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Daylight and Sunlight Report for the Proposed Development at Kirkman House, 12-14 Whitfield Street, London W1T 2RF

Prepared for	**Planning Potential**
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Development at Kirkman House, 12-14 Whitfield Street,
London W1T 2RF

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1. Executive Summary

1.1 Scope

1.1.1 We have been instructed by Planning Potential to determine the impact upon the daylight and sunlight amenity of the existing surrounding buildings which may arise from the proposed developments at Kirkman House, 12-14 Whitfield Street, London W1T 2RF. The development envisages provision of a roof top and rear extension to the existing mixed-use building, partly in the existing building envelope and partly in the proposed extension.

1.1.2 We have also been instructed to assess the potential for good daylight & sunlight levels within the proposed units themselves. We have reported on this in a separate document for clarity.

1.2 Assessment Criteria

1.2.1 To ensure that this assessment can be appropriately evaluated against London Borough of Camden's planning policy, daylight and sunlight calculations have been undertaken in accordance with the Building Research Establishment Report `Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' 2nd Edition, 2011(the "BRE guide") and also British Standard 8206 – 2: 2008 – `Lighting for Buildings – Part 2: Code of Practice for Daylighting', to which the BRE guide refers. The standards and tests applied within this assessment are briefly described in Appendix A.

1.3 Summary of Effect of Proposed Development on Existing Surrounding Buildings

1.3.1 A summary of the assessment results and findings for the main daylight and sunlight metrics is provided below. A more detailed property-by-property consideration of the results and findings is provided later in this report.

Daylight

1.3.2 Of the 34 windows assessed for Vertical Sky Component (VSC), 32 (94%) will continue to meet the target values as set out in the BRE guide, achieving either a VSC of, or above, 27% in the proposed situation, or they will experience a ratio reduction of no more than 0.8 times their former value.

1.3.3 Both of the windows that fall short of the BRE numerical criteria are located on the front elevation of Crab Tree Place, one on the second floor and the other on the third floor. However, from our research, we understand that both the windows serve bedrooms, the BRE guide considers bedrooms to have a lower requirement for daylight, due to the predominant nocturnal use. As such, the significance of the shortfalls becomes less material. Moreover, the windows will experience a marginal ratio reduction shortfall of 0.75 and 0.78 respectively, which is just below the target of 0.8 ratio reduction from its former value. We therefore consider the shortfalls are negligible and immaterial in relative terms.

1.3.4 Furthermore, we have also assessed the rooms within the surrounding properties to determine the 'No Sky Line' (NSL). Our analysis demonstrates 29 out of the 30 rooms assessed will continue to meet the BRE's target values for daylight (97% will meet the criteria). The one room which falls short of the target criteria is, again, understood to be a bedroom and, as noted in in paragraph 2.2.8 of the BRE Guide, is less important in terms of daylight. The results of our assessment are therefore considered to be essentially compliant with the BRE Guide's recommendations.

Sunlight

1.3.5 Sunlight amenity is relevant to windows that face within 90 degrees of due south only. There are 3 such windows. Of the 3 windows assessed for Annual Probable Sunlight Hours (APSH), all (100%) will meet the BRE's numerical criteria for sunlight. We therefore conclude that the properties surrounding the proposed development will not be materially affected in terms of sunlight amenity.

Overshadowing

1.3.6 No gardens or amenity spaces, as defined in the BRE guide, are located close enough to the proposed development to be adversely affected by overshadowing. No overshadowing assessments have therefore been completed.

1.4 Overall

1.4.1 Overall, it is evident from the results of our assessment that the proposed roof top and rear extension development at Kirkman House,12-14 Whitfield Street will have no material effect on the daylight and sunlight amenity enjoyed by the surrounding residential properties.

1.4.2 We believe that our assessment results demonstrate that the proposed roof top and rear extension has been thoughtfully designed, such that the neighbouring windows and rooms are not adversely affected. We consider that the proposals are fully supportable in that they enable adjoining properties to retain sufficient daylight and sunlight amenity, and, in so doing, satisfy the Council's planning policy objectives.

2. Introduction

2.1 Scope

2.1.1 We have been instructed by Planning Potential to determine the impact upon the daylight and sunlight amenity of certain existing buildings surrounding Kirkman House, 12-14 Whitfield Street, London W1T 2RF (the "Application Site") which may arise from the proposed development at the Application Site. We have been asked to limit our assessment to those surrounding/adjoining buildings containing in part, or in whole, residential uses.

2.1.2 The development envisages provision of residential accommodation at roof top level, and also in a rear extension to the existing mixed-use building. The new accommodation will be formed, partly within in the existing building envelope and partly in a proposed new rear extension.

2.1.3 We have also been instructed to assess the potential for good daylight & sunlight levels within the proposed units themselves. We have reported on this in a separate document for clarity.

2.2 Planning Policy

2.2.1 Camden Council's Local Development Framework, Development Policy, refers to the following documents as those being used to review adequacy of daylight and sunlight.

2.2.2 Building Research Establishment (BRE) Report "Site Layout Planning for Daylight and Sunlight – a guide to good practice, 2nd Edition, 2011" ("the BRE Guide").

2.2.3 This Report is therefore based on the BRE guide which contains the accepted methodologies for assessing daylight and sunlight and the recommended targets.

2.2.4 Camden Council's Local Plan (2017) contains the following policy guidance under Section 6 – Protecting Amenity, Policy A1 Managing the Impact of Development:

Sunlight, daylight and overshadowing

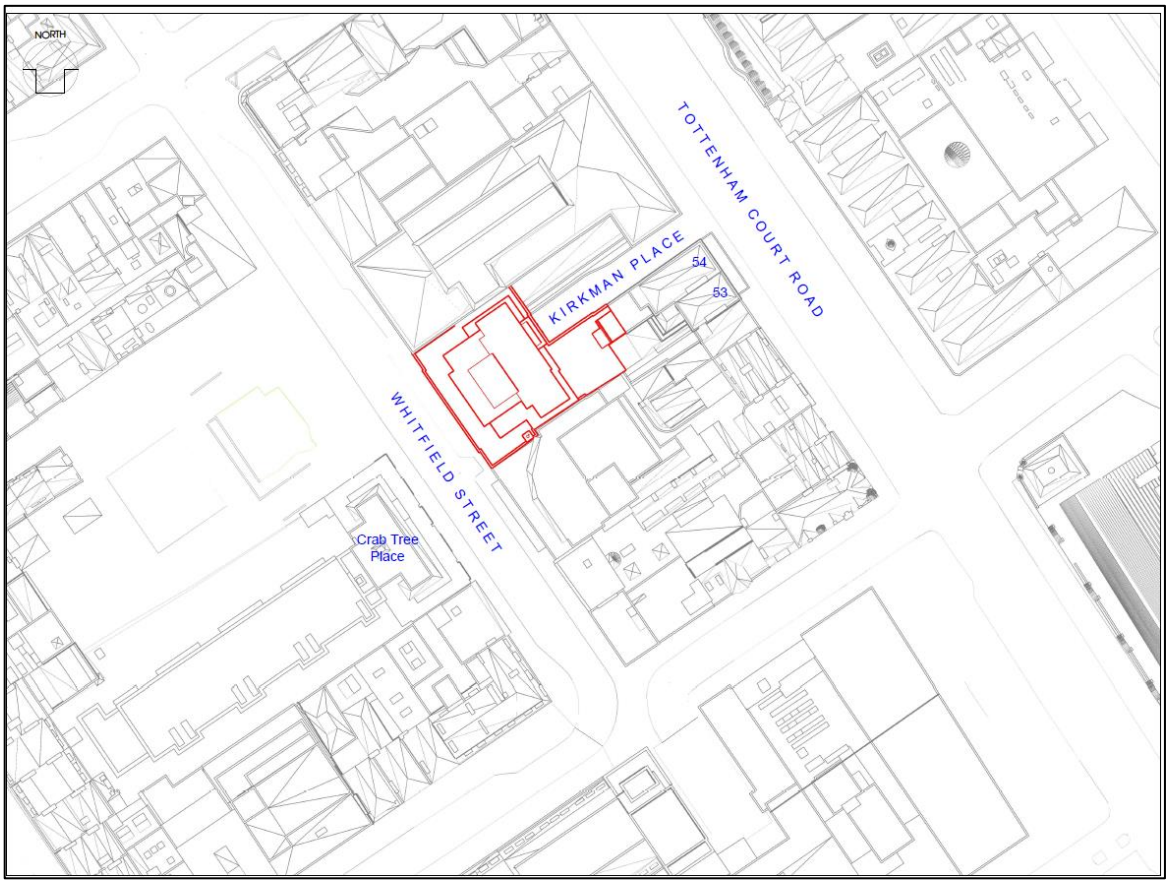
> *6.5 Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011). Further detail can be found within our supplementary planning document Camden Planning Guidance.*

2.3 Assessment Criteria

2.3.1 To ensure that this assessment can be appropriately evaluated against Camden Council's planning policy, daylight and sunlight calculations have been undertaken in accordance with the 'BRE guide' and also on BS8206–2: 2008 to which the BRE guide refers. The assessment methodologies and targets applied are briefly described in Appendix A.

2.3.2 The existing buildings adjacent to the Application Site which are believed to contain in part, or in whole, residential accommodation are shown on the Site Plan (see below) and comprise:

Name/Address of Building	Assumed Use	Position in Relation to the Development
53 Tottenham Court Road	Residential	East
54 Tottenham Court Road	Residential	East
Crab Tree Place	Residential	West



2.4 Limitations

2.4.1 Our assessment is based on the scheme drawings provided by LAP Architects as identified in the table below:

Title	Date
LAP Architects	15 May 2019
8491 Kirkman House proposed drawings.dwg	
PROMAP.CO.UK	
High Detail 3D Zmap: 203404314_1 77361 - Kirkman House_130519_Solids XY@NE.dwg	13 May 2019

2.4.2 A site inspection was undertaken on 15 April 2019 to record the location and nature of the windows to the relevant surrounding buildings. Where no elevation survey data has been provided to us, we have estimated approximate window heights and positions in the surrounding existing properties from data gathered during our site inspection.

2.4.3 For the majority of surrounding properties, internal floor plans/layouts were available from Camden Council's planning portal or estate agent's websites, we have utilised them within the 3D model of surrounding properties. Where this information is not available, we have made reasonable assumptions based on those properties where layout information is available, as well as our knowledge of construction and building types.

