE

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A		Initial Issue	AMM

Project

ALFRED PLACE
LONDON WC1

Title

SITE PLAN
PROPOSED SCHEME
MATT ARHCITECTURE - IR15
16.09.14

Scale: 1:500@A3
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Drawn: AMM
Checked:

Drawing No.: 6816-21
Rel No.: 06
Revision: A

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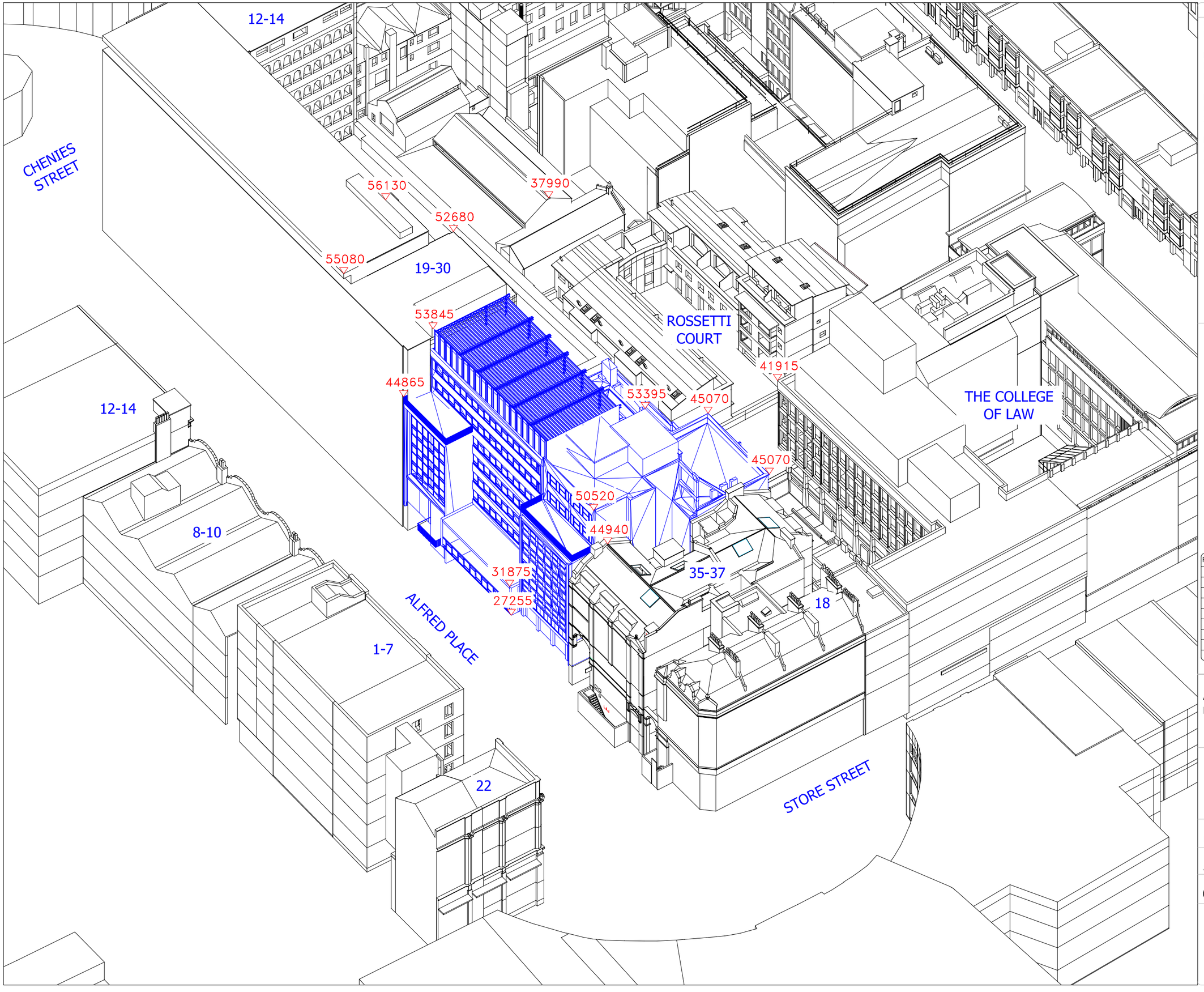

Sources of Information

GIA
IR01-3411

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

MATT ARCHITECTURE
IR15-6816
140829 Working Model External.dwg

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

DATUM HEIGHTS SHOWN IN RED
PROPOSED SCHEME SHOWN IN BLUE
ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Descrlptlon	Initials
A		Initial Issue	AMM

Project

ALFRED PLACE
LONDON WC1

Title

3D VIEW
PROPOSED SCHEME
MATT ARCHITECTURE - IR15
16.09.14

Scale: NTS
Date: 16.09.14
Drawn: AMM
Checked:
Drawing No.: 6816-22
Rel No.: 06
Revision: A

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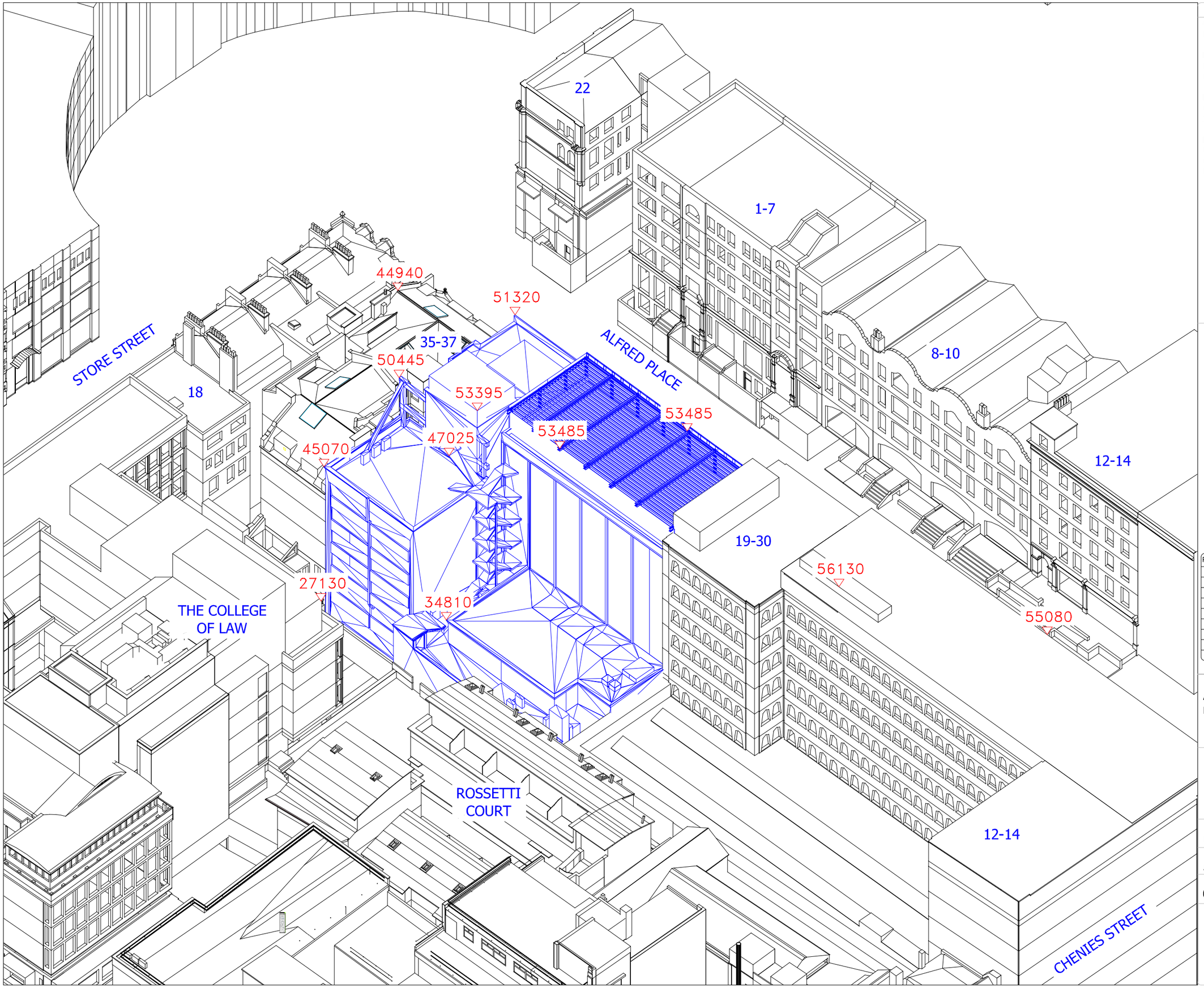

