AVISON YOUNG

Warren Court Investments LLP

Detailed Daylight & Sunlight Report

Warren Court, Euston Road, London NW1

December 2022

Contents

Appendices

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Status: Final
Draft Date: December 2022

For and on behalf of Avison Young (UK) Limited

1. Introduction and Scope of Report

1.1 Avison Young are instructed by Warren Court Investments LLP to consider Daylight & Sunlight matters associated with their proposed development of the site at Warren Court, Euston Road, London NW1.

1.2 The formal description of the proposals is as follows:

> ***Demolition of existing sixth floor and the erection of a replacement single storey extension to provide four residential units.***

1.3 The site is a located in a dense part of central London, with several neighbouring properties in close proximity as can be seen from the site location plan below.

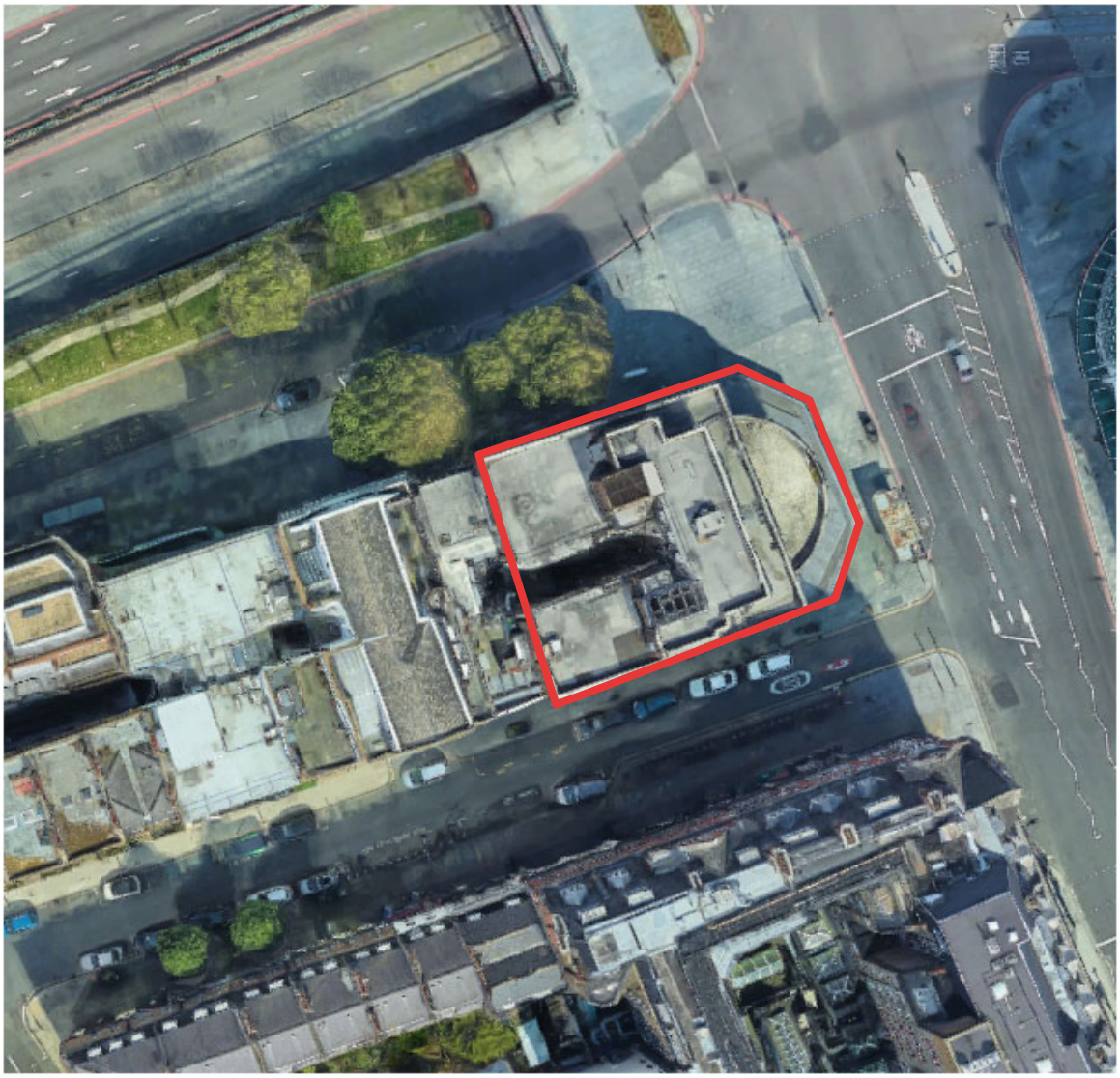

Figure 1: site location plan showing proposed development site (outlined red) in context

1.4 It is therefore a special situation whereby the BRE state that their default guidance on daylight and sunlight are not expected to be met and need to be interpreted flexibly therefore alternative, contextually appropriate targets should be adopted (para 1.6 and Appendix F).

2. Executive Summary

2.1 The Proposed Development site is centrally located in an urban context / area of intense development activity.

2.2 In such circumstances the BRE guidance states that their default targets are unlikely to be met and therefore more appropriate alternative targets can be applied. National, Strategic and Local Planning Policy also recognises the need for flexible application of the default BRE recommendations.

2.3 Notwithstanding these circumstances, the Proposed Development nonetheless significantly satisfies the default BRE recommendations.

2.4 When applying the requisite flexibility to the small number of remaining results, the overall effect to neighbours and provision of daylight and sunlight for future occupiers is considered fully acceptable, especially in the context of making efficient use of the available site area.

2.5 The Proposed Development therefore complies with national and local planning policy and guidance and as such concluded as acceptable on Daylight & Sunlight grounds.

3. Planning Policy

National Planning Policy

National Planning Policy Framework (2019)

3.1 Section 11 "Making effective use of land" Para 123 states:

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

c) Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework.

In this context, when considering applications for housing, ***authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).****"*

3.2 Section 12 "Achieving well-designed places" Para 127 states:

"Planning policies and decisions should ensure that developments:

f) Create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."

National Planning Practice Guidance "Design" (13 September 2018 Update)

3.3 Paragraph 021 "A well designed space is attractive":

"The way a place looks, sounds, feels, and even smells, affects its attractiveness and long-term success. Streetscapes, landscapes, buildings and elements within them all have an influence.

So too can more transient elements – such as the way sunshine and shadows move across an area or the way it is maintained and cleaned."

3.4 Paragraph 26 "Consider scale" states:

"This relates both to the overall size and mass of individual buildings and spaces in relation to their surroundings, and to the scale of their parts.

Decisions on building size and mass, and the scale of open spaces around and between them, will influence the character, functioning and efficiency of an area.

In general terms too much building mass compared with open space may feel overly cramped and oppressive, with access and amenity spaces being asked to do more than they feasibly can. Too little and neither land as a resource or monetary investment will be put to best use.

The size of individual buildings and their elements should be carefully considered, as their design will affect the: overshadowing and overlooking of others; local character; skylines; and vistas and views. The scale of building elements should be both attractive and functional when viewed and used from neighbouring streets, gardens and parks.

The massing of development should contribute to creating distinctive skylines in cities, towns and villages, or to respecting existing skylines. Consideration needs to be given to roof space design within the wider context, with any adverse visual impact of rooftop servicing minimised.

Account should be taken of local climatic conditions, including daylight and sunlight, wind, temperature and frost pockets."

Ministry of Housing, Communities & Local Government Guidance "Effective use of land" (22 July 2019)

"All developments should maintain acceptable living standards.

What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design.

For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings."

Regional Planning Policy

GLA "The London Plan" March 2021

3.5 Policy D6 "Housing quality and standards" states:

D The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space."

Mayor of London "Housing Supplementary Planning Guidance" (SPG) March 2016

3.6 Para 1.3.45 "Standards for privacy, daylight and sunlight" states:

"Policy 7.6Bd requires new development to avoid causing 'unacceptable harm' to the amenity of surrounding land and buildings, particularly in relation to privacy and overshadowing and where tall buildings are proposed.

An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves.

Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets.

This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time."

3.7 Para 1.3.46 "Standards for privacy, daylight and sunlight" states:

"The degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London.

Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced, but which still achieve satisfactory levels of residential amenity and avoid unacceptable"

3.8 The above principles have been applied by the GLA and Planning Inspectorate on several occasions, most notably in respect of Monmouth House (GLA ref: D&P/3698/03 dated February 2016) and the Whitechapel Estate (PINS ref: APP/E5900/W/17/3171437 dated November 2017).

3.9 In summary, the following principles have been established in London:

- In a dense urban environment, VSC values in excess of 20% should be considered as reasonably good, and VSC in the mid-teens should be acceptable
- In suitable locations there should generally be a high expectation of development taking place.
- In relation to new development it is reasonable to adopt an alternative target of 1.5% ADF for living/kitchen/dining rooms.

Local Planning Policy

Camden Local Plan (2017)

3.10 The Council has adopted a number of planning documents that together form the development plan for Camden. The Camden Local Plan is the key strategic document in Camden's development plan. It sets out the vision for shaping the future of the Borough and contains policies for guiding planning decisions. The Local Plan was adopted by Council on 3 July 2017. It has replaced the Core Strategy and Camden Development Policies documents. It is now the basis for planning decisions and future development in Camden.

3.11 Policy A1 "Managing the impact of development" states:

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

a. seek to ensure that the amenity of communities, occupiers and neighbours is protected;
b. seek to ensure development contributes towards strong and successful communities by balancing the needs of development with the needs and characteristics of local areas and communities;
c. resist development that fails to adequately assess and address transport impacts affecting communities, occupiers, neighbours and the existing transport network; and
d. require mitigation measures where necessary.
The factors we will consider include:
e. visual privacy, outlook;

f. sunlight, daylight and overshadowing.

3.12 Protecting amenity, paragraph 6.3 states:

Protecting amenity is a key part of successfully managing Camden's growth and ensuring its benefits are properly harnessed.

The Council will expect development to avoid harmful effects on the amenity of existing and future occupiers and nearby properties or, where this is not possible, to take appropriate measures to minimise potential negative impacts.

3.13 Sunlight, daylight and overshadowing, paragraph 6.5 states:

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).

Guidance

Camden Planning Guidance (Amenity) 2021

3.14 The Council has prepared this guidance to support the policies in the Camden Local Plan 2017. It is a formal Supplementary Planning Document (SPD), which is therefore a "material consideration" in planning decisions. These documents were adopted on 15 January 2021.

3.15 Paragraph 3.1 states:

The Council aims to protect the quality of life of occupiers and neighbours through Local Plan policy A1 Managing the Impact of Development, which seeks to ensure that development does not cause unacceptable harm to amenity, including in terms of daylight and sunlight.

3.16 Flexible consideration of daylight and sunlight, paragraph 3.14 states,

The Council notes the intentions of the BRE document is to provide advice to developers and decision makers and therefore it should be regarded as a guide rather than policy.

3.17 Paragraph 3.15 states:

> *While we support the aims of the BRE methodology for assessing sunlight and daylight we will consider the outcomes of the assessments flexibly where appropriate, taking into account site specific circumstances and context.*

3.18 Overshadowing, paragraph 7.19 states,

> *You should consider the design of your proposal carefully so that it does not block sunlight and overshadow windows or open spaces and gardens.*

Camden Planning Guidance (Design) 2021

3.19 Extensions, paragraph 5.12 states:

> *Proposals should assess the impacts of the scheme from a design perspective and the contribution it makes to townscape character including:*
>
> *the effects of the proposal on the amenity of adjacent residential properties with regard to daylight, sunlight, outlook, light pollution/spillage, privacy or the working conditions of occupants of adjacent non-residential buildings.*

Camden Planning Guidance (Energy efficiency and adaptation) 2021

3.20 Making the most of sunlight, paragraph 3.5 states:

> *Natural light makes buildings more attractive, pleasant, and energy efficient. Building layouts should be designed to maximise sunlight and daylight (below) while taking into account other factors such as overheating and privacy.*

Conclusion on Planning Policy and Guidance

3.21 As set out above, all levels of planning policy and guidance support the optimisation of highly sustainable/ accessible sites such as this.

3.22 The location of the Proposed Development is such that it is fair to assume a high expectation of development to take place.

3.23 Planning decision makers should apply default daylight and sunlight standards sensitively and flexibly so that such assessments do not prevent otherwise appropriate development coming forward on the right sites.

4. Information Relied Upon

Existing Buildings/Surrounding Buildings

4.1 The immediate surroundings and the existing site were modelled using a combination of Zmap, desktop and site research.

Proposed Buildings

4.2 The Proposed Development was represented by information provided by the architects, Hubarchitects in November 2022:

- 1281-EX- 001; 01;002;003;004;005;006;007;008;009;101;
- 1281-PL-001;003;004;005;006;007;008;009;010;100.