3. Assessment & Results – Impact of New Development on Existing, Surrounding Buildings

3.1 Daylight

3.1.1 In accordance with the BRE guide (see also Appendix A) and the findings of our site inspection, the following buildings required assessment:

- 53 Tottenham Court Road.
- 54 Tottenham Court Road.
- Crab Tree Place.

3.1.2 We have excluded 51 Tottenham Court Road as it is not believed to accommodate any residential uses.

3.1.3 We have also excluded 52 Tottenham Court Road from the study on the basis of the floor plans we obtained for this property from Camden Council's planning portal. Although this property is in residential use on the 1st, 2nd and 3rd floor, the windows that are located in the rear elevation and sit opposite the proposed development are expected to serve circulation spaces. Circulation spaces do not need to be analysed according to the recommendations in the BRE guide(paragraph 2.2.2).

53 Tottenham Court Road

3.1.4 53 Tottenham Court Road is located to the east of the proposed development with its rear elevation windows facing the site. It is a mixed-use, part residential and part commercial property.

3.1.5 For the VSC assessment, all windows meet the BRE's numerical criteria.

3.1.6 For the NSL assessment, all rooms meet the BRE's numerical criteria.

3.1.7 For the APSH assessment, all windows meet the BRE's numerical criteria.

3.1.8 The proposed development is not expected to affect the daylight or sunlight amenity of this property.

54 Tottenham Court Road

3.1.9 54 Tottenham Court Road is located to the east of the proposed development with its rear elevation windows facing the site. It is a mixed-use, part residential and part commercial property.

3.1.10 For the VSC assessment, all windows meet the BRE's numerical criteria.

3.1.11 For the NSL assessment, all rooms meet the BRE's numerical criteria.

3.1.12 For APSH, no windows were assessed as none face within 90 degree of due south over the proposed development.

3.1.13 The proposed development is not expected to affect the daylight or sunlight amenity of this property.

Crab Tree Place

3.1.14 Crab Tree Place is a four-storey block of flats located along Whitfield Street to the west of the proposed development.

3.1.15 For the VSC assessment, two of the 24 windows assessed will not meet the BRE's numerical criteria. One is located on the second floor and the other on the third floor. However, from our research, we understand that both the windows serve bedrooms., The BRE guide considers bedrooms to have a lower requirement for daylight, due to the predominant nocturnal use. As such, the significance of the shortfalls become less material. Moreover, the windows will experience only a marginal ratio reduction shortfall of 0.75 and 0.78 respectively, which is just below the target of 0.8 ratio reduction from its former value. We therefore consider the shortfalls are negligible and could be acceptable.

3.1.16 For the NSL assessment, only one of the 24 rooms will not meet the BRE's numerical criteria. The one room in question is understood to be a bedroom and, as noted in paragraph 2.2.8 of the BRE Guide, daylight distribution in such rooms is considered less important in amenity terms. The results of our assessment are therefor considered to be very substantially compliant with the BRE Guide's recommendations.

3.1.17 For APSH, no windows were assessed as none face within 90 degree of due south over the proposed development.

3.1.18 Overall, the daylight & sunlight amenity pertaining Crab Tree Place is not considered to be materially impacted by the proposed development with the two shortfalls being minor in nature.

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Appendix A

Assessments to be Applied

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Introduction

The main purpose of the guidelines in the Building Research Establishment Report "Site Layout Planning for Daylight and Sunlight – a guide to good practice 2011, 2nd Edition" ("the BRE guide") is to assist in the consideration of the relationship of new and existing buildings to ensure that each retains a potential to achieve good daylighting and sunlighting levels. That is, by following and satisfying the tests contained in the guidelines, new and existing buildings should be sufficiently spaced apart in relation to their relative heights so that both have the potential to achieve good levels of daylight and sunlight. The guidelines have been drafted primarily for use with low density suburban developments and should therefore be used flexibly when dealing with dense urban sites and extensions to existing buildings, a fact recognised by the BRE Report's author in the Introduction where Dr Paul Littlefair says:

'The Guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not been seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design…… In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings…..'

In many cases in low-rise housing, meeting the criteria for daylight and sunlight may mean that the BRE criteria for other amenity considerations such as *privacy* and *sense of enclosure* are also satisfied.

The BRE guide states that recommended minimum privacy distances (in cases where windows of habitable rooms face each other in low-rise residential property), as defined by each individual Local Authority's policies, vary widely, from 18-35m[1]. For two-storey properties a spacing within this range would almost certainly also satisfy the BRE guide's daylighting requirements as it complies with the 25^0 rule and will almost certainly satisfy the `Three times height' test too (as discussed more fully below). However, the specific context of each development will be taken into account and Local Authorities may relax the stated minimum, for instance, in built-up areas where this would lead to an inefficient use of land. Conversely, greater distances may be required between higher buildings, in order to satisfy daylighting and sunlighting requirements. It is important to recognize also that privacy can also be achieved by other means: design, orientation and screening can all play a key role and may also contribute towards reducing the theoretical `minimum' distance.

A sense of enclosure is also important as the perceived quality of an outdoor space may be reduced if it is too large in the context of the surrounding buildings. In urban settings the BRE guide suggests a spacing-to-height ratio of 2.5:1 would provide a comfortable environment, whilst not obstructing too much natural light: this ratio also approximates the 25^0 rule.

[1] The commonest minimum privacy distance is 21m (Householder Development Consents Review: Implementation of Recommendations – Department for Communities and Local Government – May 2007)

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Daylight

The criteria for protecting daylight to existing buildings are contained in Section 2.2 and Appendix C of the BRE guide. There are various methods of measuring and assessing daylight and the choice of test depends on the circumstances of each particular window. For example, greater protection should be afforded to windows which serve habitable dwellings and, in particular, those serving living rooms and family kitchens, with a lower requirement required for bedrooms. The BRE guide states that circulation spaces and bathrooms need not be tested as they are not considered to require good levels of daylight. In addition, for rooms with more than one window, secondary windows do not require assessment if it is established that the room is already sufficiently lit through the principal window.

The tests should also be applied to non-domestic uses such as offices and workplaces where such uses will ordinarily have a reasonable expectation of daylight and where the areas may be considered a principal workplace.

The BRE has developed a series of tests to determine whether daylighting levels within new developments and rooms within existing buildings surrounding new developments will satisfy or continue to satisfy a range of daylighting criteria.

Note: Not every single window is assessed separately, only a representative sample, from which conclusions may be drawn regarding other nearby dwellings.

Daylighting Tests

'Three times height' test - If the distance of each part of the new development from the existing windows is three or more times its height above the centre of the existing window then loss of light to the existing windows need not be analysed. If the proposed development is taller or closer than this then the 25^0 test will need to be carried out.

25^0 test – a very simple test that should only be used where the proposed development is of a reasonably uniform profile and is directly opposite the existing building. Its use is most appropriate for low density well-spaced developments such as new sub-urban housing schemes and often it is not a particularly useful tool for assessing urban and in-fill sites. In brief, where the new development subtends to an angle of less than 25^0 to the centre of the lowest window of an existing neighbouring building, it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building. Equally, the new development itself is also likely to have the potential for good daylighting. If the angle is more than 25^0 then more detailed tests are required, as outlined below.

VSC Test - the VSC is a unit of measurement that represents the amount of available daylight from the sky, received at a particular window. It is measured on the outside face of the window. The 'unit' is expressed as a percentage as it is the ratio between the amount of sky visible at the given reference point compared to the amount of light that would be available from a totally unobstructed hemisphere of sky. To put this unit of measurement into perspective, the maximum percentage value for a window with a completely unobstructed outlook (i.e. with a totally unobstructed view through 90° in every direction) is 40%.

The target figure for VSC recommended by the BRE is 27%. A VSC of 27% is a relatively good level of daylight and the level we would expect to find for habitable rooms with windows on principal elevations. However, this level is often difficult to achieve on secondary elevations and in built-up urban environments. For comparison, a window receiving 27% VSC is approximately equivalent to a window that would have a continuous obstruction opposite it which subtends an angle of 25° (i.e. the same results as would be found utilising the 25^0 Test).

Where tests show that the new development itself meets the 27% VSC target this is a good indication that the development will enjoy good daylighting and further tests can then be carried out to corroborate this (see under).

Through research the BRE have determined that in existing buildings daylight (and sunlight levels) can be reduced by approximately 20% of their original value before the loss is materially noticeable. It is for this reason that they consider that a 20% reduction is permissible in circumstances where the existing VSC value is below the 27% threshold. For existing buildings once this has been established it is then necessary to determine whether the distribution of daylight inside each room meets the required standards (see under).

Daylight Distribution (DD) Test – This test looks at the position of the "No-Sky Line" (NSL) – that is, the line that divides the points on the working plane (0.7m from floor level in offices and 0.85m in dwellings and industrial spaces) which can and cannot see the sky. The BRE guide suggests that areas beyond the NSL may look dark and gloomy compared with the rest of the room and BS8206 states that electric lighting is likely to be needed if a significant part of the working plane (normally no more than 20%) lies beyond it.

In new developments no more than 20% of a room's area should be beyond the NSL. For existing buildings the BRE guide states that if, following the construction of a new development, the NSL moves so that the area beyond the NSL increases by more than 20%, then daylighting is likely to be seriously affected.

The guide suggests that in houses, living rooms, dining rooms and kitchens should be tested: bedrooms are deemed less important, although should nevertheless be analysed. In other buildings each main room where daylight is expected should be investigated.

ADF Test –The ADF (Average Daylight Factor) test takes account of the interior dimensions and surface reflectance within the room being tested as well as the amount of sky visible from the window. For this reason it is considered a more detailed and representative measure of the adequacy of light. The minimum ADF values recommended in BS8206 Part 2 are: 2% for family kitchens (and rooms containing kitchens); 1.5% for living rooms; and 1% for bedrooms. This is a test used in assessing new developments, although, in certain circumstances, it may be used as a supplementary test in the assessment of daylighting in existing buildings, particularly where more than one window serves a room.

Room depth ratio test - This is a test for new developments looking at the relative dimensions of each room (principally its depth) and its window(s) to ensure that the rear half of a room will receive sufficient daylight so as not to appear gloomy.