Sources of Information

GIA
IR01-3411

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

MATT ARCHITECTURE
IR15-6816
140829 Working Model External.dwg

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

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Rev	Date	Description	Initials
A		Initial Issue	AMM

Project

ALFRED PLACE
LONDON WC1

Title

3D VIEW
PROPOSED SCHEME
MATT ARCHITECTURE - IR15
16.09.14

Scale: NTS
Date: 16.09.14
Drawn: AMM
Checked:

Drawing No.: 6816-23
Rel No.: 06
Revision: A

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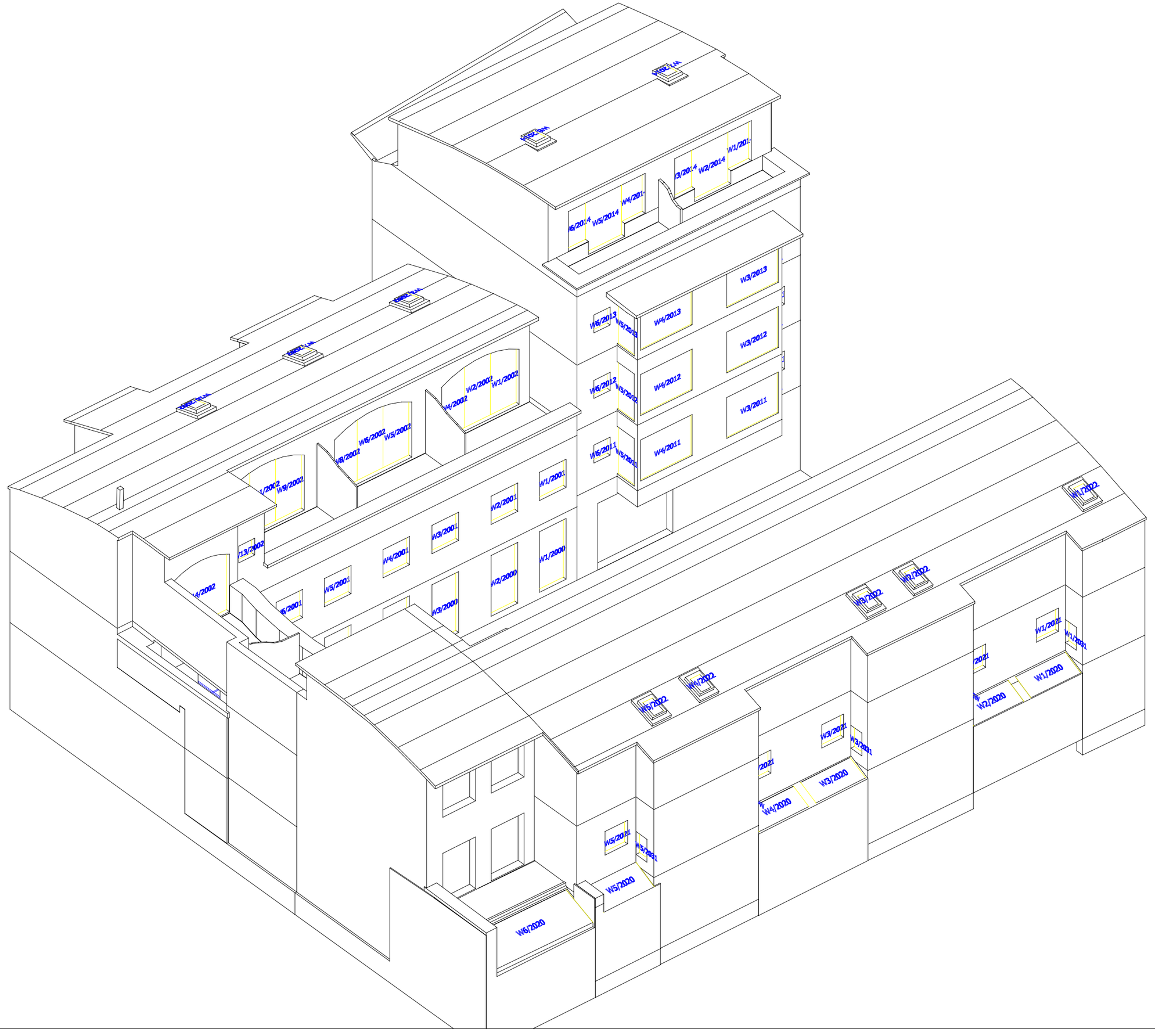

Sources of Information

GIA
IR01-3411

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

BFLS-LONDON
IR13-6816

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A	11.03.13	Initial Issue	MF
B	13.03.13	Proposal replaced (IR13)	MF

Project

ALFRED PLACE
LONDON WC1

Title

WINDOW MAP
ROSSETTI COURT

Scale: NTS
Date: 19.03.13
Drawn: JH
Checked:
Drawing No.: 6816-19
Rel No.: 04
Revision: A