4.3 The Proposed Development as represented by the above drawings and 3D model was arrived at by way of detailed design advice with respect to Daylight, Sunlight and Overshadowing matters.

4.4 The analyses were run in 'SOL', a specialist professional software developed specially for the purposes of conducting these types of assessment.

4.5 SOL has been accepted in various planning appeals and is widely considered to be a highly accurate and robust means of conducting the assessments set out in the BRE Guidelines.

5. Approach and Methodology

5.1 The information set out in Section 4 above was used to produce a 3D assessment model representing the neighbouring, existing and proposed buildings in AutoCAD.

5.2 A set of technical studies were undertaken using 'SOL', a specialist plug tool for AutoCAD written by especially for the purposes of undertaking daylight and sunlight assessments by Dr Malcolm MacPherson, Dr Martin Howarth and Paul Fletcher of Waterslade Ltd.

5.3 SOL is considered to be accurate and a well-established software for assessing light, having been accepted in numerous planning inquiries throughout the UK.

5.4 The BRE Guidance and British Standard BS EN 17037:2018 has formed the basis of the technical assessments undertaken and reported on.

5.5 Our interpretation of the principles established by these documents is set out below.

Daylight & Sunlight Principles

5.6 The BRE Guidelines – Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice, Third Edition (2022) are well established and are adopted by most planning authorities as a scientific and empirical method for measuring daylight and sunlight in order to provide objective data upon which to apply the relevant planning policies.

5.7 The default targets set out in the BRE Guidelines are predicated on a typical low-rise suburban environment with generous distance to height ratios. Therefore they recognise that decision makers should not rigidly apply these default standards in all cases and may apply more contextually appropriate alternative targets.

5.8 Paragraph 1.6 in the Introduction of the Guidelines states:

"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 developer.

Although it gives numerical guidelines, these should be interpreted flexibly because 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 an 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. "

5.9 The 'flexibility' recommended in the BRE Guidelines is a suggestion that a decision maker must consider the specific characteristics of each case being considered when determining whether alternative targets should be adopted.

5.10 Paragraph 2.2.3 of the BRE Guidelines 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."

5.11 In addition, where existing neighbouring buildings have specific design features which inherently self-limit access to daylight and sunlight such as projecting balconies, deep recesses, rooms greater than 5m deep or lit from one side only, the BRE Guidelines suggest ways in which such features may be taken into account in the assessment.

5.12 Paragraph 2.2.12 of the BRE Guidelines states:

"... If an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable."

5.13 Paragraph 2.2.14 states:

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

Daylighting

5.14 In respect of daylighting, the BRE Guidelines adopt different methods of measurement depending on whether the assessment is for the impact on existing neighbouring buildings or for measuring the adequacy of natural light provision within new buildings.

5.15 These methods of measurement are summarised below.

New Development

5.16 Section 2.1 of the BRE guidance (New Development) recommends that general illumination from skylight in proposed new buildings be checked using the methods set out in BS EN 17037:2018 "*Daylight in Buildings*".

5.17 BS EN 17037 makes use of target illuminances, by use of either direct prediction using hourly climate data ("Climate Based Daylight modelling") or estimated using daylight factors. Both methods seek to measure the overall amount of daylight in a space.

5.18 The recommendations are based around the illuminances that would be met or exceeded over half the room, over half of the daylight hours over the year.

5.19 BS EN 17037 gives a range of recommendations for 'high', 'medium' and 'minimum' daylight provision.

5.20 The UK National Annex gives further recommendations and data for daylight provision in the UK and Channel Islands.

5.21 The UK National Annex of BS EN 17037 gives minimum recommended values for locations where a predominantly daylit appearance is not achievable; giving examples of basement rooms, significant external obstruction and existing buildings being converted into dwellings.

5.22 The BRE Guidelines advise that room reflectances considerably influence the assessment and therefore realistic values must be used in the calculations and that these should be stated and specified in the design of the building.

5.23 The layout and location of spaces and rooms, taking into account their use/ demand for natural light are other key factors to consider at the design stage.

5.24 The BRE Guidelines recommend avoiding, where possible, locating windows serving habitable rooms at internal corners, basements or adjacent extensions/ projections i.e. where they would be obstructed.

5.25 The BRE Guidelines state that living rooms and kitchens need more daylight than bedrooms and therefore recommend siting these in the less obstructed areas in situations where a choice needs to be made. They also suggest, again subject to practicality, locating areas without a special requirement for daylight, e.g. bathrooms, stairwells, garages and storage areas in the most obstructed areas.

5.26 External reflectances also help improve daylighting conditions within new buildings. Lighter coloured building materials and ground finishes are suggested; however these are subject to geometrical limitations and maintenance considerations.

5.27 Balconies and overhangs are often a necessary feature of new building design, especially where access to public amenity spaces is limited. These will inevitably have a negative effect to light entering windows located beneath them, especially where there are also significant obstructions opposite.

5.28 The BRE Guidelines suggest that well designed balconies offer pleasant amenity for future occupants and provide useful solar shading to help mitigate overheating risk, factors which need to be considered on balance against their inevitable limiting effect to daylight entering rooms located nearby.

Daylight Measure, New Build: Target Illuminance

5.29 As summarised above, BS EN 17037 sets out two methods for assessing and predicting illuminance levels within new buildings.

5.30 Of the two approaches, we have applied the more accurate "Climate Based Daylight Modelling" method, which is based on existing/ proposed geometry, local climatic weather files and surface reflectances both internal and external.

5.31 As can be seen, there are several influencing factors outside the control of the designer, i.e. degree of existing obstructions and their surface reflectances/ finishes. As such there will be varying degrees of daylighting potential dependent on the inherent context/ site location.

5.32 The default BS EN 17037 target daylight recommendations are as follows:

Table A.1 — Recommendations of daylight provision by daylight openings in vertical and inclined surface

Level of recommendation for vertical and inclined daylight opening	**Target illuminance** E_T lx	**Fraction of space for target level** $F_{plane,\%}$	**Minimum target illuminance** E_{TM} lx	**Fraction of space for minimum target level** $F_{plane,\%}$	**Fraction of daylight hours** $F_{time,\%}$
Minimum	300	50 %	100	95 %	50 %
Medium	500	50 %	300	95 %	50 %
High	750	50 %	500	95 %	50 %
NOTE Table A.3 gives target daylight factor (D_T) and minimum target daylight factor (D_{TM}) corresponding to target illuminance level and minimum target illuminance, respectively, for the CEN capital cities.					

Table A.2 — Recommendations of daylight provision by daylight openings in a horizontal surface

Level of recommendation for horizontal daylight opening	Target illuminance E_T lx	Fraction of space for target level $F_{plane,\%}$	Fraction of daylight hours $F_{time,\%}$
Minimum	300	95 %	50 %
Medium	500	95 %	50 %
High	750	95 %	50 %
NOTE Tables A.3 and A.4 give target daylight factor (D_T) corresponding to target illuminance level for the CEN capital cities. Note, that for spaces with horizontal daylight openings, there is no minimum target illuminance recommendations. Table A.4 is only for horizontal daylight openings with diffusing material.			

5.33 BS EN 17037 also contains the UK National Annex, which sets out alternative targets for dwellings in locations where a predominantly daylit appearance is not achievable, i.e. "hard to light". These alternative targets are set out below.

Table NA.1 — Values of target illuminance for room types in UK dwellings

Room type	Target illuminance E_T (lx)
Bedroom	100
Living room	150
Kitchen	200

5.34 The BRE Guidelines recommend that where a room has shared use the decision maker can use discretion, for example the target for a living room can be used for a combined living/kitchen/dining space if the kitchen is not treated as a habitable space.

Existing Neighbours

5.35 When considering the daylight received by existing residential buildings which neighbour a proposed development, the relevant recommendations are set out in Section 2.2 of the BRE Guidelines. The amount and quality of potential daylight received by existing neighbouring dwellings is measured using two different methods of measurement.

5.36 In order to do so the BRE Guidelines suggest measurement of both the Vertical Sky Component (VSC) and Daylight Distribution (DD) / No Sky Line (NSL) contour.

Daylight Measure 1: VSC

5.37 VSC is measured at the mid-point on the external face of the window serving the room being assessed. The BRE Guidelines provide that the rooms to be assessed should be rooms where daylight is required, including living rooms, kitchens and bedrooms (paragraph 2.2.2).

5.38 For the purposes of the assessment, we have assessed any room which our research has indicated may be a "habitable room" within the meaning of the Housing SPG. Bathrooms, hallways and circulation space are excluded from this definition. In addition, many local authorities make a further distinction in respect of small kitchens.

5.39 Where the internal area of a small kitchen limits its use to food preparation and is not of sufficient size to accommodate some other form of "habitable" use such as dining, the kitchen may not be classed as a "habitable" room in its own right and may therefore not be assessed as it is considered that there is likely to be greater reliance on electric lighting.

5.40 VSC is a 'spot' measurement taken on the face of the window and is a measure of the availability of ambient light from the sky from over the "existing" and "proposed" obstruction caused by buildings or structures in front of the window.

5.41 For VSC, the BRE Guidelines state (at paragraph 2.2.7) that:

"If this VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. This value of VSC typically supplies enough daylight to a standard room when combined with a window of normal dimensions, with glass area around 105 or more of the floor area.

Any reduction below this level should be kept to a minimum.

If the VSC, with the new development in place, is both less than 27% and less than 0.8 times its former value, then the occupants of the existing building will notice the reduction in the amount of skylight."

5.42 To put this in context, the maximum VSC value that can be received for a totally unobstructed vertical window is 40%. There are however circumstances where the existing/ baseline VSC value is already below 27% or falls below this level post-development.

5.43 In such circumstances, the BRE Guidelines state that the existing VSC value may be reduced by a factor of up to 0.2 (i.e. 20%) so that the value in the 'proposed' conditions retains at least 0.8 times its former

value. The scientific reasoning is that existing daylight (and sunlight) levels can be reduced by a factor of 20% before the loss becomes noticeable to occupants.

5.44 The BRE Guidelines apply this rule of thumb factor of reduction to VSC (para 2.2.7), daylight distribution (para 2.2.11), sunlight (para 3.2.7) and overshadowing (para 3.3.11).

5.45 As it is measured on the outside face of the window, one of the inevitable shortcomings of VSC as a measurement tool is that it does not take account of the size of the window or the size or use of the room served by the window.

5.46 As such, the BRE Guidelines also recommend that a blended and weighted VSC assessment may be appropriate where windows are known to light the same area of a room and are not too far spaced apart.

Daylight Measure 2: DD (or NSL)

5.47 The NSL contour plotted for the purpose of measuring internal Daylight Distribution identifies those areas within the room usually measured on a horizontal working plane set at table top level, where there is direct sky visibility.

5.48 This contour therefore represents those parts within the room where the sky can be seen through the window.

5.49 This second measure therefore takes account of the size of the window and the size of the room but is only more reliable than VSC when the actual room uses, layouts and dimensions are known.

5.50 In situations where layouts are not known, an approach commonly applied is to undertake an indicative assessment based on reasonable assumptions, however much of its accuracy and significance will depend upon the actual use of the room in question.

5.51 When interpreted in conjunction with the VSC value, the overall quality of lighting is made more apparent.

Sunlighting

5.52 As for daylighting, the BRE Guidelines adopt different methods of measurement depending on whether the assessment is being undertaken to judge the impact on existing neighbouring buildings or the adequacy of natural light provision within new buildings.

5.53 There are separate methods for assessing sunlight provision to external spaces such as parks, sitting out areas and gardens.

5.54 These methods of sunlight measurement are summarised below.

New Development

5.55 Section 3.1 of the BRE guidance (New Development) recommends that access to sunlight in interiors be checked using the methods set out in BS EN 17037:2018 "*Daylight in Buildings*".

5.56 BS EN 17037 recommends assessment of direct sunlight exposure on a selected date between February 1 and March 21, assuming a cloudless sky. For dwellings, it recommends that at least one habitable room achieves the targets.

5.57 The BRE Guidelines state (at paragraph 3.1.2):

"In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories.

It is viewed as less important in bedrooms and in kitchens, where people prefer it in the morning rather than the afternoon."

5.58 The BRE Guidelines therefore suggest using March 21 (equinox) as the assessment day and to aim for the living area as the habitable room to achieve the target, as arguably this is where sunlight would be most valued.

5.59 As for daylight, BS EN 17037 gives a range of recommendations for 'high', 'medium' and 'minimum' sunlight provision.

Sunlight Measure, New Build: Target Sunlight Exposure

5.60 BRE Guidelines set out that site layout is the most important factor affecting the duration of sunlight in buildings, more specifically site orientation and degree of overshadowing.