Sunlight

Sunlight is an important 'amenity' in both domestic and non-domestic settings. The way in which a building's windows are orientated and the overall position of a building on a site will have an impact on the sunlight it receives but, importantly, will also have an effect on the sunlight neighbouring buildings receive. Unlike daylight, which is non-directional and assumes that light from the sky is uniform, the availability of sunlight is dependent on direction. That is, as the United Kingdom is in the northern hemisphere, we receive virtually all of our sunlight from the south. The availability of sunlight is therefore dependent on the orientation of the window or area of ground being assessed relative to the position of due south.

In new developments the BRE guide suggests that dwellings should aim to have at least one main living room which faces the southern or western parts of the sky so as to ensure that it receives a reasonable amount of sunlight. Where groups of dwellings are planned the Guide states that site layout design should aim to maximise the number of dwellings with a main living room that meet sunlight criteria. Where a window wall faces within 90^0 of due south and no obstruction subtends to angle of more than 25^0 to the horizontal or where the window wall faces within 20^0 of due south and the reference point has a VSC of at least 27% then sunlighting will meet the required standards: failing that the Annual Probable Sunlight Hours (APSH) need to be analysed. APSH means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloud for the location in question. If the APSH tests reveal that the new development will receive at least one quarter of the available APSH, including at least 5% of APSH during the winter months (from 21 September to 21 March), then the requirements are satisfied. It should be noted that if a room has two windows on opposite walls, the APSH due to each can be added together.

The availability of sunlight is also an important factor when looking at the impact of a proposed development on the existing surrounding buildings. APSH tests will be required where one or more of the following are true:

- The 'Three times height' test is failed (see 'Daylight' above);
- The proposed development is situated within 90^0 of due south of an existing building's main window wall and he new building subtends to angle of more tha^n 25^0 to the horizontal;
- The window wall faces within 20^0 of due south and a point at the centre of the window on the outside face of the window wall (the reference point) has a VSC of less than 27%.

Where APSH testing is required it is similar to the test for the proposed development. That is to say that compliance will be demonstrated where a room receives:

- At least 25% of the APSH (including at least 5% in the winter months), or
- At least 0.8 times its former sunlight hours during either period, or
- A reduction of no more than 4% APSH over the year.

The Guide stresses that the target values it gives are purely advisory, especially in circumstances such as: the presence of balconies (which can overhang windows, obstructing light); when an existing building stands unusually close to the common boundary with the new development and; where the new development needs to match the height and proportion of existing nearby buildings. In circumstances like these a larger reduction in sunlight may be necessary.

The sunlight criteria in the BRE guide primarily apply to windows serving living rooms of an existing dwelling. This is in contrast to the daylight criteria which apply to kitchens and bedrooms as well as living rooms. Having said that, the guide goes on to say that care should be taken not to block too much sun from kitchens and bedrooms. Non-domestic buildings which are deemed to have a requirement for sunlight should also be checked.

Sunlight – Gardens and Open Spaces

As well as ensuring buildings receive a good level of sunlight to their interior spaces, it is also important to ensure that the open spaces between buildings are suitably lit. The recommendations as set out in the BRE guide are meant to ensure that spaces between buildings are not permanently in shade for a large part of the year. Trees and fences over 1.5m tall are also factored into the calculations.

The BRE guidelines state that:

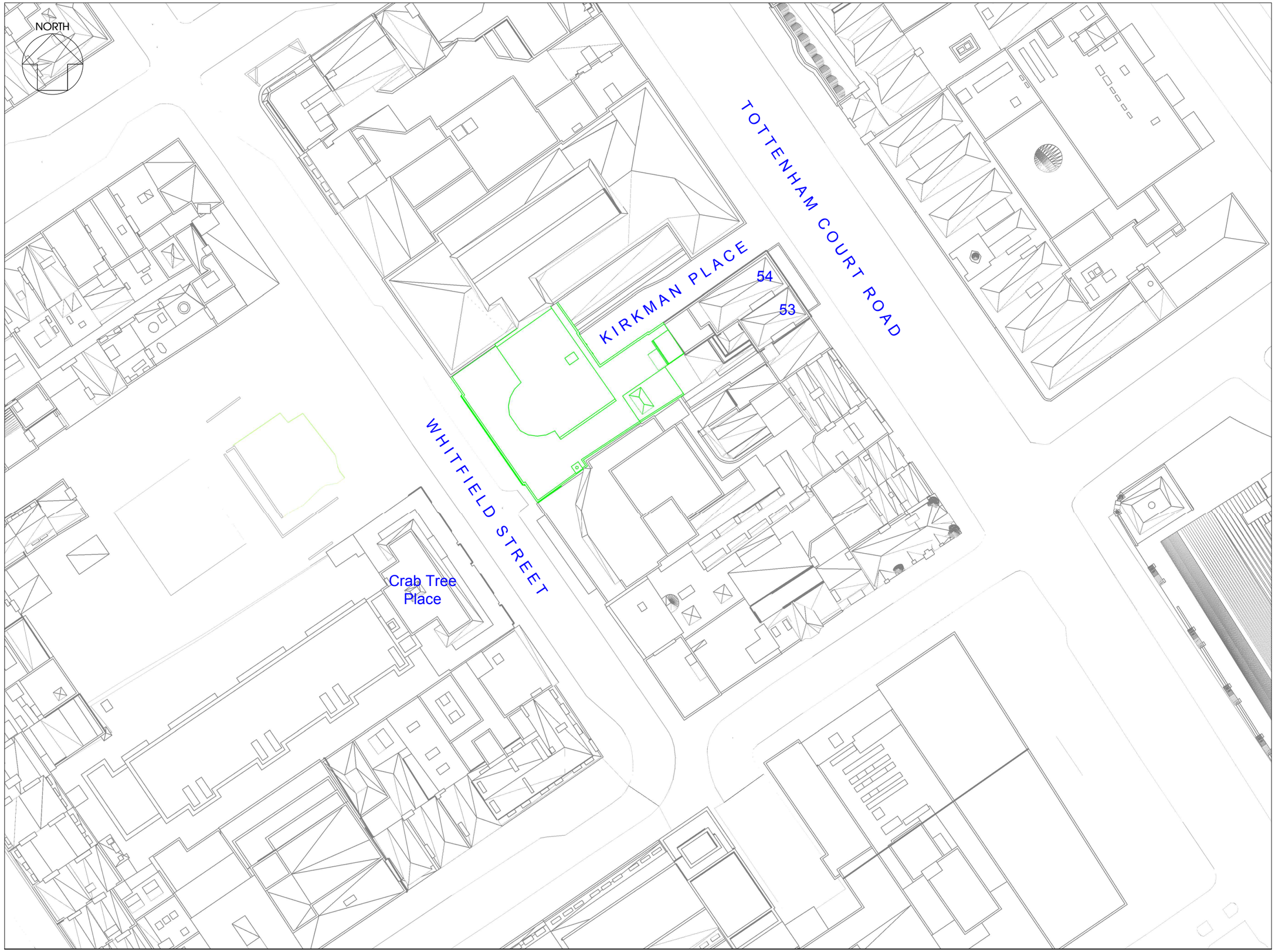
- For a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of the area should receive at least two hours of sunlight on 21 March;

- In addition, if, as result of new development, an existing garden or amenity area does not reach the area target above and the area which can receive two hours of direct sunlight on 21 March is reduced by more than 20% this loss is likely to be noticeable.

Appendix G of the BRE guidelines describes a methodology for calculating sunlight availability for amenity spaces.

Appendix B

Context Drawings



Existing Site Plan

SOURCES OF INFORMATION:

LAP ARCHITECTS

8491 Kirkman House proposed drawings.dwg
Received 15 May 2019

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High Detail 3D Zmap:
203404314_1 77361 - Kirkman House_130519_Solids XY@NE.dwg
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Rev.	Date	Amendments	Initial

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ALL DIMENSIONS ARE IN MILLIMETERS ONLY