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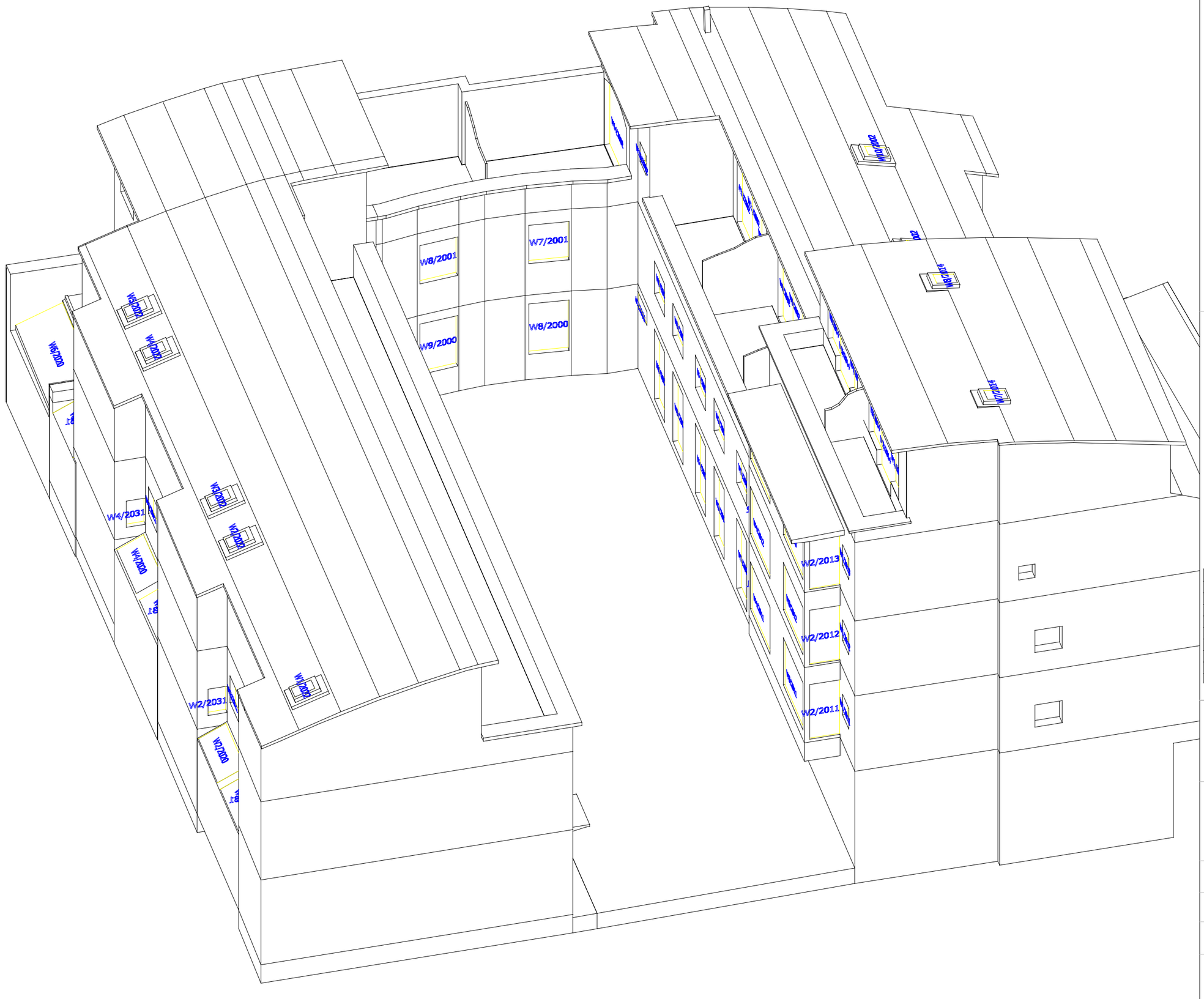

Sources of Information

GIA
IR01-3411

MALTBY LAND SURVEYS LTD
IR02-6816
IR08-6816

BFLS-LONDON
IR13-6816

DP9 (FLOOR PLANS)
IR04-6816
IR06-6816
IR07-6816

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

ALL HEIGHTS GIVEN IN mm AOD

Rev	Date	Description	Initials
A	11.03.13	Initial Issue	MF
B	13.03.13	Proposal replaced (IR13)	MF

Project

ALFRED PLACE
LONDON WC1

Title

WINDOW MAP
ROSSETTI COURT

Scale: NTS
Date: 19.03.13
Drawn: JH
Checked:
Drawing No.: 6816-20
Rel No.: 04
Revision: A

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APPENDIX 3

DAYLIGHT AND SUNLIGHT TABULATED RESULTS

Vertical Sky Component (VSC)

ALFRED PLACE
LONDON WC1
DAYLIGHT ANALYSIS

			Vertical Sky Component			
Room	Window	Room Use	Existing	Proposed	Loss	%
ROSSETTI COURT						
R1/2000	**W1/2000**	LIVINGROOM	17.79	17.74	0.05	0.28
R1/2000	**W2/2000**	LIVINGROOM	18.03	17.99	0.04	0.22
R3/2000	**W3/2000**	LIVINGROOM	17.81	17.77	0.04	0.22
R3/2000	**W4/2000**	LIVINGROOM	17.14	17.11	0.03	0.18
R5/2000	**W5/2000**	LIVINGROOM	15.61	15.59	0.02	0.13
R5/2000	**W6/2000**	LIVINGROOM	13.29	13.26	0.03	0.23
R7/2000	**W7/2000**	ENTRANCE	5.13	4.88	0.25	4.87
R8/2000	**W8/2000**	BEDROOM	15.85	15.85	0.00	0.00
R9/2000	**W9/2000**	BEDROOM	14.55	14.55	0.00	0.00
R1/2001	**W1/2001**	ASSUMED_BEDF	20.68	20.20	0.48	2.32
R2/2001	**W2/2001**	ASSUMED_BEDF	21.12	20.67	0.45	2.13
R3/2001	**W3/2001**	ASSUMED_BEDF	21.22	20.81	0.41	1.93
R4/2001	**W4/2001**	ASSUMED_BEDF	21.16	20.78	0.38	1.80
R5/2001	**W5/2001**	BEDROOM	20.95	20.61	0.34	1.62
R6/2001	**W6/2001**	BEDROOM	19.08	18.77	0.31	1.62
R7/2001	**W7/2001**	BEDROOM	21.51	21.25	0.26	1.21
R8/2001	**W8/2001**	BEDROOM	21.71	21.71	0.00	0.00
R1/2002	**W1/2002**	BEDROOM	15.87	15.57	0.30	1.89

ALFRED PLACE
LONDON WC1
DAYLIGHT ANALYSIS

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/2002	**W2/2002**	BEDROOM	19.13	18.68	0.45	2.35
R1/2002	**W3/2002**	BEDROOM	62.30	62.27	0.03	0.05
R2/2002	**W4/2002**	STORAGE	19.42	18.98	0.44	2.27
R3/2002	**W5/2002**	STORAGE	21.24	20.89	0.35	1.65
R4/2002	**W6/2002**	BEDROOM	22.83	22.43	0.40	1.75
R4/2002	**W7/2002**	BEDROOM	78.45	78.39	0.06	0.08
R4/2002	**W8/2002**	BEDROOM	21.76	21.37	0.39	1.79
R5/2002	**W9/2002**	BEDROOM	19.82	19.57	0.25	1.26
R5/2002	**W10/2002**	BEDROOM	76.65	76.60	0.05	0.07
R5/2002	**W11/2002**	BEDROOM	20.33	20.00	0.33	1.62
R6/2002	**W12/2002**	STORAGE	16.93	16.61	0.32	1.89
R7/2002	**W13/2002**		21.13	20.82	0.31	1.47
R8/2002	**W14/2002**		20.79	20.52	0.27	1.30
R1/2011	**W1/2011**	KITCHEN	14.36	13.78	0.58	4.04
R2/2011	**W2/2011**	LD	8.17	8.05	0.12	1.47
R2/2011	**W3/2011**	LD	20.40	19.83	0.57	2.79
R3/2011	**W4/2011**	LD	20.86	20.33	0.53	2.54
R3/2011	**W5/2011**	LD	14.11	14.11	0.00	0.00
R4/2011	**W6/2011**	KITCHEN	15.77	15.36	0.41	2.60
R1/2012	**W1/2012**	KITCHEN	16.13	15.49	0.64	3.97
R2/2012	**W2/2012**	LD	9.93	9.79	0.14	1.41