5.61 With respect to orientation, the BRE Guidelines state (at paragraph 3.1.6):

"A south-facing window will, in general, receive most sunlight, while a north facing one will only receive it on a handful of occasions (early morning and late evening in summer).

…

Sensitive layout design of flats will attempt to ensure that each individual dwelling has at least one main living room which can receive a reasonable amount of sunlight. In both flats and houses, a sensible approach is to try to match internal room layout with window wall orientation."

5.62 With respect to overshadowing, the BRE Guidelines make recommendations mainly with regards to the layout of new buildings, however existing third-party buildings and obstructions will of course have an influence.

5.63 The inherent site orientation and degree of overshadowing are outside the control of the designer and the BRE Guidelines accept that it is not always feasible to have all living areas facing south, especially in denser development when seeking to make most efficient use of the available site area.

5.64 The default BS EN 17037 target sunlight recommendations are as follows:

Table A.6 — Recommendation for daily sunlight exposure

Level of recommendation for exposure to sunlight	Sunlight exposure
Minimum	**1,5 h**
Medium	**3,0 h**
High	**4,0 h**

Existing Neighbours

5.65 When considering the sunlight received by existing residential buildings which neighbour a proposed development, the relevant recommendations are set out in Section 3.2 of the BRE Guidelines.

5.66 The potential for sunlight access by existing neighbouring dwellings is measured by assessing the number of probable hours in the year a given window point is likely to receive sunlight, with a separate consideration of what percentage of this overall annual figure comprises winter months access.

5.67 In order to do so the BRE Guidelines suggest the use of the Annual Probable Sunlight Hours (APSH) methodology.

Sunlight Measure for Existing Buildings: APSH

5.68 The availability of sunlight varies throughout the year with the maximum and minimum amount of available sunlight being on the summer and winter solstices.

5.69 The APSH method is based on the long-term average of the total number of hours during the year in which direct sunlight reaches the unobstructed ground, allowing for average levels of cloudiness.

5.70 APSH therefore also varies with location; however for reference in London a figure of 1,486 hours is used for the annual unobstructed total.

5.71 The correct sunlight availability indicator for the location is then used to plot what percentage of the annual unobstructed total will reach the window reference point when obstructions and orientation are taken into account.

5.72 For existing neighbours APSH calculations are taken at the centre of each window being assessed, on the plane of the outside face of the window wall. As for new development, regard is had for the orientation and use of the rooms serving the existing neighbouring building under consideration.

5.73 The BRE Guidelines state (at paragraph 3.2.3):

"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 90° of due south.

Kitchens and bedrooms are less important, although care should eb taken not to block too much sun. Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space, for example a bed sitting room in an old people's home."

5.74 Paragraphs 3.2.6 and 3.2.7 of the BRE Guidelines set the following recommendations:-

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"If a room can receive more than one quarter of annual probable sunlight hours (APSH), including at least 5% of APSH in the winter months between 21 September and 21 March, then it should still receive enough sunlight. Also, if the overall annual loss of APSH is 4% or less, the loss of sunlight is small.

Any reduction in sunlight access below these levels should be kept to a minimum. If the available sunlight hours are both less than the amount above and less than 0.80 times their former value, either over the whole year or just in the winter months (21 September to 21 March), and the overall annual loss is greater than 4% of APSH, then the occupants of the existing building will notice the loss of sunlight; the room may appear colder and less cheerful and pleasant."

5.75 To summarise the above, the default recommendation to meet occupant's sunlight expectations is 25% APSH, of which 5% should be in winter months. Where existing windows do not face within 90° of due south, as set out in the BRE guidance these were not assessed.

5.76 Where this recommendation is not met for the existing neighbouring properties a comparison with the existing condition is reviewed. If the ratio reduction is within 0.8 of its former value (in other words less

than 20% reduction of existing/baseline APSH) then the sunlight loss will not be noticeable by the occupants.

5.77 The BRE Guidelines add a further check of the overall annual loss, stating that when this is less than 4% APSH the change is small. There is a clear emphasis on the primary requirement for sunlight amenity being in living rooms and conservatories.

Sunlight Measure for External Spaces: Sun Hours on Ground (SHoG)

5.78 Section 3.3 of the BRE Guidelines acknowledge that the spaces between buildings have an important impact on their overall appearance and ambience. They advise that the sunlight reaching spaces is valuable for several reasons, namely to:

- Provide attractive sunlit views (all year);
- Make outdoor activities like sitting out and children's play more pleasant (mainly warmer months);
- Encourage plant growth (mainly spring and summer);
- To dry out the ground, reducing moss and slime (mainly in colder months);
- Melt frost, ice and snow (in winter); and
- Dry clothes (all year).

5.79 As can be seen from the above list, it is important to ensure good sunlight penetration throughout the year for various reasons. They state that the availability of sunlight should be checked for all open spaces where it will be required.

5.80 This would normally include:

- gardens, such as the main back garden of a house or communal gardens including courtyards and roof terraces
- parks and playing fields
- children's playgrounds
- outdoor swimming pools and paddling pools, and other areas of recreational water such as marinas and boating lakes (the daylight and sunlight effects on permanent residential moorings may be assessed using the methods in sections 2.2 and 3.2)

- sitting out areas such as those between nondomestic buildings and in public squares
- nature reserves (which may have special requirements for sunlight if rare plants are growing there)

5.81 The BRE Guidelines state that each of the above spaces will have different sunlighting requirements and therefore it is difficult to suggest a hard and fast rule for all. They state that the Equinox (21 March) can be selected as an assessment date as it represents average annual conditions.

5.82 The default recommendation is that at least half of the amenity area being assessed (i.e. 50% of its area) should receive at least 2 hours of sunlight on 21 March. The BRE Guidelines advise plotting the '2 hours sun contour' onto the amenity area in order to determine this.

5.83 This guidance applies to both existing and proposed new external spaces. For existing neighbouring spaces, the BRE Guidelines suggest that less than 20% reduction (or a 0.8 ratio) is not significant.

5.84 In addition to the above assessment, the BRE Guidelines also recommend consideration of 'before' and 'after' shadow plotting for critical areas and/or where several spaces may be affected. This can be undertaken to consider specific times of the day or year when sunlight access is more important.

Flexibility

5.85 As set out in the BRE Guidelines and BS EN 17037:2018, these default recommendations are "purely advisory" (paragraph F1) and "should be interpreted flexibly" (paragraph 1.6).

5.86 This does not mean that the default recommendations and targets within the Guidelines can be disregarded but, instead, any 'flexibility' that is applied after applying the default recommendations should be founded on sound scientific principles that can be objectively supported and justified.

5.87 Where appropriate, if the initial assessments show non-compliance with the default target recommendations, the suggestions in the BRE guidance with respect to alternative targets have been applied, as follows.

Existing Neighbours

5.88 As part of the process of setting any alternative target values/ approach to the default recommendations, regard has been had to the recommendations in Appendix F of the BRE guidance, which states:

"F1: Sections 2.1, 2.2 and 2.3 give numerical target values in assessing how much light from the sky is blocked by obstructing buildings.

These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location."

New Development

5.89 The location of the site in a very dense part of Central London with neighbouring properties in close proximity is appropriate for application of the UK National Annex alternative targets.

6. Assessment Results and Commentary: Existing Neighbours

Scope

6.1 Within this section we assess the impact to existing neighbouring dwellings we consider have the potential to experience a change to their existing Daylight and Sunlight amenity due to the introduction of the proposed development.

6.2 The 3D image below shows the assessment scope, with a list of potentially affected residential properties assessed beneath.

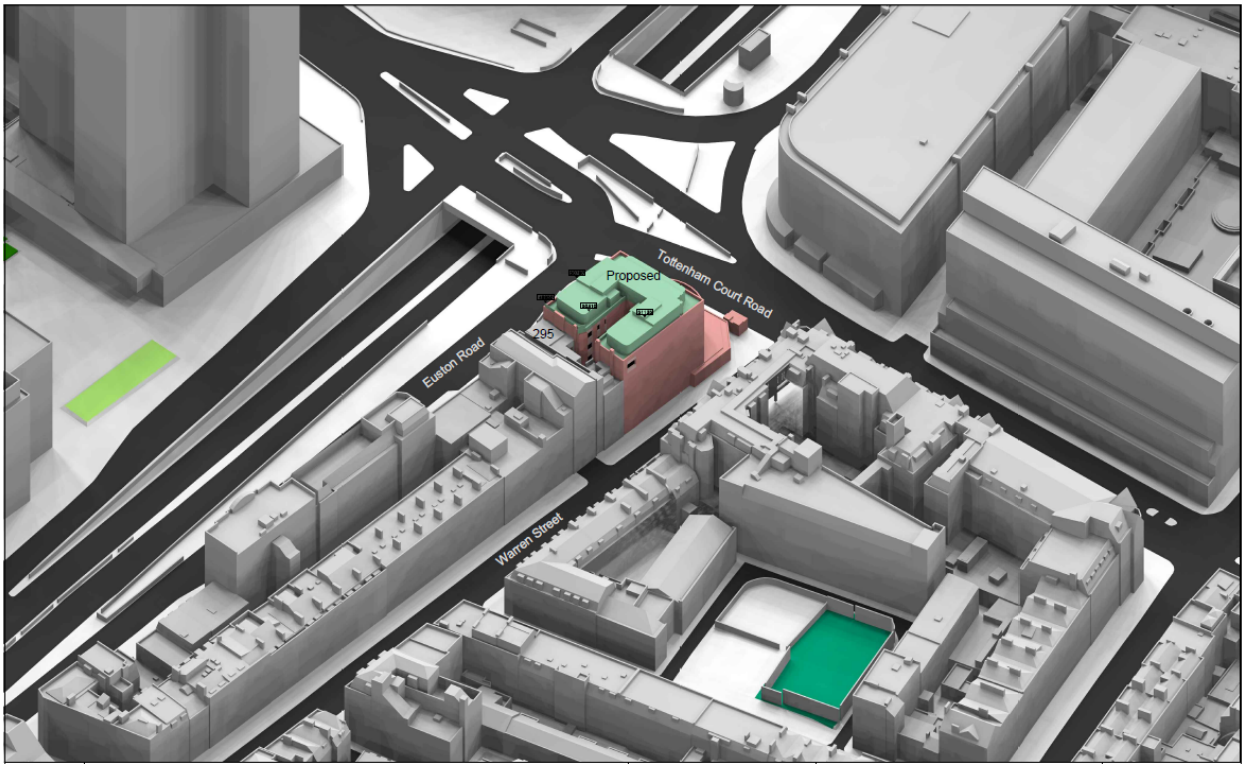


Figure 2: axonometric view of assessment model showing proposed massing and scope

- 295 Euston Road
- Warren Court (The Host building)

6.3 The remaining potentially affected properties are either too far away to be affected, do not face the site or understood to be commercial use and therefore not to have any special requirement for natural light and so not assessed.

6.4 Our research did not identify any neighbouring external amenity spaces which could be potentially affected and therefore these assessments were not conducted.

Daylight & Sunlight Analysis

6.5 Please refer to the detailed assessment drawings and results tables at Appendix 2 and 4, which would be summarised as follows:

VSC

- 23 potentially affected windows were assessed
- 18 (78%) of windows assessed fully met the default BRE recommendations for VSC
- The remaining 5 windows would either fractionally exceed the default target or retain typical values for the context. These are either non-habitable kitchens or bedrooms, which have a lowered expectation for daylight.

NSL

- Reasonable assumptions based on external inspection and desktop research were made with respect to uses and layouts to consider NSL effects
- 22 potentially affected rooms were assessed
- 16 (72%) of rooms assessed fully met the default BRE recommendations
- The remaining 6 rooms either fractionally exceed the default target or retain typical values for the context. These are either non-habitable kitchens or bedrooms, which have a lowered expectation for daylight.

APSH

- 13 potentially affected southerly orientated windows were assessed
- 11 of 13 windows (85%) met the default BRE recommendations for sunlight.
- The remaining 2 windows are understood to serve non-habitable kitchens, both of which retain APSH values commensurate with the context.

6.6 In summary, the assessments confirm acceptable impact to natural light amenity of existing neighbours.

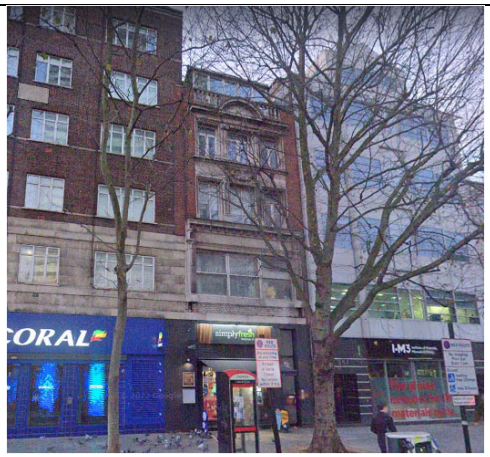
6.7 The assessment results for each property analysed are considered individually below in more detail.