TITLE
Existing Site Plan

CLIENT
Planning Potential

PROJECT
Kirkman House
12-14 Whitfield Street
London W1T 2RF

DRAWN BY	CHECKED
OW	XXX

SCALE	DATE
1:500@A3	May 2019

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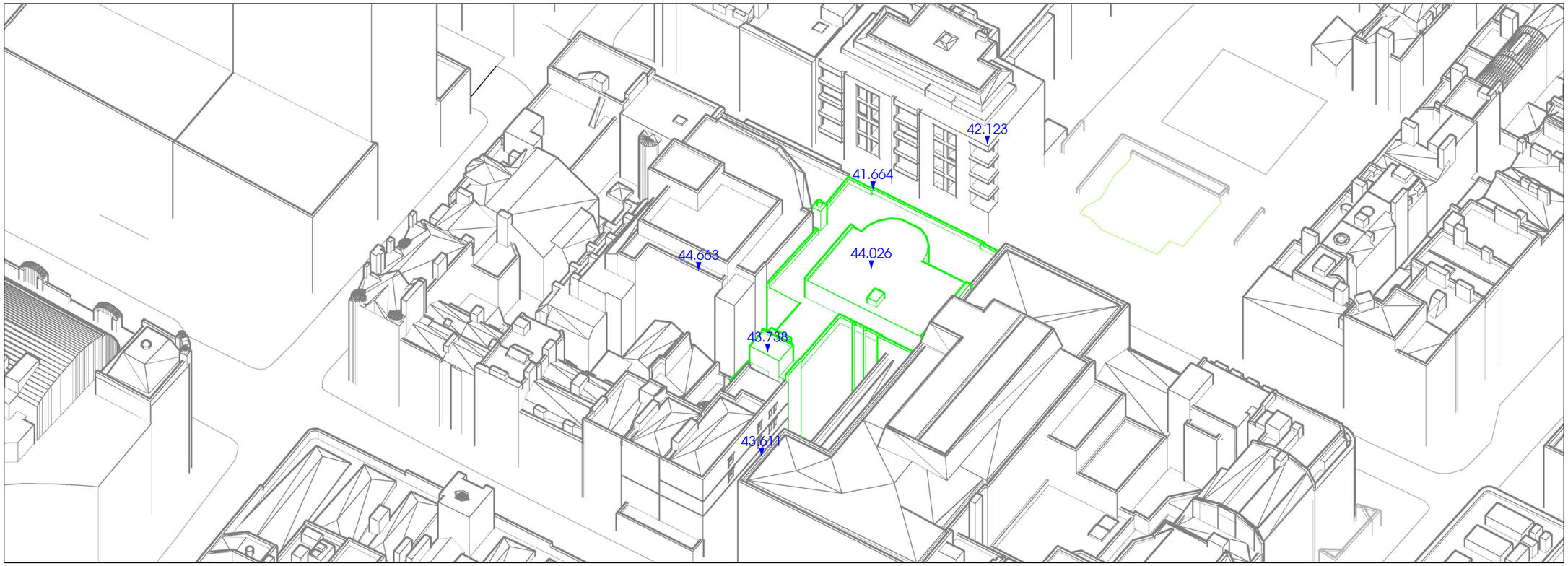
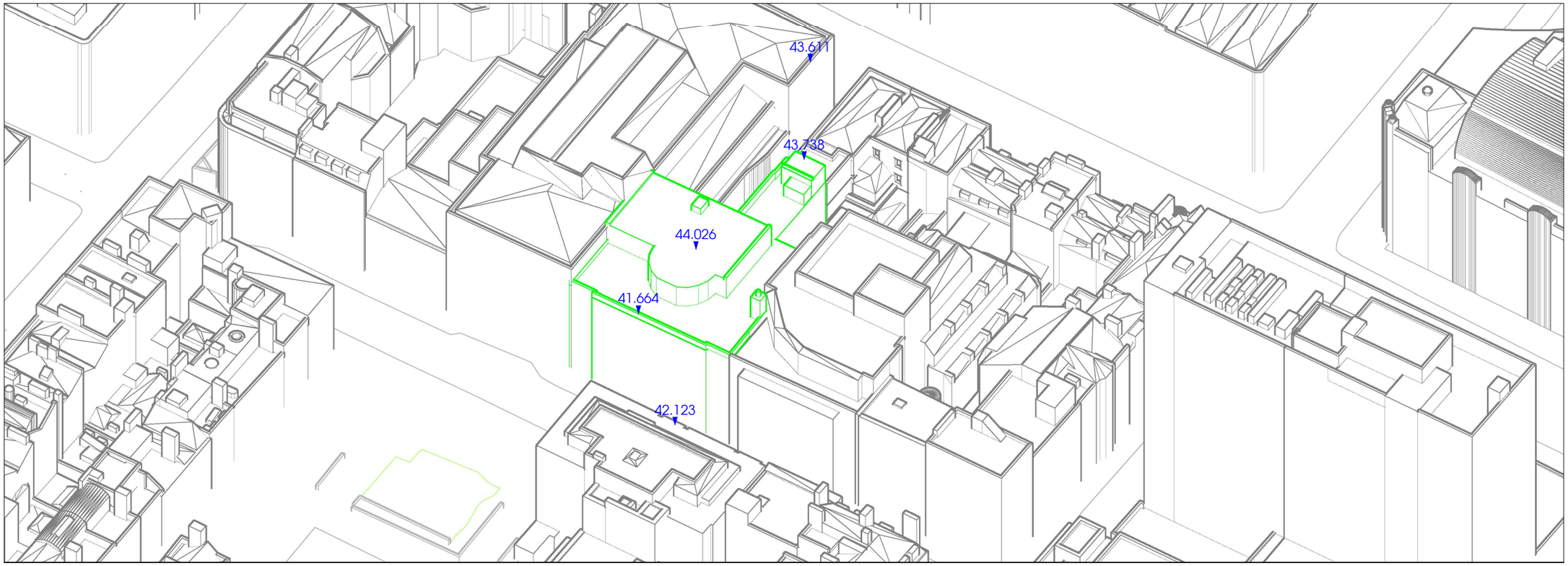


3D Context View - View from North (Existing)



3D Context View - View from South (Existing)

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TITLE

3D Views
Existing Site

CLIENT

Planning Potential

PROJECT

Kirkman House
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London W1T 2RF

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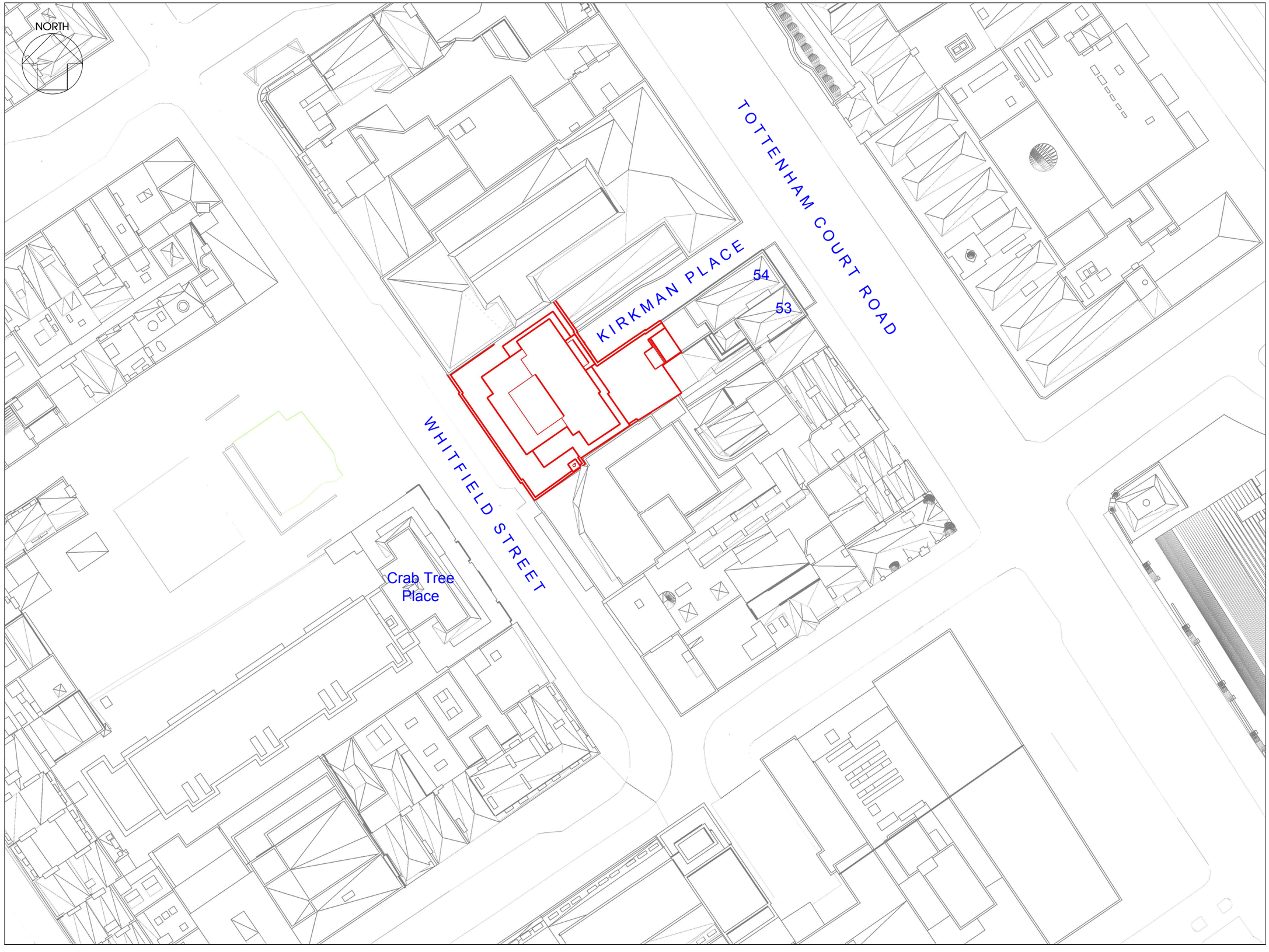

Proposed Site Plan

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Kirkman House
12-14 Whitfield Street
London W1T 2RF