ALFRED PLACE
LONDON WC1
DAYLIGHT ANALYSIS

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R2/2012	**W3/2012**	LD	22.71	22.08	0.63	2.77
R3/2012	**W4/2012**	LD	23.05	22.47	0.58	2.52
R3/2012	**W5/2012**	LD	17.11	17.11	0.00	0.00
R4/2012	**W6/2012**	KITCHEN	17.17	16.73	0.44	2.56
R1/2013	**W1/2013**		15.03	14.36	0.67	4.46
R2/2013	**W2/2013**		10.66	10.51	0.15	1.41
R2/2013	**W3/2013**		21.83	21.15	0.68	3.11
R3/2013	**W4/2013**		22.05	21.43	0.62	2.81
R3/2013	**W5/2013**		17.03	17.02	0.01	0.06
R4/2013	**W6/2013**		15.84	15.36	0.48	3.03
R1/2014	**W1/2014**		27.14	26.50	0.64	2.36
R1/2014	**W2/2014**		27.34	26.71	0.63	2.30
R1/2014	**W3/2014**		27.16	26.54	0.62	2.28
R1/2014	**W7/2014**		93.91	93.84	0.07	0.07
R2/2014	**W4/2014**		27.35	26.76	0.59	2.16
R2/2014	**W5/2014**		27.66	27.09	0.57	2.06
R2/2014	**W6/2014**		27.55	26.99	0.56	2.03
R2/2014	**W8/2014**		96.11	96.05	0.06	0.06
R1/2020	**W1/2020**	KITCHEN	6.38	6.38	0.00	0.00
R2/2020	**W2/2020**	KITCHEN	6.40	6.40	0.00	0.00
R3/2020	**W3/2020**	KITCHEN	5.37	5.37	0.00	0.00
R4/2020	**W4/2020**	KITCHEN	5.13	5.13	0.00	0.00

ALFRED PLACE
LONDON WC1
DAYLIGHT ANALYSIS

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R5/2020	**W5/2020**	KITCHEN	8.68	8.68	0.00	0.00
R6/2020	**W6/2020**	KD	20.67	20.67	0.00	0.00
R1/2021	**W1/2021**	ASSUMED_BATH	7.67	7.32	0.35	4.56
R2/2021	**W2/2021**	ASSUMED_BATH	7.53	7.13	0.40	5.31
R3/2021	**W3/2021**	ASSUMED_BATH	3.81	3.74	0.07	1.84
R4/2021	**W4/2021**	ASSUMED_BATH	2.73	2.73	0.00	0.00
R5/2021	**W5/2021**	BATHROOM	3.18	3.18	0.00	0.00
R1/2022	**W1/2022**		75.29	74.18	1.11	1.47
R2/2022	**W2/2022**		75.90	75.03	0.87	1.15
R3/2022	**W3/2022**		75.91	75.12	0.79	1.04
R4/2022	**W4/2022**		75.59	75.09	0.50	0.66
R5/2022	**W5/2022**		75.52	75.11	0.41	0.54
R1/2031	**W1/2031**	STAIRS	4.41	4.41	0.00	0.00
R2/2031	**W2/2031**	STAIRS	4.16	4.16	0.00	0.00
R3/2031	**W3/2031**	STAIRS	2.85	2.85	0.00	0.00
R4/2031	**W4/2031**	STAIRS	2.75	2.75	0.00	0.00
R5/2031	**W5/2031**	STAIRS	4.52	4.52	0.00	0.00

Daylight Distribution (No SkyLine)

ALFRED PLACE
LONDON WC1
DAYLIGHT DISTRIBUTION ANALYSIS

Room/ Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
ROSSETTI COURT						
R1/2000	LIVINGROOM	184.8	91.5	86.4	5.1	5.6
R3/2000	LIVINGROOM	185.1	93.6	88.9	4.7	5.0
R5/2000	LIVINGROOM	180.8	90.6	86.6	4.0	4.4
R7/2000	ENTRANCE	69.0	33.8	33.5	0.3	0.9
R8/2000	BEDROOM	111.6	88.5	88.5	0.0	0.0
R9/2000	BEDROOM	103.8	79.2	79.2	0.0	0.0
R1/2001	ASSUMED_BEDROOM	122.9	39.4	36.4	3.0	7.6
R2/2001	ASSUMED_BEDROOM	70.0	38.2	35.7	2.5	6.5
R3/2001	ASSUMED_BEDROOM	74.1	39.4	37.3	2.1	5.3
R4/2001	ASSUMED_BEDROOM	123.8	38.4	36.1	2.3	6.0
R5/2001	BEDROOM	123.8	37.8	35.8	2.0	5.3
R6/2001	BEDROOM	73.2	38.4	36.8	1.6	4.2
R7/2001	BEDROOM	111.6	99.6	99.4	0.1	0.1
R8/2001	BEDROOM	103.8	94.9	94.9	0.0	0.0
R1/2002	BEDROOM	107.7	105.4	105.4	0.0	0.0
R2/2002	STORAGE	27.8	27.2	27.2	0.0	0.0
R3/2002	STORAGE	27.8	27.7	27.7	0.0	0.0
R4/2002	BEDROOM	107.7	107.4	107.4	0.0	0.0
R5/2002	BEDROOM	107.7	107.7	107.7	0.0	0.0
R6/2002	STORAGE	31.0	30.7	30.7	0.0	0.0
R7/2002		20.6	15.9	15.9	0.0	0.0
R8/2002		44.0	43.9	43.9	0.0	0.0
R1/2011	KITCHEN	59.0	14.6	13.4	1.2	8.2
R2/2011	LD	145.8	76.4	75.1	1.2	1.6
R3/2011	LD	145.8	71.0	71.0	0.0	0.0
R4/2011	KITCHEN	60.7	14.7	13.2	1.5	10.2
R1/2012	KITCHEN	59.0	17.1	15.8	1.3	7.6
R2/2012	LD	145.8	83.3	80.8	2.6	3.1
R3/2012	LD	145.8	76.7	76.7	0.0	0.0
R4/2012	KITCHEN	60.7	17.1	15.2	1.9	11.1
R1/2013		28.6	21.1	18.6	2.5	11.8
R2/2013		132.6	91.5	88.8	2.7	3.0
R3/2013		132.0	82.1	81.2	0.9	1.1