295 Euston Road

6.8 The building is to the west of the proposed development and comprises of a ground floor retail space, with residential flats from first to fourth floors. Our understanding of the internal configuration is informed by sample layouts from online planning records and estate agents' brochure.

6.9 A total of 7 windows serving 7 rooms have been considered for daylight. Based on the layouts obtained, these are likely to relate to a mixture of kitchen, dining and bedroom areas, as well as non-habitable space.

Front elevation



Rear elevation

Daylight Measure 1: VSC

6.10 5 (72%) of 7 windows tested would satisfy the default BRE guidelines recommendations.

6.11 The two remaining windows record extremely low VSC values in the baseline condition, providing little to no natural light amenity to the non-habitable kitchen and bedroom they serve. Post development, there would be a very small change of circa 0.3%VSC, effectively no change from the baseline.

6.12 However, when expressed as a percentage this is misleadingly high and therefore, in our view, does not represent an unacceptable worsening of the baseline.

Daylight Measure 2: NSL

6.13 The assessments show no noticeable NSL change to the assumed rooms analysed.

Sunlight Measure: APSH

6.14 The potentially affected southerly facing windows serving these properties were assessed for potential impacts to existing sunlight amenity.

6.15 The results confirm that all potentially affected southerly facing windows would satisfy the default BRE recommendations for APSH, despite the dense context.

Overall Conclusion, 295 Euston Road

6.16 The assessments confirmed no unacceptable effects to existing natural light amenity.

Warren Court (The host building)

6.17 This property comprises ground part six upper floors. Our understanding of the internal configuration is informed by sample layouts received from the client.

6.18 A total of 16 windows serving 15 rooms have been considered for daylight. Based on the layouts obtained, these are likely to relate to a mixture of kitchen, dining and bedroom areas, as well as non-habitable space.

South elevation

North elevation

Daylight Measure 1: VSC

6.19 13 (81%) of 16 windows tested would satisfy the default BRE guidelines recommendations.

6.20 The remaining three windows would experience between 20.56% and 33.38% reductions in their existing VSC values, slightly in excess of the 20% point at which the BRE considers differences may become noticeable to occupants. They either experience small changes or retain VSC values in the mid-teens, commensurate with a dense urban context.

Daylight Measure 2: NSL

6.21 9 (60%) of 15 rooms tested would satisfy the default BRE guidelines recommendations.

6.22 The 6 remaining rooms are either non-habitable kitchens or bedrooms, which record percentage differences exceeding the 20% point at which the BRE considers changes may become noticeable to occupants.

6.23 All six either have small actual/ absolute changes or retain NSL in excess of 50%, considered acceptable given their use and context.

Sunlight Measure: APSH

6.24 10 potentially affected windows were assessed, 8 of which (i.e. 80%) satisfy the default BRE guidelines recommendations.

6.25 The 2 windows not satisfying the default BRE guidelines recommendations both serve non-habitable kitchens. 1 result is extremely close to the default winter months APSH target of at least 5%, retaining 4% with 38% total APSH, exceeding the default target of at least 25%.

6.26 The remaining window satisfies the default winter months APSH recommendation and retains total ASPH commensurate with a dense urban context.

Overall Conclusion, Warren Court Existing Dwellings

6.27 The assessments confirmed no unacceptable effects to existing natural light amenity.

7. Assessment Results and Commentary: Amenity Provision within the Proposed Development

7.1 As set out above, CBDM assessments have been undertaken in accordance with the UK National Annex. (BS EN 17037), as well as sunlight exposure assessments to each of the proposed habitable rooms within the residential dwellings (i.e. living rooms, kitchens and bedrooms).

7.2 AY have worked alongside the design team throughout the design process in order to maximise levels of natural light within the Proposed Development as far as reasonably possible, given the Site context and the need to make efficient use of the land to provide much needed housing.

7.3 The need for flexibility in applying the BRE Guidelines applies equally to the consideration of light levels within a proposed scheme.

7.4 The following design measures were taken into account:

- Designing the massing to allow for greater daylight ingress and more dual aspect apartments;
- Arranging the flat layouts to prioritise daylight within the main living areas;
- Arranging room layouts to ensure the potential of each window is realised, as far as reasonably possible;
- Maximising window sizes in areas of lower daylight potential, whilst being mindful of the need to reduce heat gain/loss.

7.5 The results of the assessments are at appendix 5, 7, 9.

7.6 With regard to the CBDM analysis the following reflectance values were applied:

• Internal Walls – 0.8	• Internal Ceilings – 0.8
• Internal floors – 0.4	• Internal reveals – 0.8
• External walls/ reveals – 0.25	• Balconies – 0.2
• Surroundings and ground - 0.25	• Glazing bar correction – 0.8
• Glazing Transmittance – 0.68	• Maintenance Factor – 0.92

7.7 The table below summarises the assessment results.

	LIVING AREAS/ STUDIOS		BEDROOMS	
	200lx, 50% Area, 50% Time	**1.5h Sunlight Exposure (March 21)**	**100lx, 50% Area, 50% Time**	**1.5h Sunlight Exposure (March 21)**
Rooms Assessed	4	4	3	3
Meeting Default Recommendation	4	4	3	2
Percentage	100%	100%	100%	66%

Living Areas

7.8 A total of 4 proposed LKDs and studios were assessed.

Daylight

7.9 All 4 would comfortably achieve the default UKNA recommendations for combined living kitchen dining areas.

Sunlight

7.10 All 4 would achieve the default EN 17037 minimum recommendations.

Bedrooms

7.11 A total of 3 proposed bedrooms were assessed.

Daylight

7.12 All 3 rooms would comfortably achieve the default UKNA recommendations.

Sunlight

7.13 2 rooms would achieve the default EN 17037 minimum recommendation.

7.14 1 bedroom does not meet the default minimum recommendation.

7.15 The living area for the dwelling this bedroom forms part of achieves the default recommendation. As such all dwellings achieve the default recommendation for sunlight exposure.

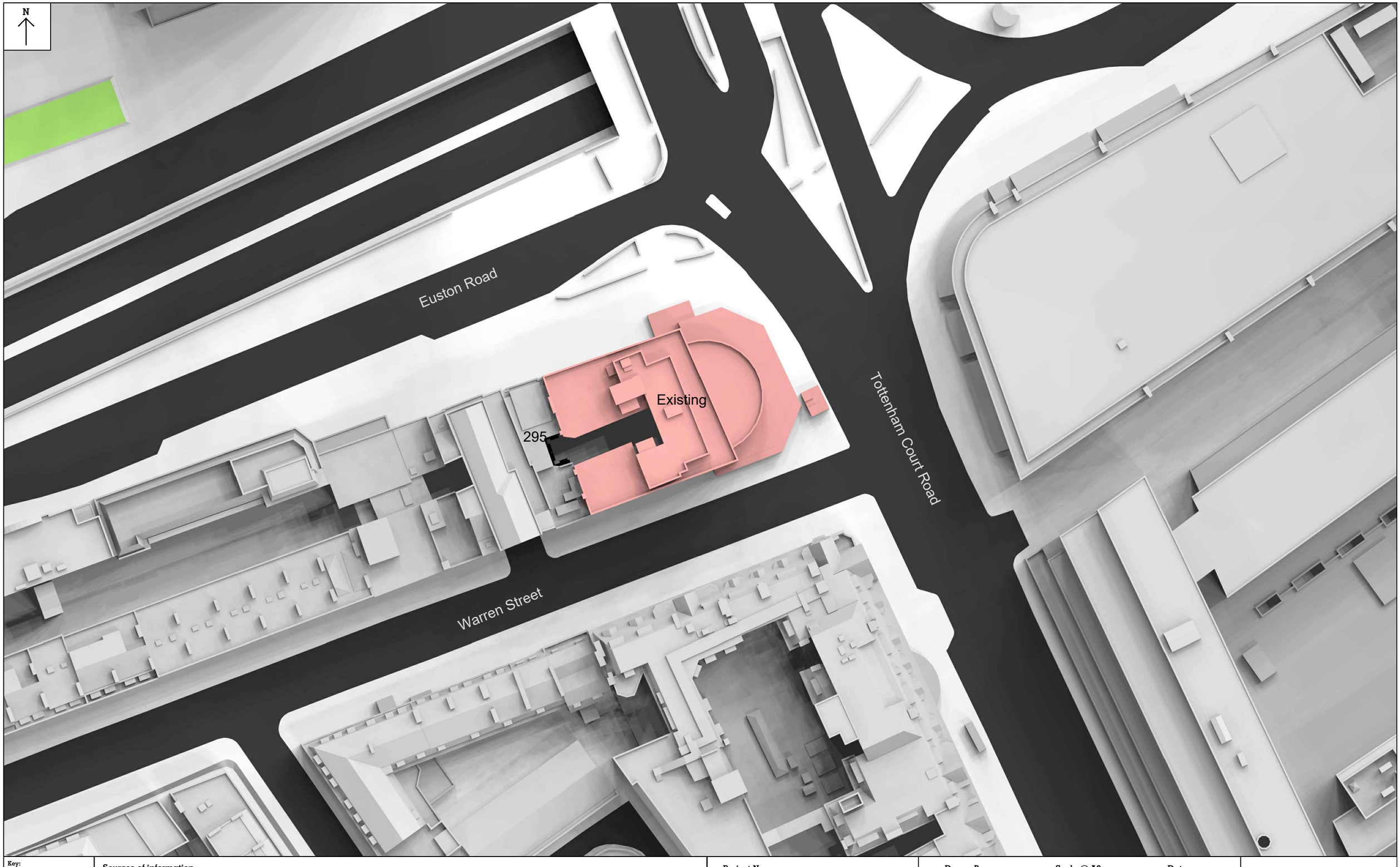
8. Summary and Conclusions

8.1 Despite the restrictive context, the range of detailed assessments have confirmed that the Proposed Development would have no unacceptable effects to existing Daylight and Sunlight amenity of neighbouring dwellings.

8.2 Within the proposed dwellings, future occupants would enjoy excellent natural light amenity for a dense urban environment.

8.3 The Proposed Development is therefore concluded as adherent with local, regional and national planning policy related to Daylight and Sunlight and therefore fully acceptable on these grounds.

Appendix 1
3D Model Drawings



Key:

- Existing
- Proposed
- Consented
- Surrounding Context

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
PLAN VIEW
EXISTING

Drawn By	Scale @ A3	Date
CC	1/500	28 NOV 2022

Project No.	Drawing No.	Revision
WA118_12	BRE_01	-

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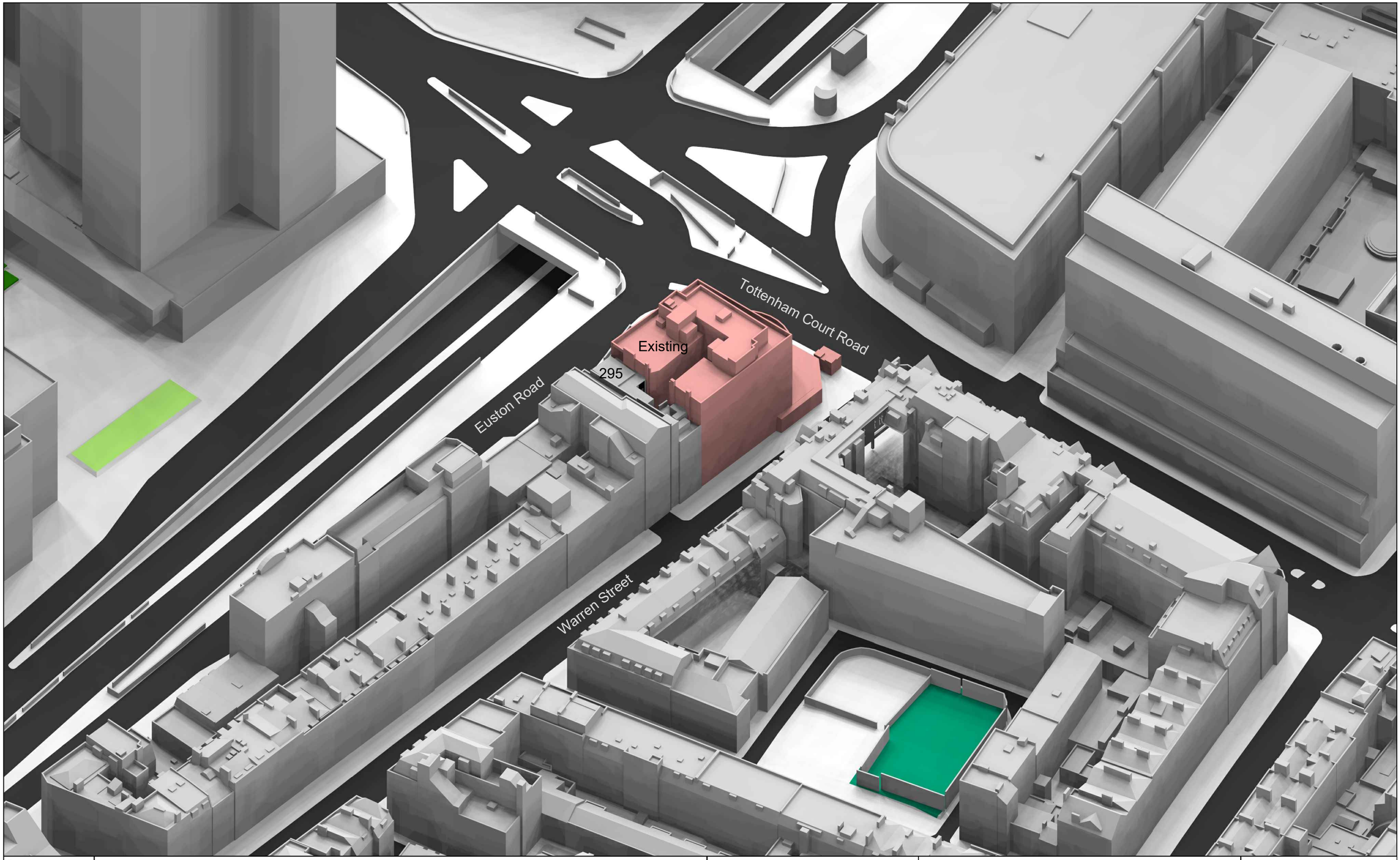

Key:

- Existing
- Proposed
- Consented
- Surrounding Context

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
3D VIEW
EXISTING

Drawn By	Scale @ A3	Date
CC	NTS	28 NOV 2022

Project No.	Drawing No.	Revision
WA118_12	BRE_02	-

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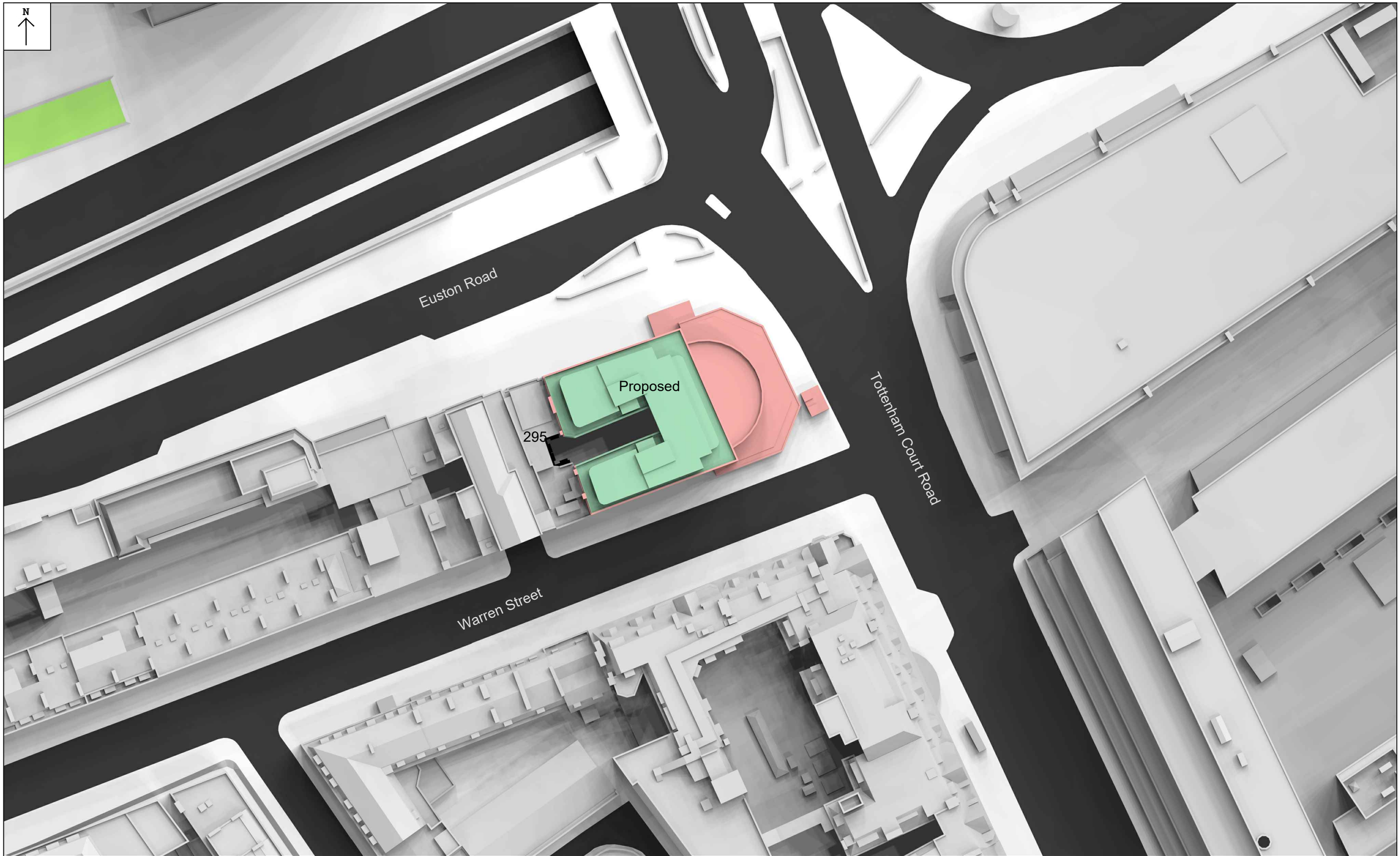

Key:

- Existing
- Proposed
- Consented
- Surrounding Context

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
PLAN VIEW
PROPOSED

Drawn By	Scale @ A3	Date
CC	1/500	28 NOV 2022

Project No.	Drawing No.	Revision
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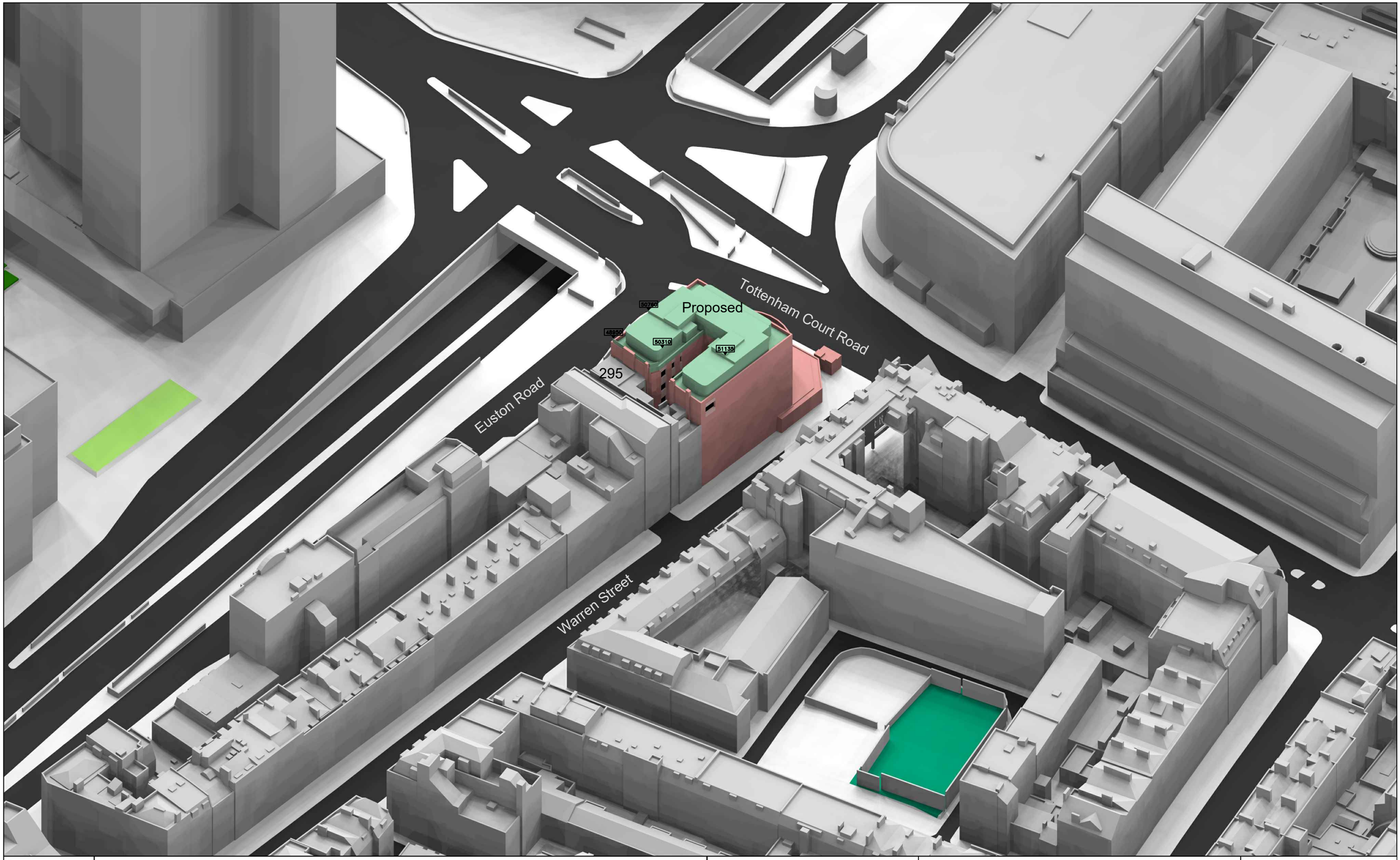

Key:

- Existing
- Proposed
- Consented
- Surrounding Context

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
3D VIEW
PROPOSED

Drawn By	Scale @ A3	Date
CC	NTS	28 NOV 2022

Project No.	Drawing No.	Revision
WA118_12	BRE_04	-

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Appendix 2
VSC and NSL Tabular Results

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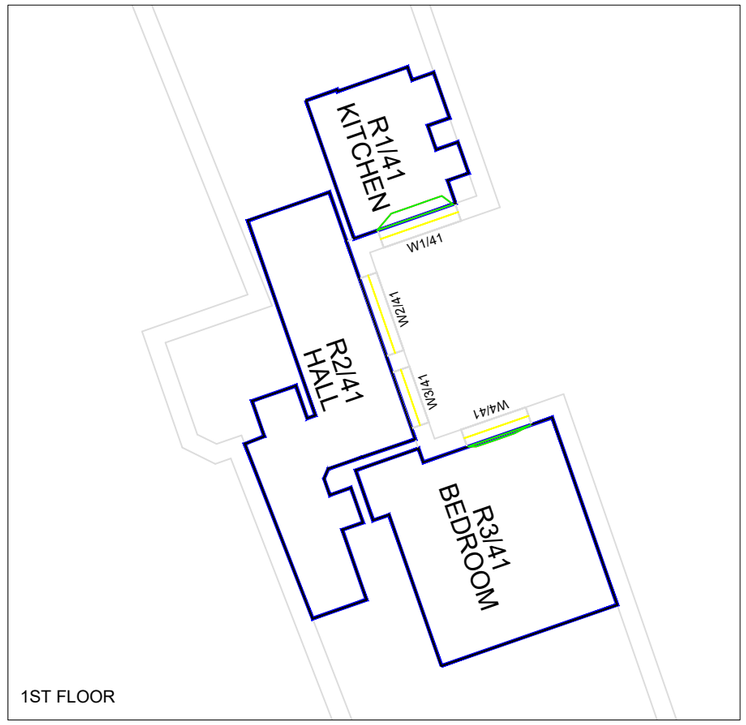
WARREN COURT
01-Dec-22
JOB 12 - DAYLIGHT RESULTS