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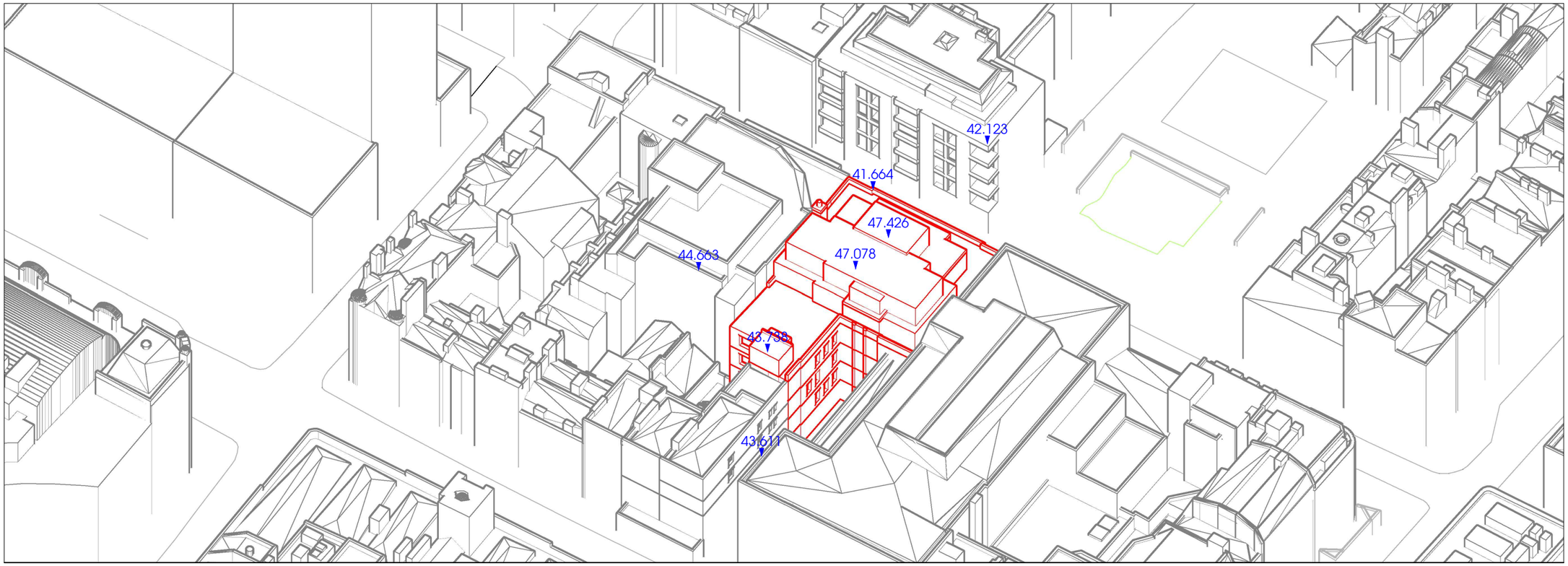
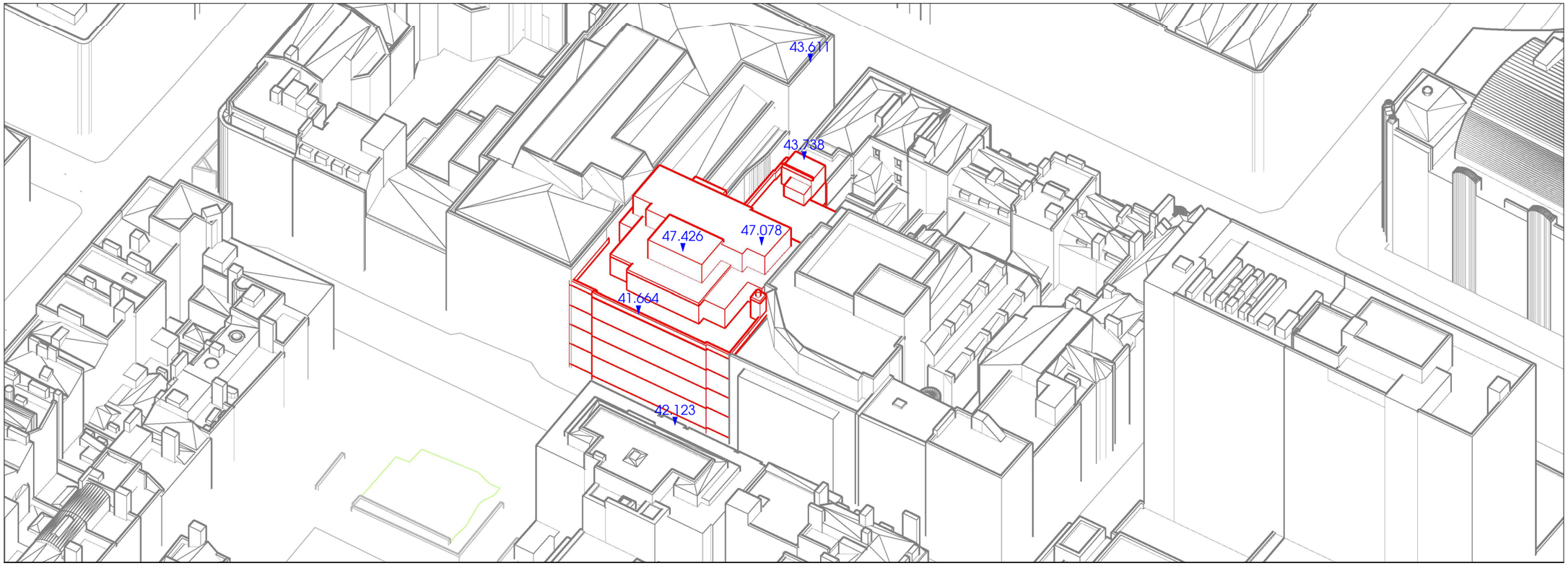


3D Context View - View from North (Proposed)



3D Context View - View from South (Proposed)

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3D Views
Proposed Site

CLIENT

Planning Potential

PROJECT

Kirkman House
12-14 Whitfield Street
London W1T 2RF

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OW	XXX

SCALE	DATE
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77361_CTXT_04	1

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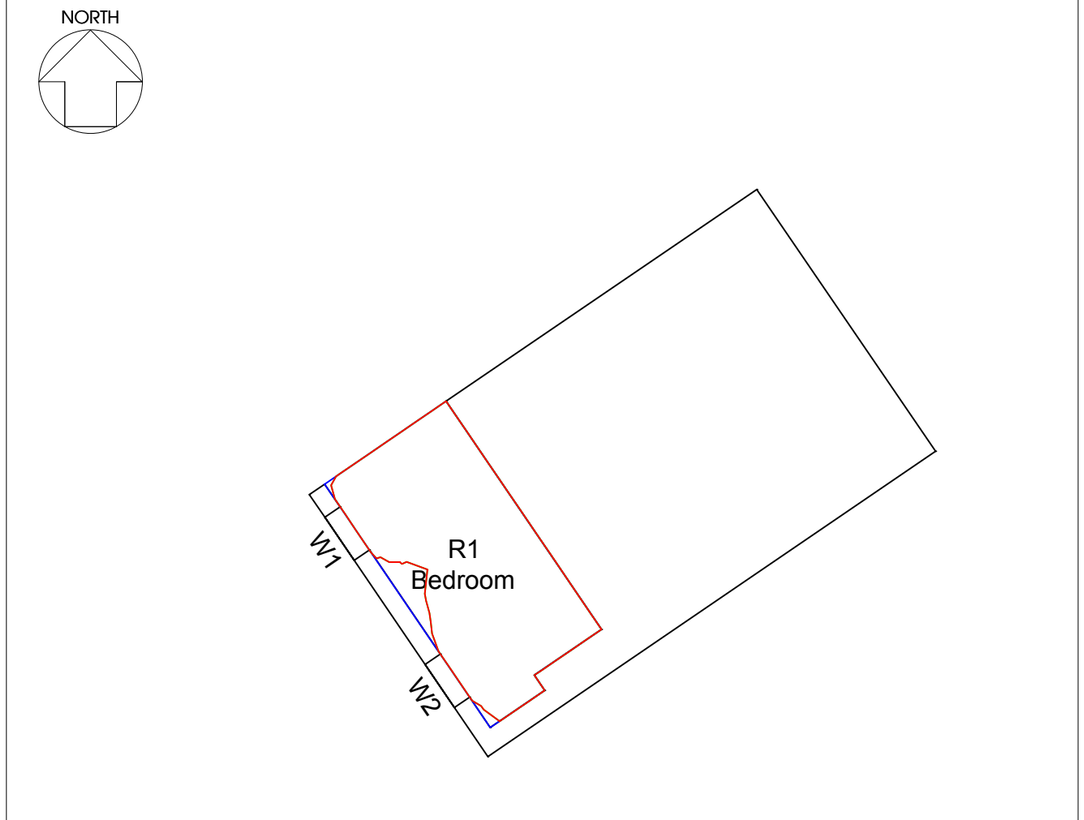
Appendix C

Window/Room Reference Drawings

53 Tottenham Court Road - Second Floor



53 Tottenham Court Road - Third Floor

SOURCES OF INFORMATION:

LAP ARCHITECTS

8491 Kirkman House proposed drawings.dwg
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High Detail 3D Zmap:
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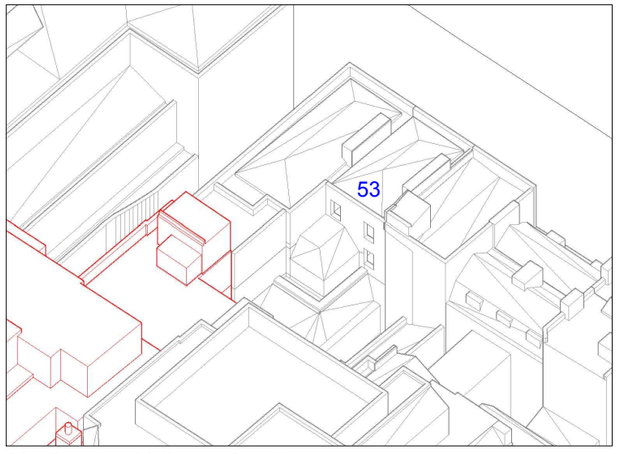

3D Context View - South

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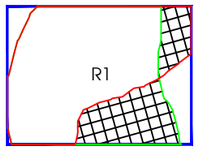
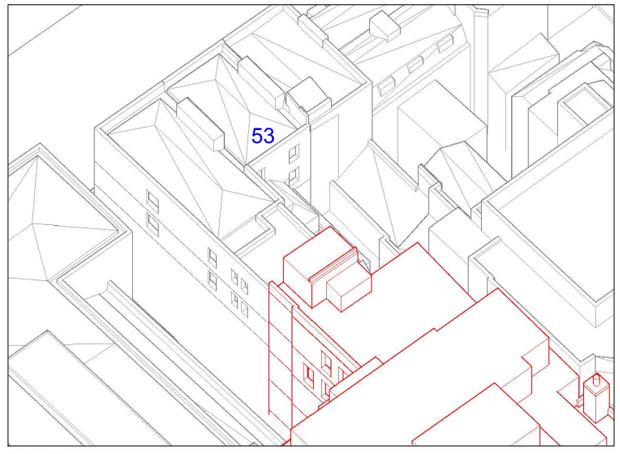