ALFRED PLACE
LONDON WC1
DAYLIGHT DISTRIBUTION ANALYSIS

Room/ Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R4/2013		29.8	20.8	18.8	2.0	9.6
R1/2014		202.9	202.9	202.9	0.0	0.0
R2/2014		199.8	199.8	199.8	0.0	0.0
R1/2020	KITCHEN	70.9	24.7	24.7	0.0	0.0
R2/2020	KITCHEN	70.6	25.5	25.5	0.0	0.0
R3/2020	KITCHEN	69.9	25.2	25.2	0.0	0.0
R4/2020	KITCHEN	70.2	23.2	23.2	0.0	0.0
R5/2020	KITCHEN	71.6	25.7	25.7	0.0	0.0
R6/2020	KD	243.7	92.6	92.6	0.0	0.0
R1/2021	ASSUMED_BATHROOI	66.7	9.9	8.9	1.0	10.1
R2/2021	ASSUMED_BATHROOI	67.5	9.9	9.1	0.8	8.1
R3/2021	ASSUMED_BATHROOI	67.0	6.1	6.1	0.0	0.0
R4/2021	ASSUMED_BATHROOI	68.2	0.0	0.0	0.0	#DIV/0!
R5/2021	BATHROOM	68.5	0.8	0.8	0.0	0.0
R1/2022		91.5	71.6	69.3	2.3	3.2
R2/2022		85.5	64.7	62.6	2.0	3.1
R3/2022		84.7	63.2	61.9	1.3	2.1
R4/2022		86.6	62.3	61.8	0.5	0.8
R5/2022		85.7	61.1	61.0	0.1	0.2
R1/2031	STAIRS	45.5	18.7	18.7	0.0	0.0
R2/2031	STAIRS	39.2	14.0	14.0	0.0	0.0
R3/2031	STAIRS	38.9	11.0	11.0	0.0	0.0
R4/2031	STAIRS	39.1	12.6	12.6	0.0	0.0
R5/2031	STAIRS	39.1	14.5	14.5	0.0	0.0

Annual Probable Sunlight Hours (APSH)

ALFRED PLACE
LONDON WC1
SUNLIGHT ANALYSIS

			Window						Room					
			Existing		Proposed				Existing		Proposed			
Room	Window	Room Use	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
ROSSETTI COURT														
R1/2000	**W1/2000**	LIVINGROOM	5	26	5	26	0.0	0.0						
R1/2000	**W2/2000**	LIVINGROOM	5	30	4	29	20.0	3.3	5	30	5	30	0.0	0.0
R3/2000	**W3/2000**	LIVINGROOM	5	31	4	30	20.0	3.2						
R3/2000	**W4/2000**	LIVINGROOM	7	34	6	33	14.3	2.9	7	34	6	33	14.3	2.9
R5/2000	**W5/2000**	LIVINGROOM	8	34	8	34	0.0	0.0						
R5/2000	**W6/2000**	LIVINGROOM	8	32	8	32	0.0	0.0	8	34	8	34	0.0	0.0
R7/2000	**W7/2000**	ENTRANCE	7	15	7	15	0.0	0.0	7	15	7	15	0.0	0.0
R8/2000	**W8/2000**	BEDROOM	6	31	6	31	0.0	0.0	6	31	6	31	0.0	0.0
R9/2000	**W9/2000**	BEDROOM	2	22	2	22	0.0	0.0	2	22	2	22	0.0	0.0
R1/2001	**W1/2001**	ASSUMED_BEDR	8	32	8	32	0.0	0.0	8	32	8	32	0.0	0.0
R2/2001	**W2/2001**	ASSUMED_BEDR	8	34	8	34	0.0	0.0	8	34	8	34	0.0	0.0
R3/2001	**W3/2001**	ASSUMED_BEDR	9	37	9	37	0.0	0.0	9	37	9	37	0.0	0.0
R4/2001	**W4/2001**	ASSUMED_BEDR	10	39	10	39	0.0	0.0	10	39	10	39	0.0	0.0
R5/2001	**W5/2001**	BEDROOM	11	41	11	41	0.0	0.0	11	41	11	41	0.0	0.0
R6/2001	**W6/2001**	BEDROOM	10	39	10	39	0.0	0.0	10	39	10	39	0.0	0.0

ALFRED PLACE
LONDON WC1
SUNLIGHT ANALYSIS

			Window						Room					
			Existing		Proposed				Existing		Proposed			
Room	Window	Room Use	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R7/2001	W7/2001	BEDROOM	10	44	9	43	10.0	2.3	10	44	9	43	10.0	2.3
R8/2001	W8/2001	BEDROOM	6	39	6	39	0.0	0.0	6	39	6	39	0.0	0.0
R1/2002	W1/2002	BEDROOM	0	16	0	16	-	0.0						
R1/2002	W2/2002	BEDROOM	3	24	2	23	33.3	4.2	3	24	2	23	33.3	4.2
R2/2002	W4/2002	STORAGE	5	31	4	30	20.0	3.2	5	31	4	30	20.0	3.2
R3/2002	W5/2002	STORAGE	5	33	5	33	0.0	0.0	5	33	5	33	0.0	0.0
R4/2002	W6/2002	BEDROOM	9	39	9	39	0.0	0.0						
R4/2002	W8/2002	BEDROOM	10	39	10	39	0.0	0.0	10	40	10	40	0.0	0.0
R5/2002	W9/2002	BEDROOM	4	31	4	31	0.0	0.0						
R5/2002	W11/2002	BEDROOM	11	39	11	39	0.0	0.0	11	40	11	40	0.0	0.0
R6/2002	W12/2002	STORAGE	13	38	13	38	0.0	0.0	13	38	13	38	0.0	0.0
R7/2002	W13/2002		14	47	14	47	0.0	0.0	14	47	14	47	0.0	0.0
R8/2002	W14/2002		14	45	13	44	7.1	2.2	14	45	13	44	7.1	2.2
R1/2011	W1/2011	KITCHEN	3	29	2	28	33.3	3.4	3	29	2	28	33.3	3.4
R2/2011	W2/2011	LD	3	23	2	22	33.3	4.3						
R2/2011	W3/2011	LD	5	34	5	34	0.0	0.0	5	34	5	34	0.0	0.0

ALFRED PLACE
LONDON WC1
SUNLIGHT ANALYSIS

			Window						Room					
			Existing		Proposed				Existing		Proposed			
Room	Window	Room Use	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R3/2011	W4/2011	LD	6	35	6	35	0.0	0.0	6	35	6	35	0.0	0.0
R4/2011	W6/2011	KITCHEN	1	17	1	17	0.0	0.0	1	17	1	17	0.0	0.0
R1/2012	W1/2012	KITCHEN	5	36	4	34	20.0	5.6	5	36	4	34	20.0	5.6
R2/2012	W2/2012	LD	6	29	5	28	16.7	3.4						
R2/2012	W3/2012	LD	7	38	6	37	14.3	2.6	8	39	7	38	12.5	2.6
R3/2012	W4/2012	LD	9	40	8	39	11.1	2.5	9	40	8	39	11.1	2.5
R4/2012	W6/2012	KITCHEN	2	20	2	20	0.0	0.0	2	20	2	20	0.0	0.0
R1/2013	W1/2013		9	38	8	37	11.1	2.6	9	38	8	37	11.1	2.6
R2/2013	W2/2013		9	30	8	29	11.1	3.3						
R2/2013	W3/2013		11	40	10	39	9.1	2.5	11	47	10	46	9.1	2.1
R3/2013	W4/2013		11	40	11	40	0.0	0.0	11	40	11	40	0.0	0.0
R4/2013	W6/2013		1	17	0	16	100.0	5.9	1	17	0	16	100.0	5.9
R1/2014	W1/2014		13	49	11	47	15.4	4.1						
R1/2014	W2/2014		13	47	12	46	7.7	2.1						
R1/2014	W3/2014		15	49	13	47	13.3	4.1	15	51	13	49	13.3	3.9
R2/2014	W4/2014		15	49	13	47	13.3	4.1						