			%VSC			% Daylight Factor			Daylight Distribution					
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Room Area sq ft	Existing Area sq ft	Existing % of Room Area	Proposed Area sq ft	Proposed % of Room Area	% Loss of Existing
295 Euston Road NW1														
1st Floor														
R1/41	KITCHEN	W1/41	1.16	0.78	32.76%	0.00	0.00	0.00%	49.7	2.2	4.43%	2.2	4.43%	0.00%
R3/41	BEDROOM	W4/41	0.66	0.42	36.36%	0.00	0.00	0.00%	110.2	0.4	0.36%	0.4	0.36%	0.00%
2nd Floor														
R1/42	BEDROOM	W1/42	2.59	2.24	13.51%	0.10	0.10	0.00%	133.6	7.2	5.39%	7.2	5.39%	0.00%
R3/42	KITCHEN	W5/42	1.38	1.23	10.87%	0.00	0.00	0.00%	85.1	2.1	2.47%	2.1	2.47%	0.00%
3rd Floor														
R1/43	BEDROOM	W1/43	7.50	6.40	14.67%	0.22	0.20	8.93%	148.5	28.8	19.39%	28.4	19.12%	1.39%
R3/43	KITCHEN	W5/43	3.94	3.55	9.90%	0.19	0.18	2.67%	87.9	8.6	9.78%	8.4	9.56%	2.33%
4th Floor														
R3/44	KITCHEN	W3/44	14.56	12.61	13.39%	0.96	0.85	11.78%	65.6	62.5	95.27%	56.4	85.98%	9.76%
Warren Court														
1st Floor														
R1/51	KITCHEN	W1/51	0.73	0.65	10.96%	0.00	0.00	0.00%	53.2	0.9	1.69%	0.9	1.69%	0.00%
2nd Floor														
R1/52	KITCHEN	W1/52	2.00	1.80	10.00%	0.00	0.00	0.00%	48.7	1.2	2.46%	0.8	1.64%	33.33%
R2/52	KITCHEN	W2/52	2.05	1.88	8.29%	0.40	0.39	2.50%	46.8	5.2	11.11%	4.9	10.47%	5.77%
3rd Floor														
R1/53	BEDROOM	W1/53	4.89	4.36	10.84%	1.02	0.91	10.81%	127	23.8	18.74%	21.6	17.01%	9.24%
R2/53	KITCHEN	W2/53	3.82	3.32	13.09%	0.36	0.24	32.87%	48.7	5.2	10.68%	4.2	8.62%	19.23%
R3/53	KITCHEN	W3/53	4.64	4.15	10.56%	1.35	1.12	17.46%	46.8	8.8	18.80%	7.7	16.45%	12.50%
R4/53	BEDROOM	W4/53	5.37	4.89	8.94%	1.22	1.13	7.86%	114.2	31.8	27.85%	29.4	25.74%	7.55%
4th Floor														
R1/54	BEDROOM	W1/54	10.88	9.15	15.90%	1.72	1.49	13.39%	127	40.1	31.57%	33.7	26.54%	15.96%
R2/54	KITCHEN	W2/54	8.51	6.76	20.56%	0.80	0.61	24.50%	48.7	14.1	28.95%	9.9	20.33%	29.79%
R3/54	KITCHEN	W3/54	9.85	8.23	16.45%	2.50	2.10	15.89%	46.8	19.5	41.67%	14.3	30.56%	26.67%
R4/54	BEDROOM	W4/54	12.53	11.03	11.97%	2.01	1.82	9.37%	114.2	69.7	61.03%	65.6	57.44%	5.88%
5th Floor														
R1/55	BEDROOM	W1/55	24.87	17.70	28.83%	2.88	2.25	21.90%	127	125.2	98.58%	64.2	50.55%	48.72%
R2/55	KITCHEN	W2/55	21.90	14.59	33.38%	1.57	1.10	29.97%	48.7	43.7	89.73%	24.4	50.10%	44.16%
R3/55	KITCHEN	W3/55	19.85	16.00	19.40%	3.93	3.32	15.36%	46.8	45.9	98.08%	31.1	66.45%	32.24%
R4/55	LKD	W4/55	21.79	18.00	17.39%	4.04	3.85	4.61%	308.7	303.2	98.22%	299.4	96.99%	1.25%
		W5/55	36.25	36.25	>27									

ADF	Pass Value	No Rooms	No Passes	% Passes
BEDROOM	1	8	4	50.00%
DINING	1.5	0	0	0.00%
KITCHEN	2	13	2	15.38%
LD	1.5	0	0	0.00%
KD	2	0	0	0.00%
STUDY	1.5	0	0	0.00%
STUDIO	1.5	0	0	0.00%
LKD	2	1	1	100.00%
Livingroom	1.5	0	0	0.00%
TOTALS		22	7	31.82%

Appendix 3
NSL Contour Plots



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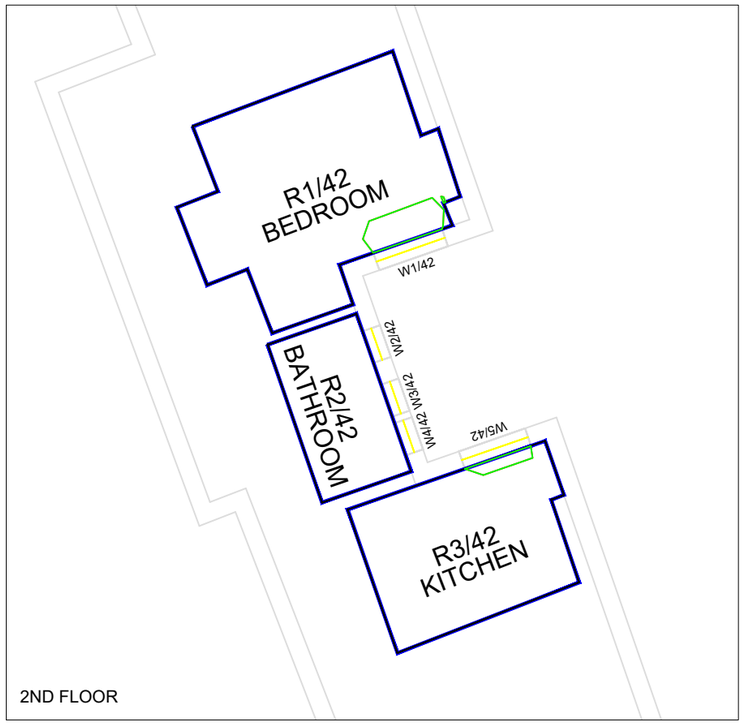

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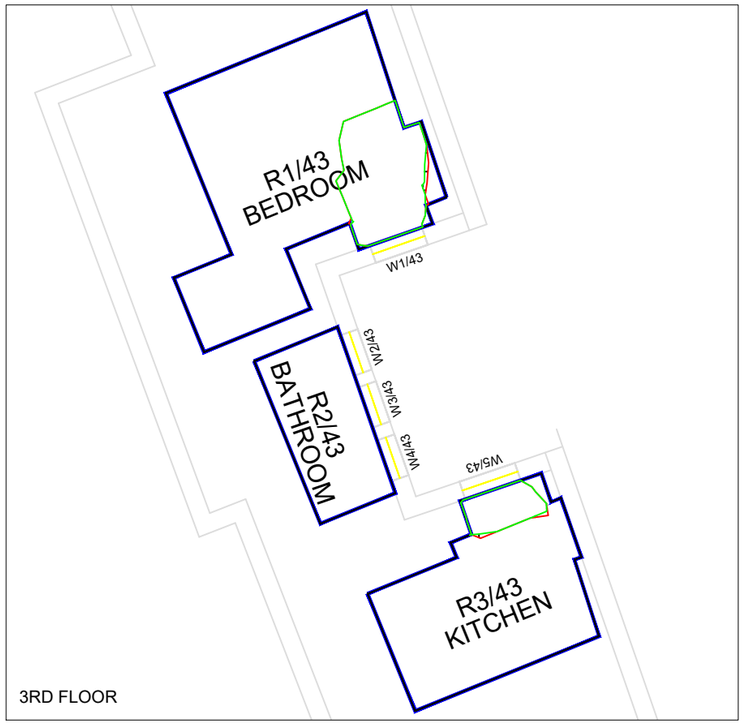

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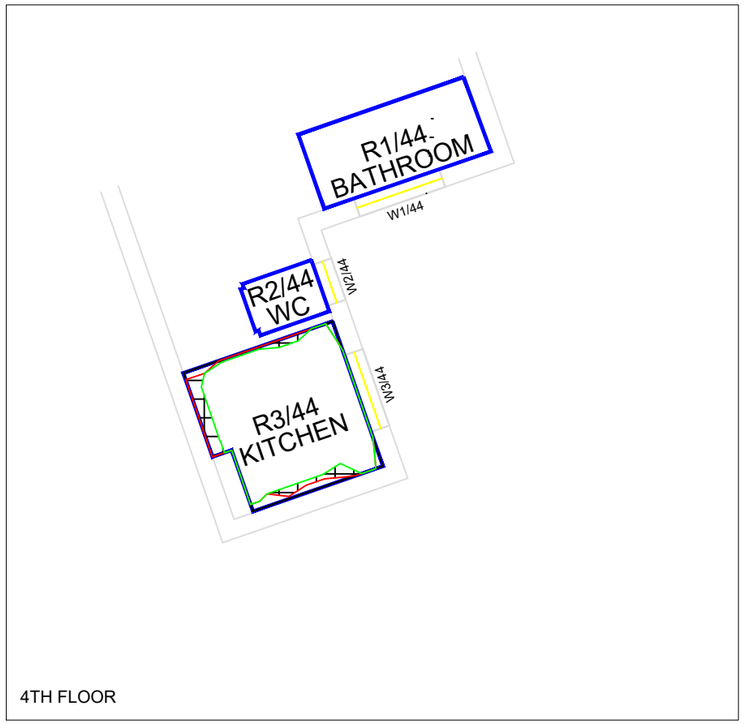

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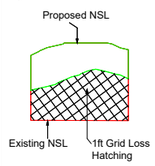

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
NO SKYLINE CONTOURS

295 EUSTON ROAD

Drawn By	Scale @ A3	Date
CC	1/100	28 NOV 2022

Project No.	Drawing No.	Revision
WA118_12	BRE_05	-

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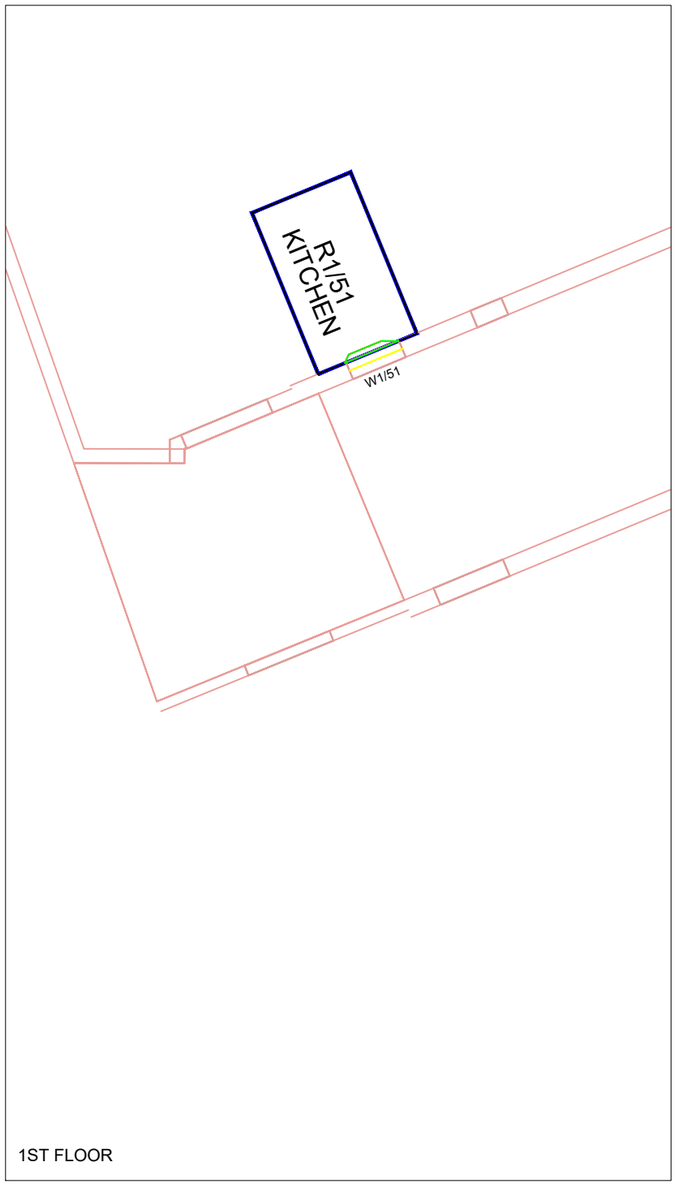