Existing contour

Proposed contour

Area of loss/gain

Subject room



3D Context View - West

Rev.	Date	Amendments	Initial

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TITLE

Daylight Distribution Contours/Referencing Plans
53 Tottenham Court Place

CLIENT

Planning Potential

PROJECT

Kirkman House
12-14 Whitfield Street
London W1T 2RF

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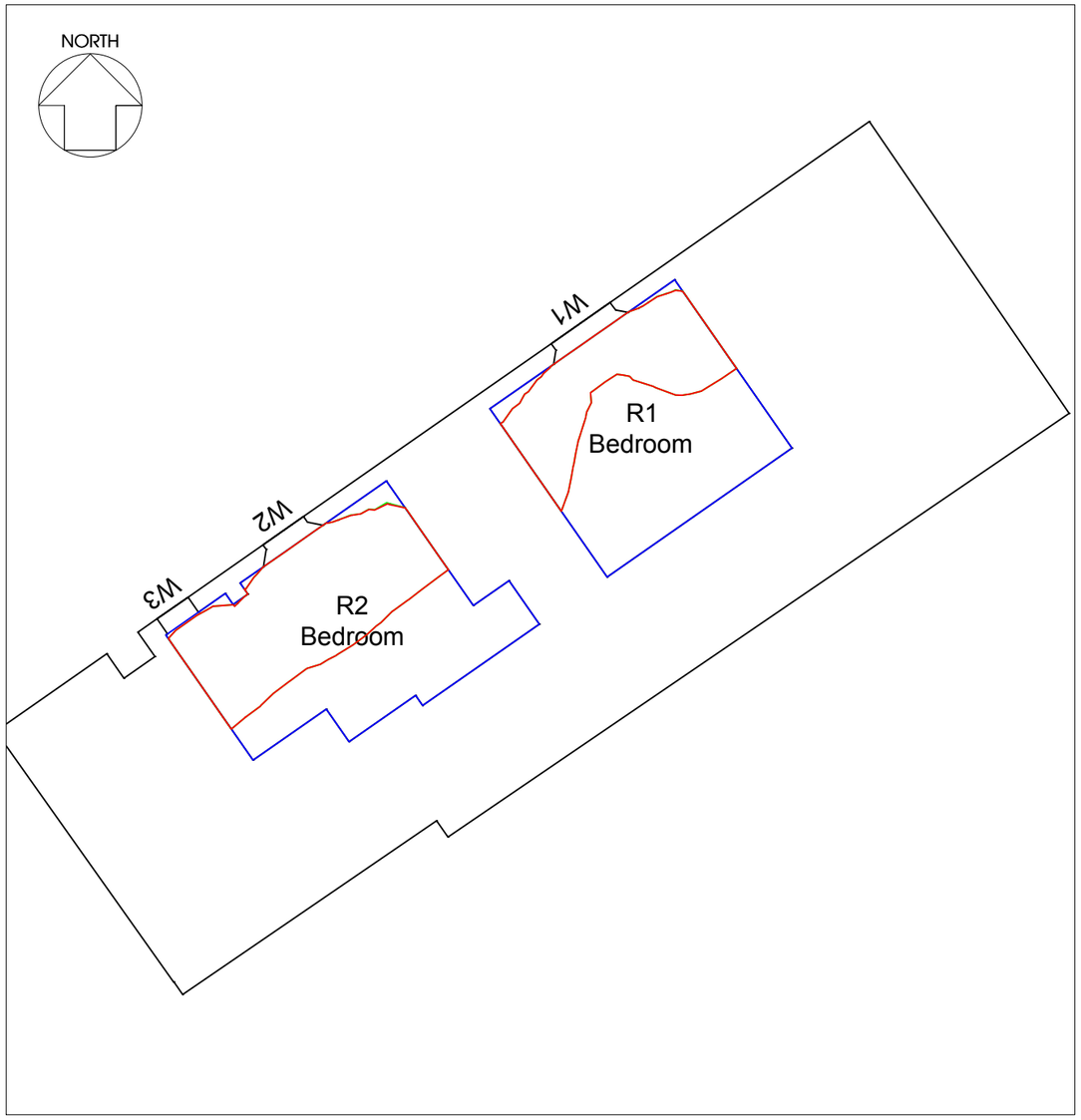
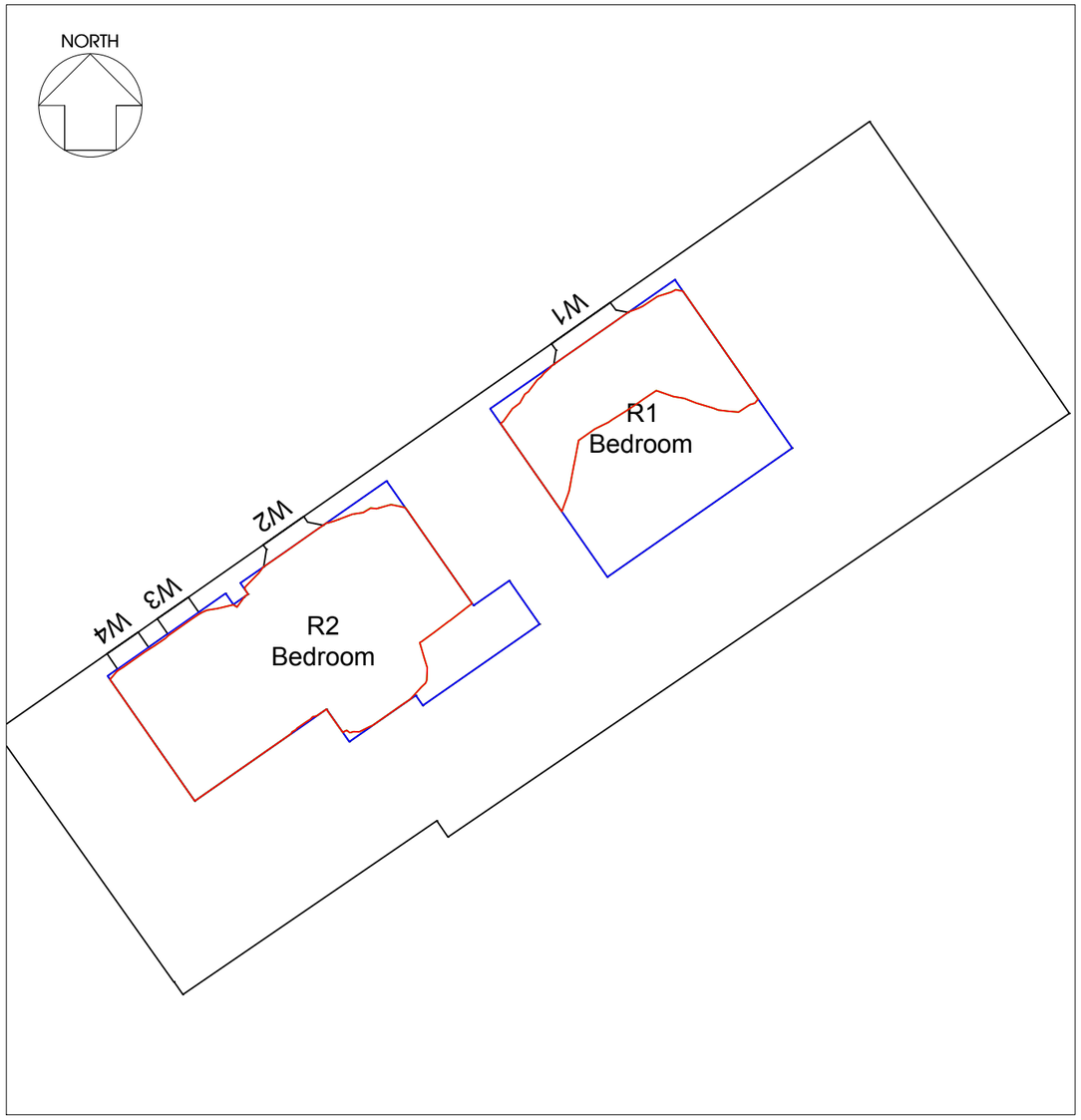
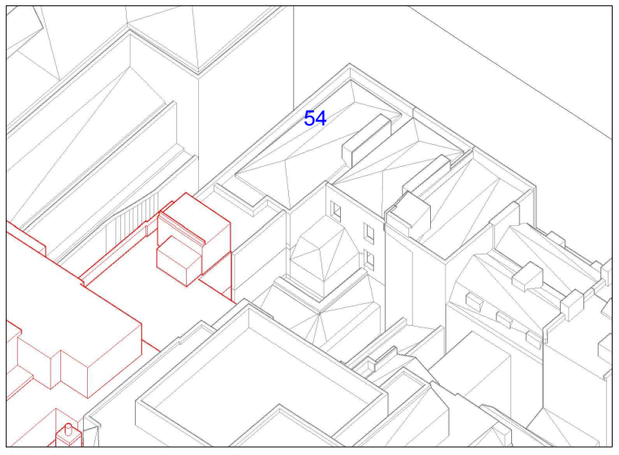


54 Tottenham Court Road - Second Floor



54 Tottenham Court Road - Third Floor



3D Context View - South

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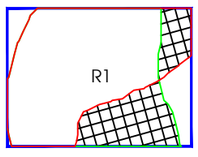
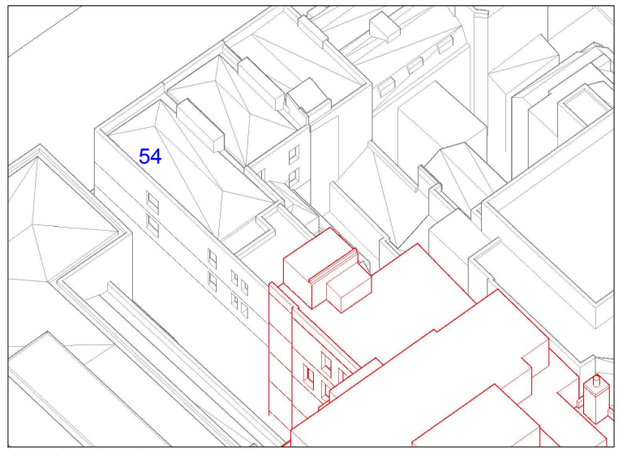


Existing contour

Proposed contour

Area of loss/gain

Subject room



3D Context View - West

SOURCES OF INFORMATION:

LAP ARCHITECTS

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High Detail 3D Zmap:
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TITLE