ALFRED PLACE
LONDON WC1
SUNLIGHT ANALYSIS

			Window						Room					
			Existing		Proposed				Existing		Proposed			
Room	Window	Room Use	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R2/2014	W5/2014		15	49	13	47	13.3	4.1						
R2/2014	W6/2014		16	50	14	48	12.5	4.0	17	51	15	49	11.8	3.9
R1/2020	W1/2020	KITCHEN	0	0	0	0	-	-	0	0	0	0	-	-
R2/2020	W2/2020	KITCHEN	0	1	0	1	-	0.0	0	1	0	1	-	0.0
R3/2020	W3/2020	KITCHEN	0	0	0	0	-	-	0	0	0	0	-	-
R4/2020	W4/2020	KITCHEN	0	1	0	1	-	0.0	0	1	0	1	-	0.0
R5/2020	W5/2020	KITCHEN	0	0	0	0	-	-	0	0	0	0	-	-
R6/2020	W6/2020	KD	0	2	0	2	-	0.0	0	2	0	2	-	0.0
R1/2021	W1/2021	ASSUMED_BATH	0	4	0	4	-	0.0	0	4	0	4	-	0.0
R2/2021	W2/2021	ASSUMED_BATH	0	15	0	14	-	6.7	0	15	0	14	-	6.7
R3/2021	W3/2021	ASSUMED_BATH	0	2	0	2	-	0.0	0	2	0	2	-	0.0
R4/2021	W4/2021	ASSUMED_BATH	0	6	0	6	-	0.0	0	6	0	6	-	0.0
R5/2021	W5/2021	BATHROOM	0	0	0	0	-	-	0	0	0	0	-	-
R1/2022	W1/2022		7	43	7	42	0.0	2.3	7	43	7	42	0.0	2.3
R2/2022	W2/2022		9	50	7	47	22.2	6.0	9	50	7	47	22.2	6.0

ALFRED PLACE
LONDON WC1
SUNLIGHT ANALYSIS

			Window						Room					
			Existing		Proposed				Existing		Proposed			
Room	Window	Room Use	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R3/2022	W3/2022		9	52	7	49	22.2	5.8	9	52	7	49	22.2	5.8
R4/2022	W4/2022		9	51	7	49	22.2	3.9	9	51	7	49	22.2	3.9
R5/2022	W5/2022		10	52	8	50	20.0	3.8	10	52	8	50	20.0	3.8
R2/2031	W2/2031	STAIRS	1	8	1	8	0.0	0.0	1	8	1	8	0.0	0.0
R4/2031	W4/2031	STAIRS	1	6	1	6	0.0	0.0	1	6	1	6	0.0	0.0

Appendix 4

Overshadowing Assessment

Overshadowing Assessment

Overshadowing Assessment

Alfred Place

Project No: 6816

March 19, 2013

DAYLIGHT+SOLAR DESIGN

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Client	Wainbridge
Architect	Flanagan Lawrence Ltd
Project Title	Alfred Place
Project Number	6816
Report Title	Overshadowing Assessment
Dated	March 19, 2013

Prepared by	VL
Checked by	ML
Type	Planning

Revisions		Date:	Notes:	Signed:
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1. BRE guidelines

The Building Research Establishment (BRE) have set out in their handbook *Site Layout Planning for Daylight and Sunlight a Guide to Good Practice (2011),* guidelines and methodology for the measurement and assessment of daylight and sunlight within proposed buildings. This document states that it is also intended to be used in conjunction with the interior daylight recommendations found within the *British Standard BS8206-2:2008* and *The Applications Manual on Window Design* of the Chartered Institution of Building Services Engineers (CIBSE).

The guide also provides advice on site layout planning to determine the quality of daylight and sunlight within open spaces between buildings.

It is important to note, however, that this document is a guide whose stated aim *"is to help rather than constrain the designer".*

The document provides advice, but also clearly states that it *"is not mandatory and this document should not be seen as an instrument of planning policy."* The report acknowledges also in its introduction that *"in special circumstances the developer or planning authority may wish to use different target values. For example, in a historic City centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."*

It is an inevitable consequence of the built up urban environment that daylight and sunlight will be more limited in these areas. It is well acknowledged that in such situations there may be many other conflicting and potentially more important planning and urban design matters to consider other than just the provision of ideal levels of daylight and sunlight.

1.1. Overshadowing

The BRE guidance in respect of overshadowing of amenity spaces is set out in section 3.3 of the handbook. Here it states as follows:

"Sunlight in the spaces between buildings has an important impact on the overall appearance and ambiance of a development. It is valuable for a number of reasons:

- *To provide attractive sunlit views (all year)*
- *To make outdoor activities, like sitting out and children's play more pleasant (mainly during the warmer months)*
- *To encourage plant growth (mainly in spring and summer)*
- *To dry out the ground, reducing moss and slime (mainly during the colder months)*
- *To melt frost, ice and snow (in winter)*
- *To dry clothes (all year)"*

Again, it must be acknowledged that in urban areas the availability of sunlight on the ground is a factor which is significantly controlled by the existing urban fabric around the site in question and so may have very little to do with the form of the development itself. Likewise there may be many other urban design, planning and site constraints which determine and run contrary to the best form, siting and location of a proposed development in terms of availability of sun on the ground.

The summary of section 3.3 of the guide states as follows:

"3. 3 .17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at east two hours of sunlight on 21 March."

2. Methodology

In order to undertake the daylight and sunlight assessments set out above, and in accordance with your instructions, we have prepared a three dimensional computer model and used specialist lighting simulation software.

The three dimensional representation of the proposed development has been modelled using the scheme drawings provided to us by Flanagan Lawrence Ltd. This has been placed in the context of its surrounding buildings which have been modelled from survey information, photogrammetry, OS and site photographs. This allows for a precise model, which in turn ensures that analysis accurately represents the amount of daylight and sunlight available to the building facades, internal and external spaces, considering all of the surrounding obstructions and orientation.