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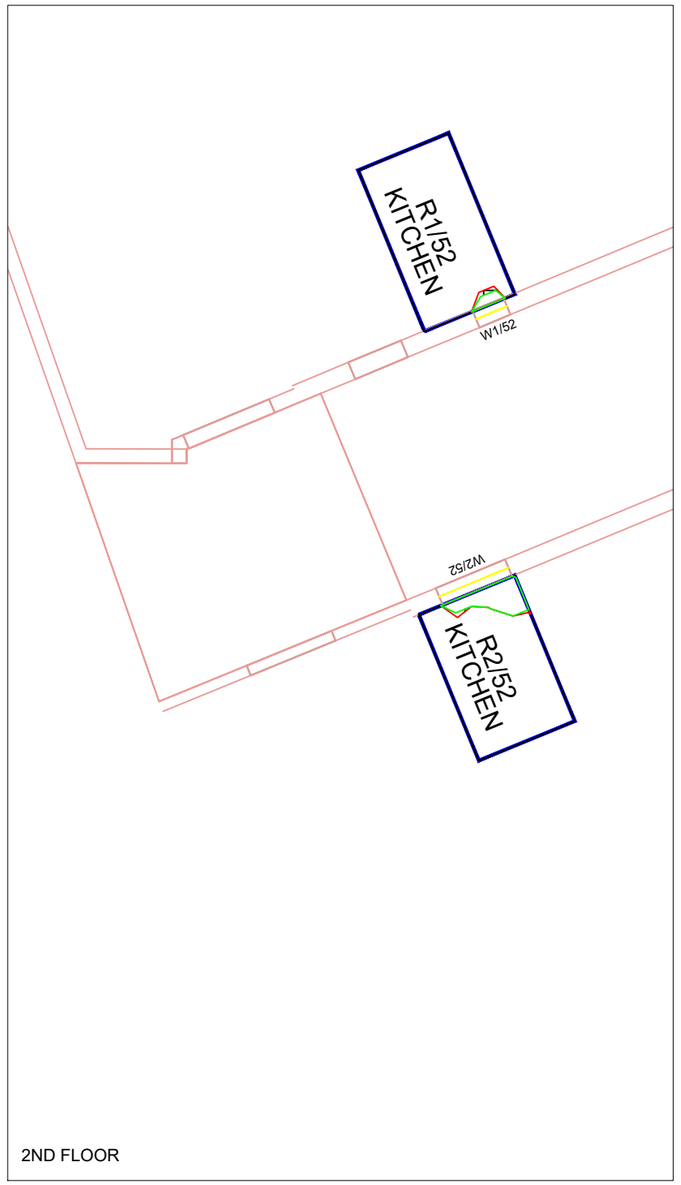

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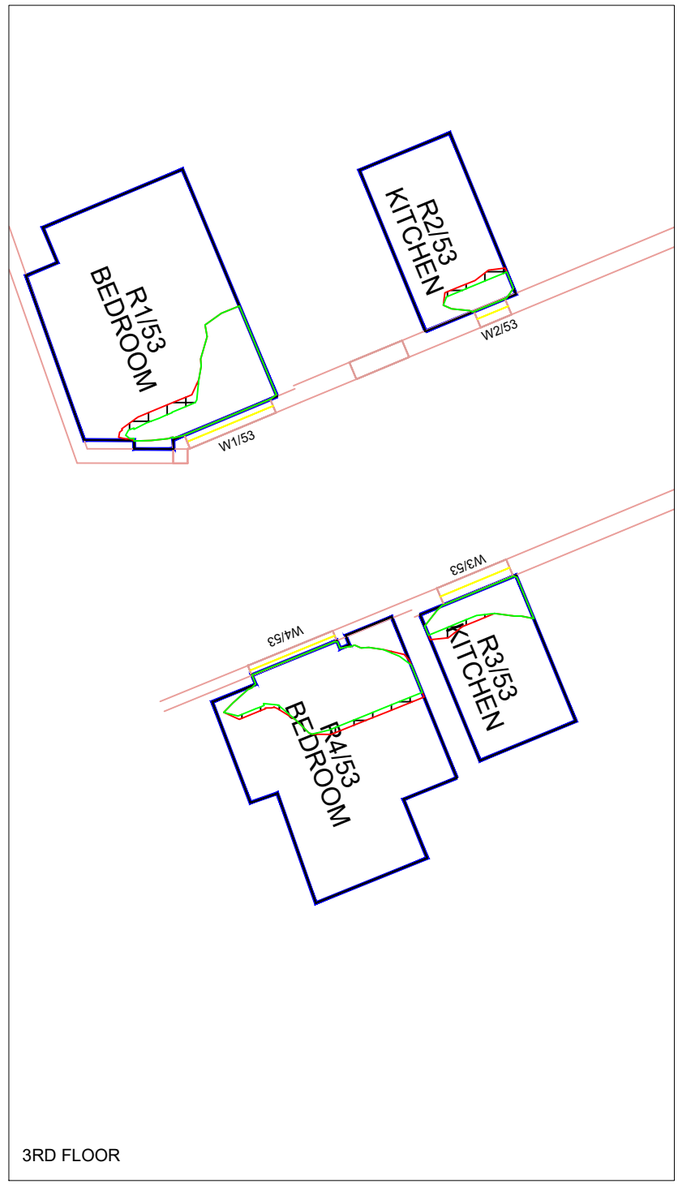

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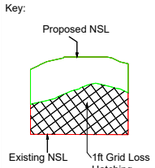

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
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Project Name
WARREN COURT LONDON

Drawing Title
NO SKYLINE CONTOURS
WARREN COURT

Drawn By	Scale @ A3	Date
CC	1/100	28 NOV 2022

Project No.	Drawing No.	Revision
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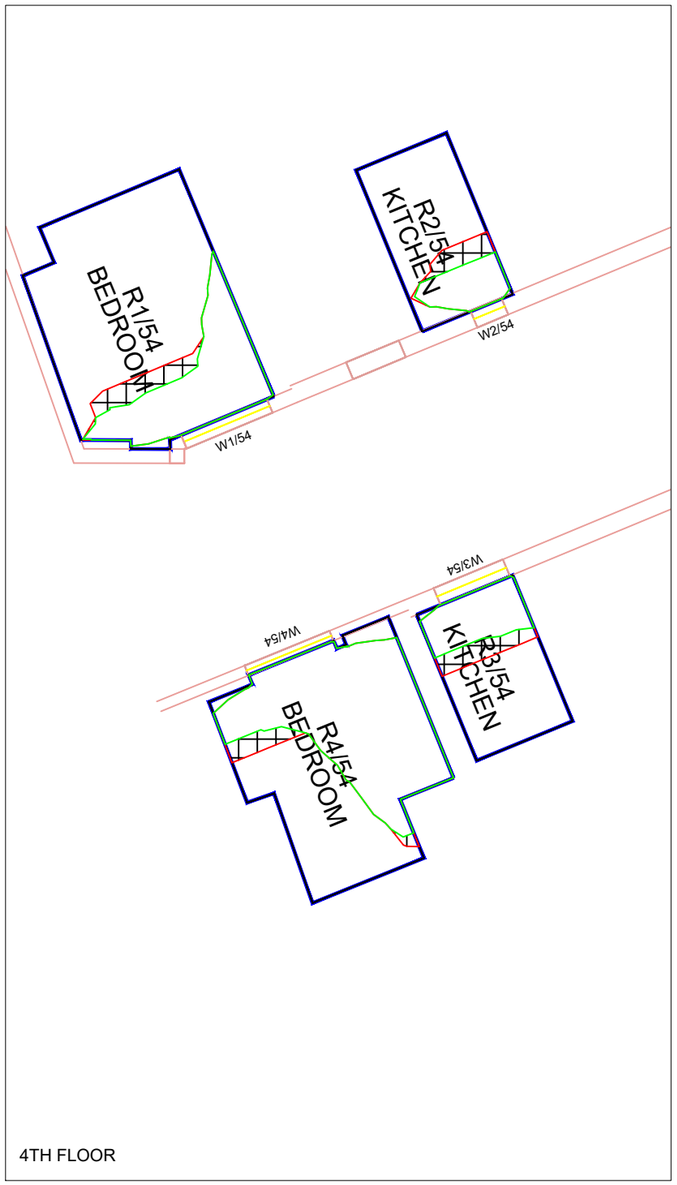
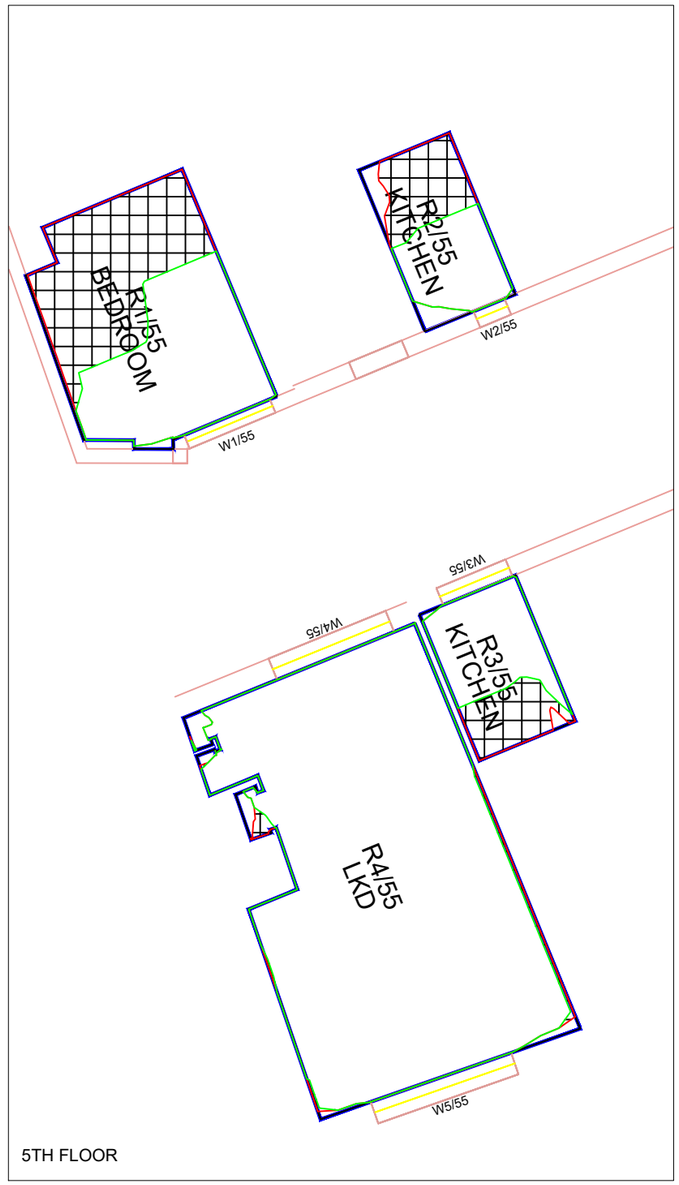
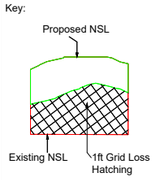


4TH FLOOR



5TH FLOOR

Key:



Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
NO SKYLINE CONTOURS
WARREN COURT

Drawn By	Scale @ A3	Date
CC	1/100	28 NOV 2022

Project No.	Drawing No.	Revision
WA118_12	BRE_07	-

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Appendix 4
APSH Tabular Results

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WARREN COURT
01-Dec-22
JOB 12 - SUNLIGHT RESULTS

Available sunlight as a percentage of
annual unobstructed total (1486.0 Hrs)

		Existing %			Proposed %					
Room use	Window Ref	Summer	Winter	Total	Summer	Winter	Total	% Loss of Summer	% Loss of Winter	% Loss of Total
295 Euston Road NW1										
1st Floor										
KITCHEN	W1/41	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%
2nd Floor										
BEDROOM	W1/42	1.00	0.00	1.00	1.00	0.00	1.00	0.00%	0.00%	0.00%
3rd Floor										
BEDROOM	W1/43	6.00	1.00	7.00	6.00	1.00	7.00	0.00%	0.00%	0.00%
Warren Court										
1st Floor										
KITCHEN	W1/51	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%
2nd Floor										
KITCHEN	W1/52	4.00	0.00	4.00	3.00	0.00	3.00	25.00%	0.00%	25.00%
3rd Floor										
BEDROOM	W1/53	8.00	0.00	8.00	6.00	0.00	6.00	25.00%	0.00%	25.00%
KITCHEN	W2/53	9.00	0.00	9.00	8.00	0.00	8.00	11.11%	0.00%	11.11%
4th Floor										
BEDROOM	W1/54	17.00	2.00	19.00	13.00	2.00	15.00	23.53%	0.00%	21.05%
KITCHEN	W2/54	21.00	1.00	22.00	14.00	1.00	15.00	33.33%	0.00%	31.82%
5th Floor										
BEDROOM	W1/55	43.00	11.00	54.00	34.00	5.00	39.00	20.93%	54.55%	27.78%
KITCHEN	W2/55	40.00	12.00	52.00	34.00	4.00	38.00	15.00%	66.67%	26.92%
LKD	W4/55	10.00	0.00	10.00	10.00	0.00	10.00	0.00%	0.00%	0.00%
LKD	W5/55	56.00	27.00	83.00	56.00	27.00	83.00	0.00%	0.00%	0.00%