Daylight Distribution Contours/Referencing Plans
54 Tottenham Court Place

CLIENT

Planning Potential

PROJECT

Kirkman House
12-14 Whitfield Street
London W1T 2RF

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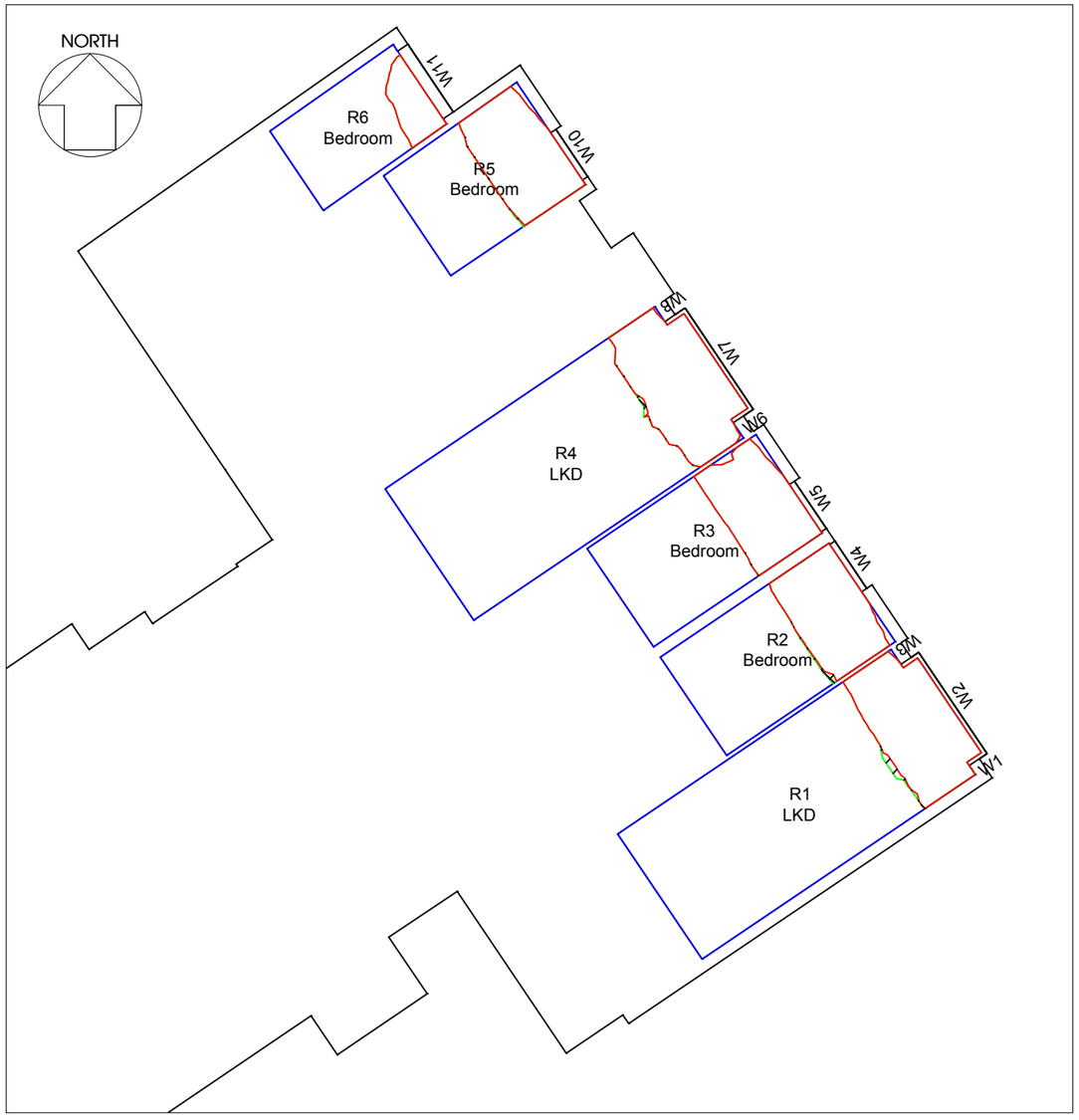
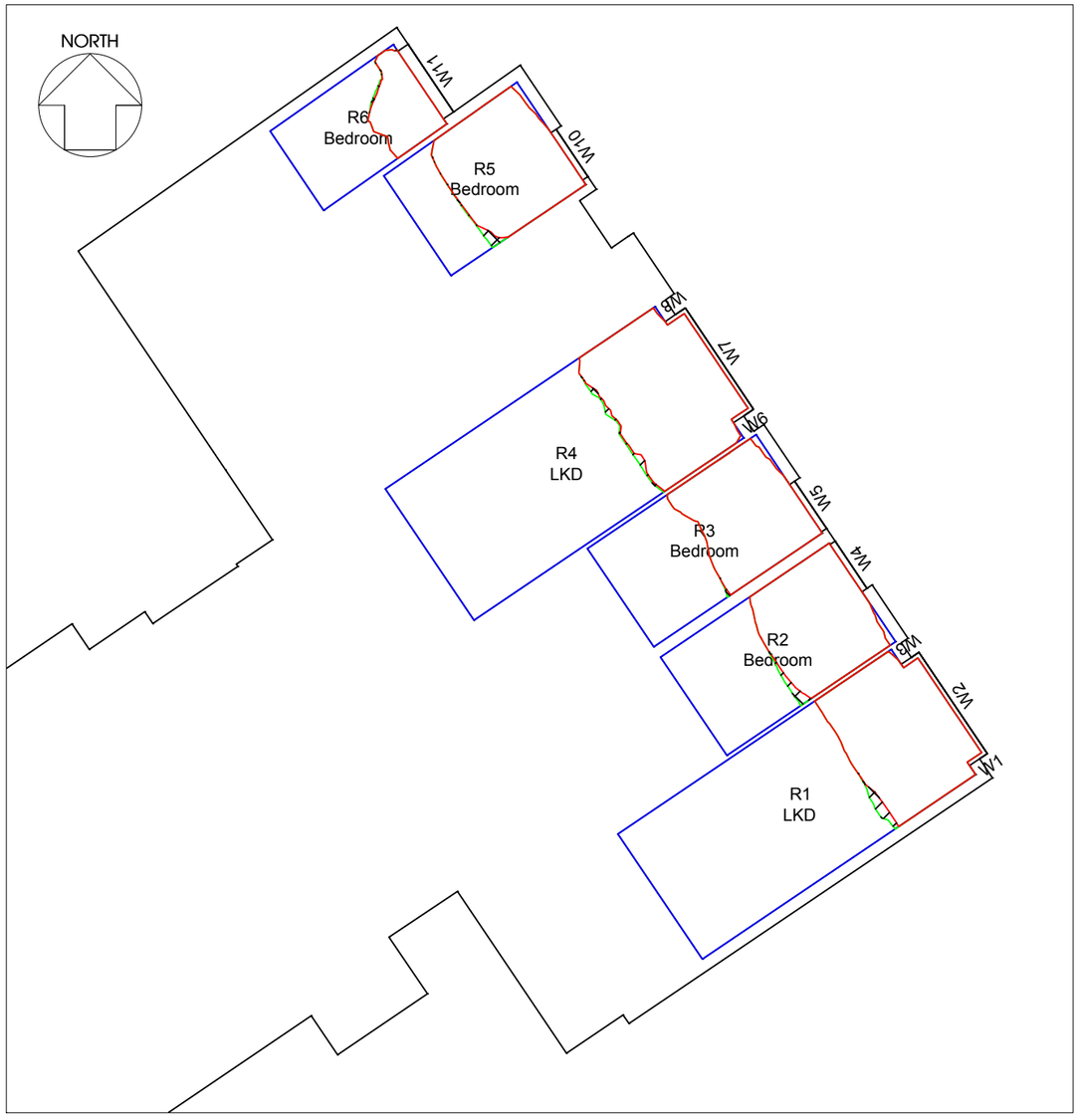
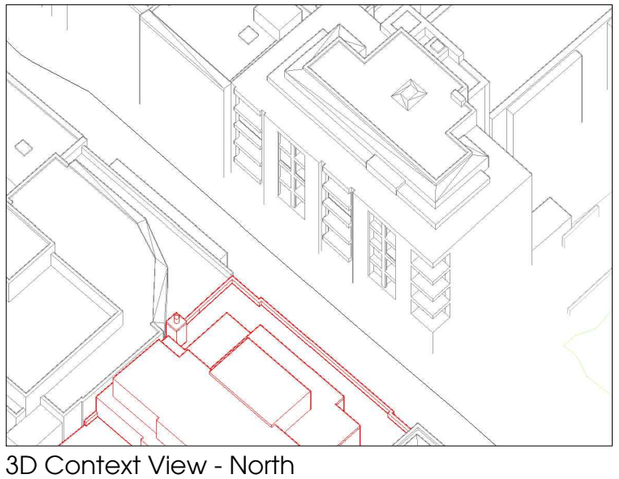


Crab Tree Place - First Floor



Crab Tree Place - Second Floor



3D Context View - North

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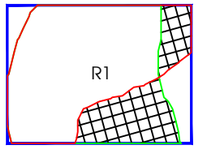
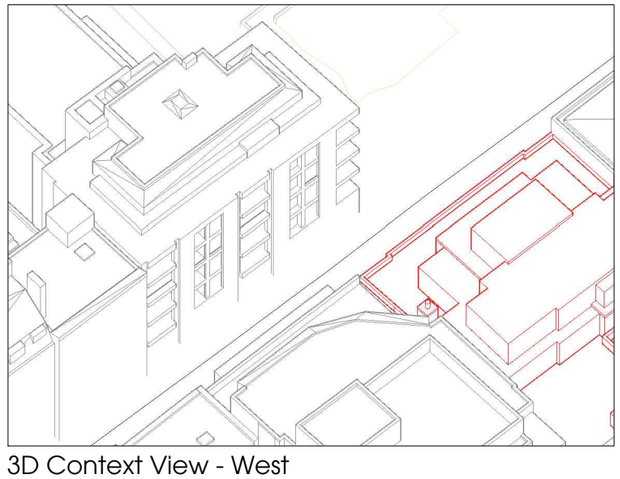


Existing contour

Proposed contour

Area of loss/gain

Subject room



3D Context View - West

SOURCES OF INFORMATION:

LAP ARCHITECTS

8491 Kirkman House proposed drawings.dwg
Received 15 May 2019

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High Detail 3D Zmap:
203404314_1 77361 - Kirkman House_130519_Solids XY@NE.dwg
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TITLE