Figure 1: Plan View

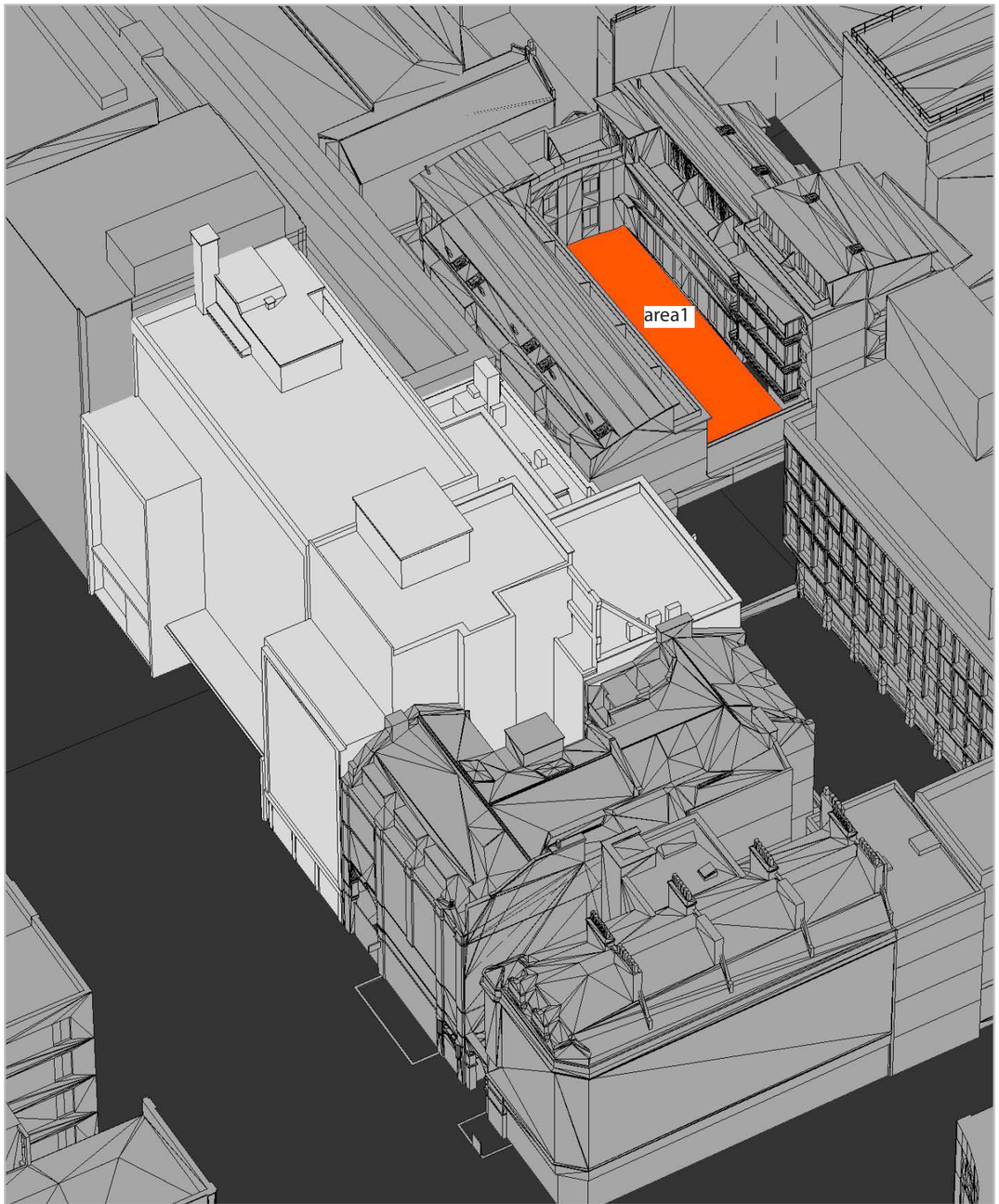

Figure 3: Bird's Eye View

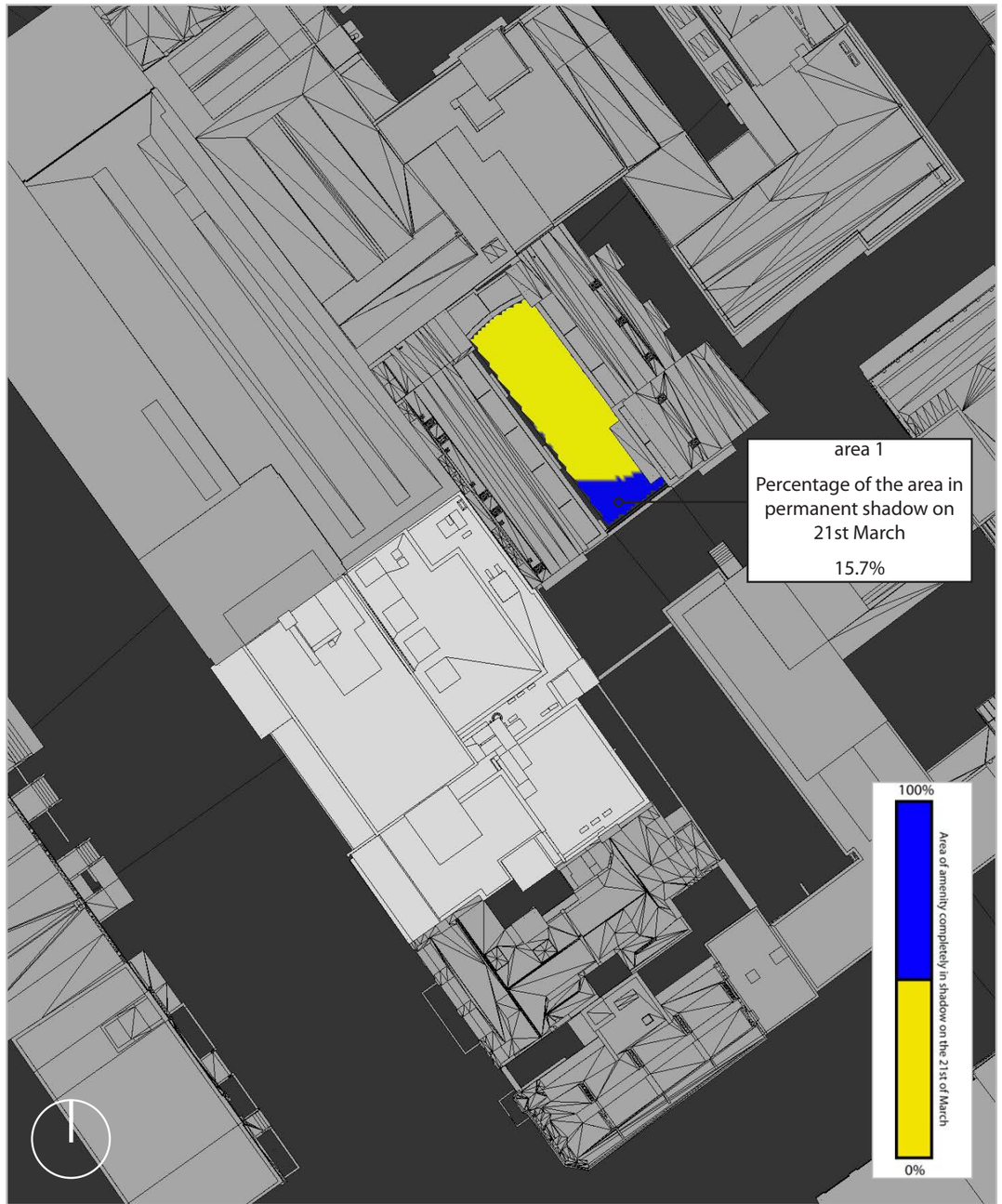

Figure 2: Plan View