Appendix 5
UK Annex Tabular Results (200Lux)

AVISON YOUNG

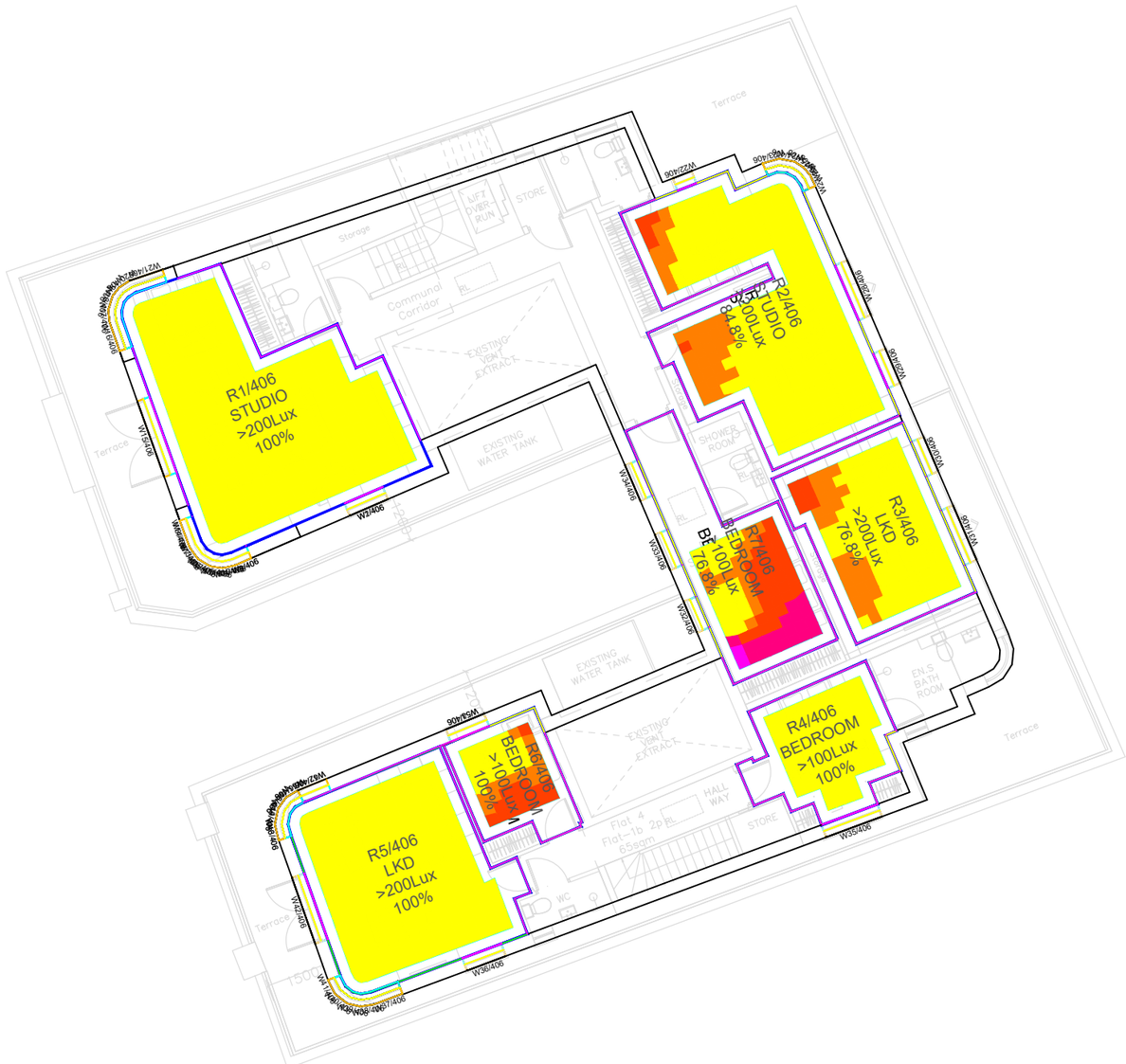
Warren Court

Daylight Illuminance UKNA results 200 lux LKD Job 13 - 12 December 2022

Address	Flat No.	Level	Room Label	Room Use	Room Area sq m	Percentage of Daylight	Median Illuminance	Ref Plane Target %	Room Use Target	Fraction of Working Plane % area	Pass/Fail
Warren Court	1	6th	R1/406	STUDIO	26.05	50	768.1	50	200	100	PASS
Warren Court	2	6th	R2/406	STUDIO	22.41	50	326.1	50	200	84.8	PASS
Warren Court	3	6th	R3/406	LKD	11.78	50	282	50	200	76.8	PASS
Warren Court	3	6th	R7/406	BEDROOM	7.56	50	138.7	50	100	76.8	PASS
Warren Court	4	6th	R4/406	BEDROOM	6.46	50	343.6	50	100	100	PASS
Warren Court	4	6th	R5/406	LKD	18.62	50	1045.6	50	200	100	PASS
Warren Court	4	6th	R6/406	BEDROOM	4.06	50	177.6	50	100	100	PASS

Total pass	7
Total fail	0
Percentage fail rate	0.00%
Percentage pass rate	100.00%
Total rooms	7

Appendix 6
UK Annex Plots (200Lux)



6TH FLOOR

Key:

Daylight Illuminance Falsecolour Lux

- 0-5 lux
- 5-10 lux
- 10-25 lux
- 25-50 lux
- 50-100 lux
- 100-150 lux
- 150-200 lux
- >200 lux

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name

WARREN COURT LONDON

Drawing Title

UKNA Daylight Illuminance 200 LUX

PROPOSED WARREN COURT

Drawn By	Scale @ A3	Date
CC	1/150	12 DEC 2022

Project No.	Drawing No.	Revision
WA118_13	BRE_05	-

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Appendix 7
UK Annex Tabular Results (150 Lux)

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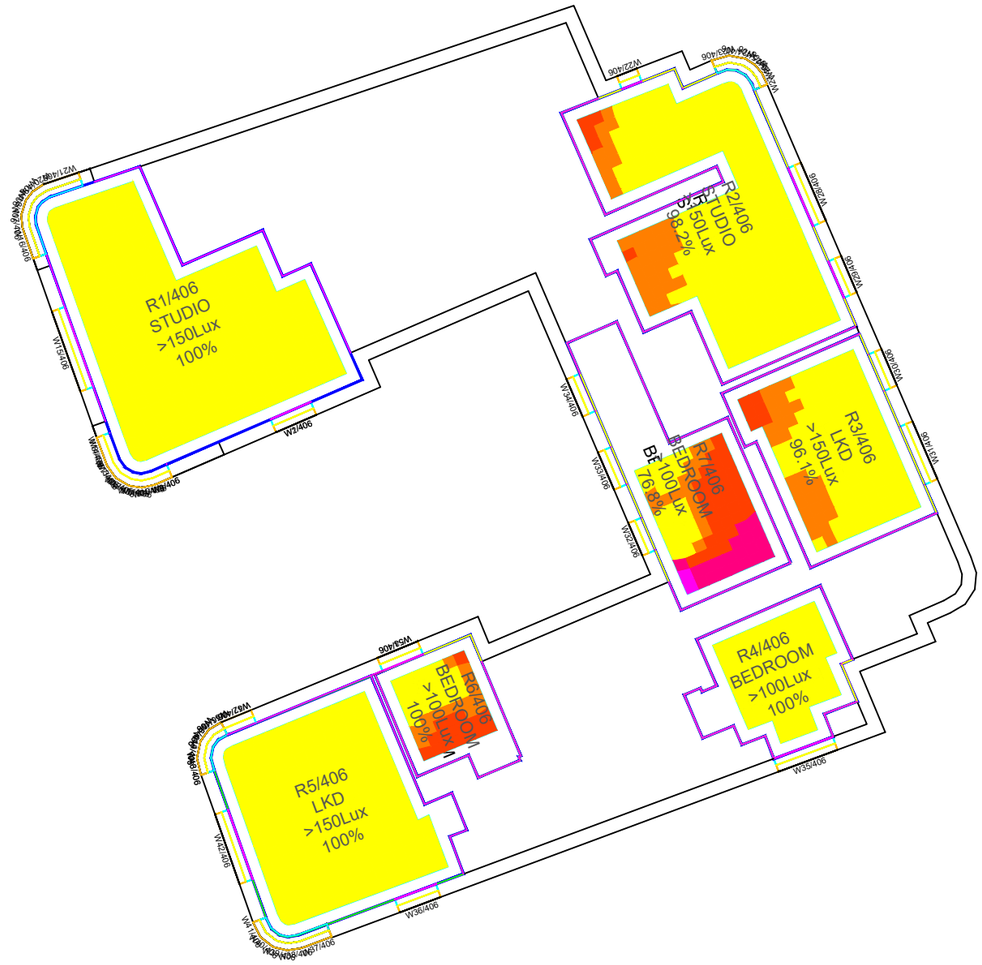
Warren Court
Daylight Illuminance UKNA results 150 lux LKD Job 13 - 12 December 2022

Address	Flat No.	Level	Room Label	Room Use	Room Area sq m	Percentage of Daylight	Median Illuminance	Ref Plane Target %	Room Use Target	Fraction of Working Plane % area	Pass/Fail
Warren Court	1	6th	R1/406	STUDIO	26.05	50	768.1	50	150	100	PASS
Warren Court	2	6th	R2/406	STUDIO	22.41	50	326.1	50	150	98.2	PASS
Warren Court	3	6th	R3/406	LKD	11.78	50	282	50	150	96.1	PASS
Warren Court	3	6th	R7/406	BEDROOM	7.56	50	138.7	50	100	76.8	PASS
Warren Court	4	6th	R4/406	BEDROOM	6.46	50	343.6	50	100	100	PASS
Warren Court	4	6th	R5/406	LKD	18.62	50	1045.6	50	150	100	PASS
Warren Court	4	6th	R6/406	BEDROOM	4.06	50	177.6	50	100	100	PASS

Total pass	7
Total fail	0
Percentage fail rate	0.00%
Percentage pass rate	100.00%
Total rooms	7

Appendix 8
UK Annex Plots (150Lux)



6TH FLOOR

Key:

Daylight Illuminance Falsecolour Lux

- 0-5 lux
- 5-10 lux
- 10-25 lux
- 25-50 lux
- 50-100 lux
- 100-150 lux
- 150-200 lux
- >200 lux

Sources of information

Existing building	Surrounding buildings	Proposed building	Consented
Z-MAP 3D Model in AutoCAD dwg format	Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans	17. DOWNLOAD SCHEME DWGS 16 NOV 2022	N/A

Project Name
WARREN COURT LONDON

Drawing Title
UKNA Daylight Illuminance 150 LUX
PROPOSED WARREN COURT

Drawn By	Scale @ A3	Date
CC	1/150	12 DEC 2022

Project No.	Drawing No.	Revision
WA118_13	BRE_07	-

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Appendix 9

Sunlight Exposure Analysis

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Warren Court

Sunlight Exposure Analysis adjoining block results for February 01, March 01 & March 21 Job 14 04 December 2022

Room	Feb-01	Above/Below	Mar-01	Above/Below	Mar-21	Above/Below	ROOMUSE	FLATNUMBER
Warren Court								
6th Floor								
R1/406	455	Above	550	Above	615	Above	STUDIO	1
R2/406	20	Below	80	Below	175	Above	STUDIO	2
R3/406	20	Below	80	Below	145	Above	LKD	3
R7/406	150	Above	265	Above	290	Above	BEDROOM	3
R4/406	405	Above	430	Above	445	Above	BEDROOM	4
R5/406	460	Above	565	Above	630	Above	LKD	4
R6/406	0	Below	0	Below	0	Below	BEDROOM	4

	Total above	4	Total above	4	Total above	6
	Total below	3	Total below	3	Total below	1
	Percentage below rate	42.86%	Percentage below rate	42.86%	Percentage below rate	14.29%
	Percentage above rate	57.14%	Percentage above rate	57.14%	Percentage above rate	85.71%
	Total rooms	7	Total rooms	7	Total rooms	7
LKD above	1	50%	1	50%	2	100%
Bedroom above	2	67%	2	67%	2	67%
Studio above	1	14%	1	14%	2	29%
Total LKD	2		2		2	
Total Bedroom	3		3		3	
Total Studio	2		2		2	
Total	7		7		7	

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