Daylight Distribution Contours/Referencing Plans
54 Tottenham Court Place

CLIENT

Planning Potential

PROJECT

Kirkman House
12-14 Whitfield Street
London W1T 2RF

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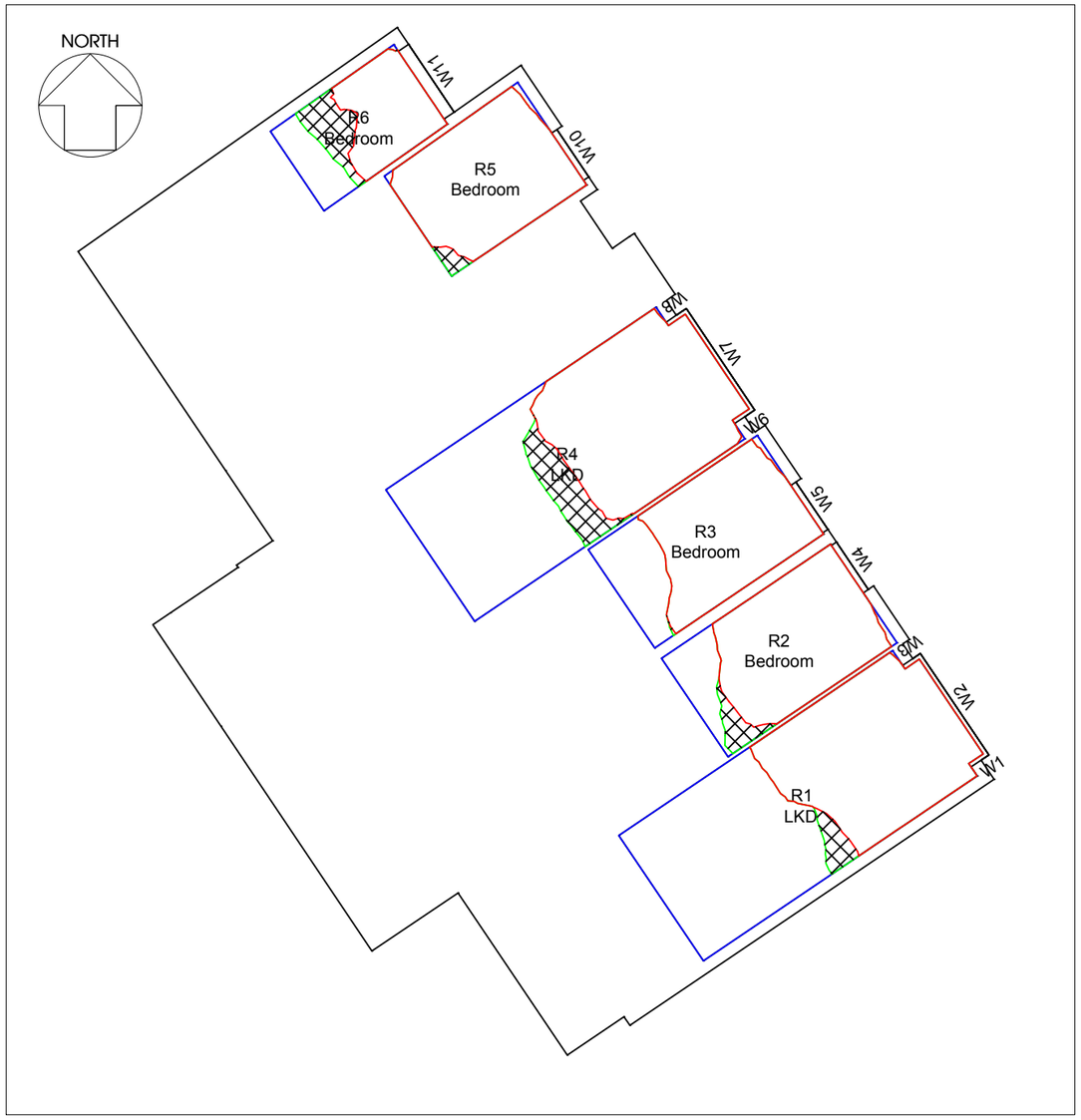
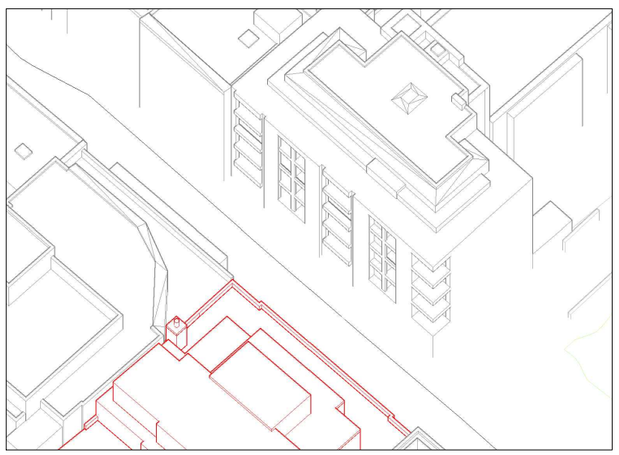


Crab Tree Place - Third Floor

Crab Tree Place - Fourth Floor



3D Context View - North

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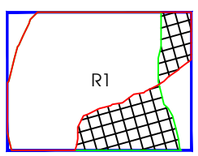
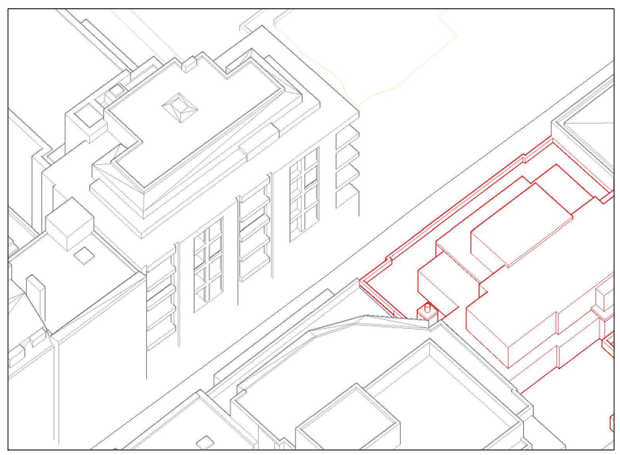


Existing contour

Proposed contour

Area of loss/gain

Subject room



3D Context View - West

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54 Tottenham Court Place

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Planning Potential

PROJECT

Kirkman House
12-14 Whitfield Street
London W1T 2RF

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SCALE	**DATE**
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77361_DD_04	1

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Appendix D

Daylight Study

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Vertical Sky Component (VSC) – Numerical Analysis (Existing Buildings)

BRE VSC

Floor Ref.	Window Ref.	Existing VSC	Proposed VSC	Times Former Value	BRE Compliant
53 Tottenham Court Road					
Second	W1	19.76	18.74	0.94	Yes
Second	W2	26.35	25.29	0.95	Yes
Third	W1	19.80	18.93	0.95	Yes
54 Tottenham Court Road					
Second	W1	12.45	12.33	0.99	Yes
Second	W2	16.65	16.42	0.98	Yes
Second	W3	18.08	17.78	0.98	Yes
Third	W1	17.68	17.55	0.99	Yes
Third	W2	22.41	22.16	0.98	Yes
Third	W3	23.95	23.60	0.98	Yes
Third	W4	24.25	23.85	0.98	Yes
Crab Tree Place					
First	W2	16.39	16.29	0.99	Yes
First	W4	16.88	16.75	0.99	Yes
First	W5	16.89	16.74	0.99	Yes
First	W7	17.41	17.22	0.98	Yes
First	W10	17.27	16.99	0.98	Yes
First	W11	1.33	1.33	1.00	Yes
Second	W2	20.82	20.56	0.98	Yes
Second	W4	21.41	21.02	0.98	Yes
Second	W5	21.51	21.05	0.97	Yes
Second	W7	22.27	21.67	0.97	Yes
Second	W10	22.22	21.33	0.96	Yes
Second	W11	3.49	2.65	0.75	No
Third	W2	25.83	25.30	0.97	Yes
Third	W4	26.36	25.59	0.97	Yes
Third	W5	26.51	25.62	0.96	Yes
Third	W7	27.47	26.29	0.95	Yes
Third	W10	27.34	25.81	0.94	Yes
Third	W11	7.18	5.67	0.78	No
Fourth	W2	30.64	30.00	0.97	Yes
Fourth	W4	30.47	29.55	0.96	Yes
Fourth	W5	30.58	29.53	0.96	Yes
Fourth	W7	31.88	30.42	0.95	Yes
Fourth	W10	31.41	29.55	0.94	Yes
Fourth	W11	10.26	8.59	0.83	Yes

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Daylight Distribution (DD) Analysis – Existing Buildings

Floor Ref.	Room Ref.	Room Use	Existing SQ M	Proposed SQ M	Times Former Value	% Loss	BRE Compliant
53 Tottenham Court Road							
Second	R1	Kitchen	4.4	4.4	0.99	0	YES
Third	R1	Bedroom	10.6	10.6	0.99	0	YES
54 Tottenham Court Road							
Second	R1	Bedroom	4.8	4.8	0.99	0	YES
Second	R2	Bedroom	7.6	7.6	0.99	0	YES
Third	R1	Bedroom	5.8	5.8	0.99	0	YES
Third	R2	Bedroom	14.5	14.5	0.99	0	YES
Crab Tree Place							
First	R1	LKD	6.9	6.8	0.98	2	YES
First	R2	Bedroom	5.3	5.3	0.98	1	YES
First	R3	Bedroom	5.2	5.2	0.99	0	YES
First	R4	LKD	7.4	7.3	0.99	1	YES
First	R5	Bedroom	5.5	5.5	0.99	0	YES
First	R6	Bedroom	1.7	1.7	0.99	0	YES
Second	R1	LKD	10.0	9.7	0.97	2	YES
Second	R2	Bedroom	7.7	7.6	0.97	2	YES
Second	R3	Bedroom	7.5	7.5	0.99	0	YES
Second	R4	LKD	10.9	10.7	0.98	2	YES
Second	R5	Bedroom	8.3	8.1	0.98	2	YES
Second	R6	Bedroom	2.9	2.8	0.98	1	YES
Third	R1	LKD	16.4	15.6	0.95	5	YES
Third	R2	Bedroom	12.3	11.5	0.93	6	YES
Third	R3	Bedroom	11.0	10.9	0.99	0	YES
Third	R4	LKD	19.0	16.6	0.87	12	YES
Third	R5	Bedroom	11.8	11.5	0.97	3	YES
Third	R6	Bedroom	6.6	5.0	0.75	25	NO
Fourth	R1	LKD	24.8	24.5	0.98	1	YES
Fourth	R2	Bedroom	14.5	14.5	1	0	YES
Fourth	R3	Bedroom	14.3	14.3	1	0	YES
Fourth	R4	LKD	31.4	28.4	0.9	10	YES
Fourth	R5	Bedroom	11.9	11.9	0.99	0	YES
Fourth	R6	Bedroom	8.7	7.9	0.91	9	YES

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Appendix E

Sunlight Study

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Numeric Results for the Annual Probable Sunlight Hours (APSH) Tests – Existing Buildings

Floor Ref.	Window Ref.	Existing Winter %	Existing Annual %	Proposed Winter %	Proposed Annual %	Winter Times Former Value	Annual Times Former Value	BRE Compliant
53 Tottenham Court Road								
Second	W1	7	38	7	37	1.00	0.97	YES
Third	W2	10	48	10	47	1.00	0.97	YES
Third	W1	12	43	12	43	1.00	1.00	YES