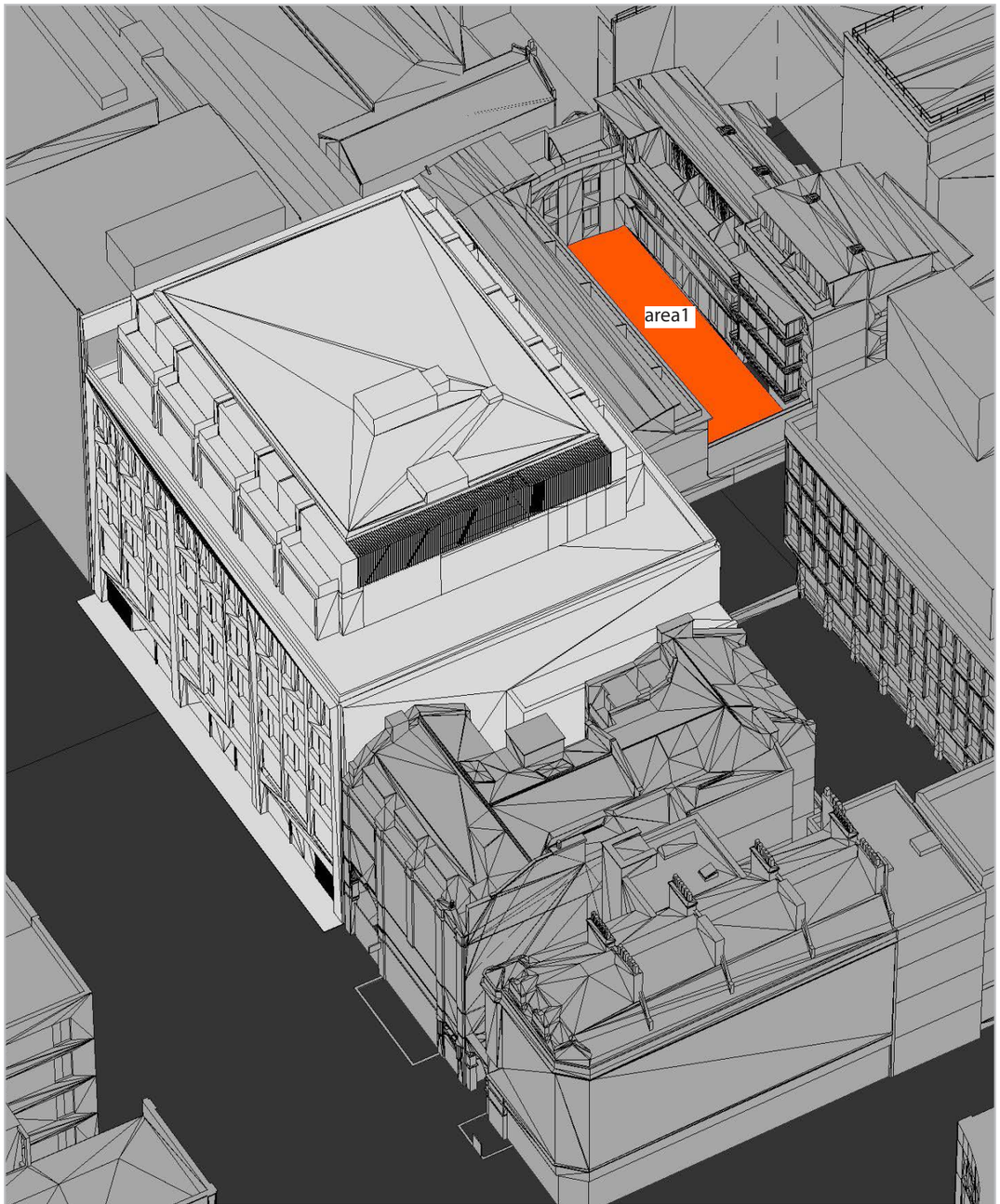

Figure 5: Bird's Eye View

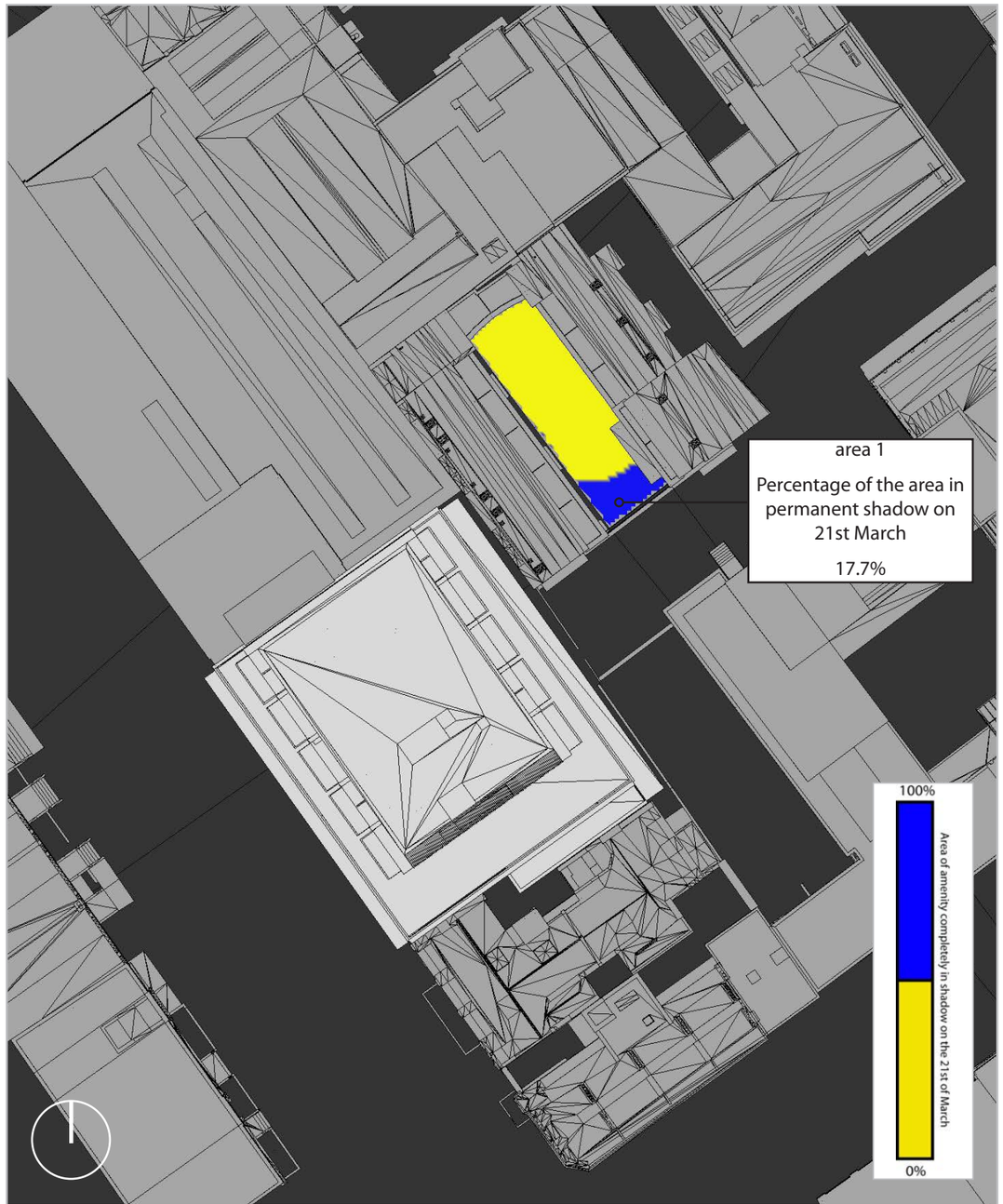

Figure 4: Plan View

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