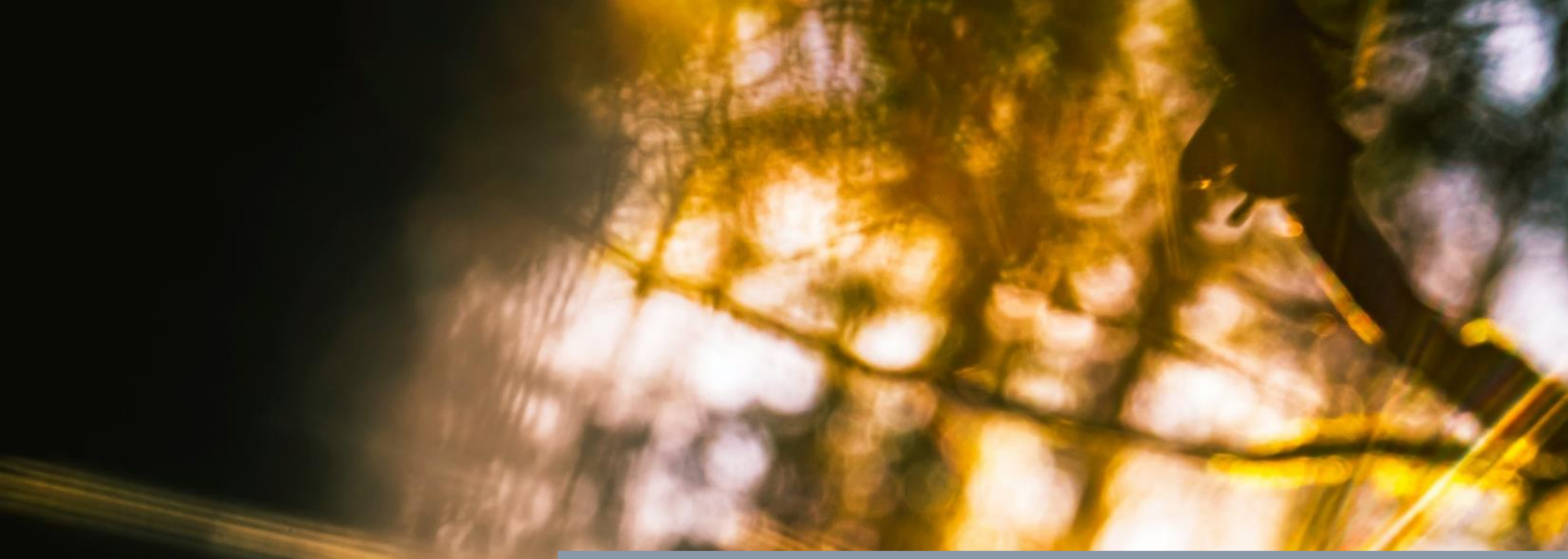

Kings Cross Methodist Church, 58a Birkenhead Street, London

Daylight & Sunlight Effects Report

dpr

22 October 2024

PROJECT INFORMATION

Project Title:	Kings Cross Methodist Church, 58a Birkenhead Street, London, WC1H 8BW
Project Number:	24340
Client:	West London Mission Circuit
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VERSION HISTORY

Version	Date	Details
1.0	22/10/2024	First issue
1.1	22/10/2024	Second issue
1.2	17/12/2024	Third Issue

ABOUT US

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APPENDICES

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1.0 Introduction

1.1. Delva Patman Redler LLP ("we") have been engaged by the Applicant to assess the potential effects of the Proposed Development at Kings Cross Methodist Church, 58a Birkenhead Street, London, WC1H 8BW ("the Site") on daylight and sunlight to neighbouring buildings. This report has been prepared to accompany the Applicant's planning application.

1.2. The Site is shown central to the aerial photograph in Figure 1 below and on the location plan in Appendix 2.

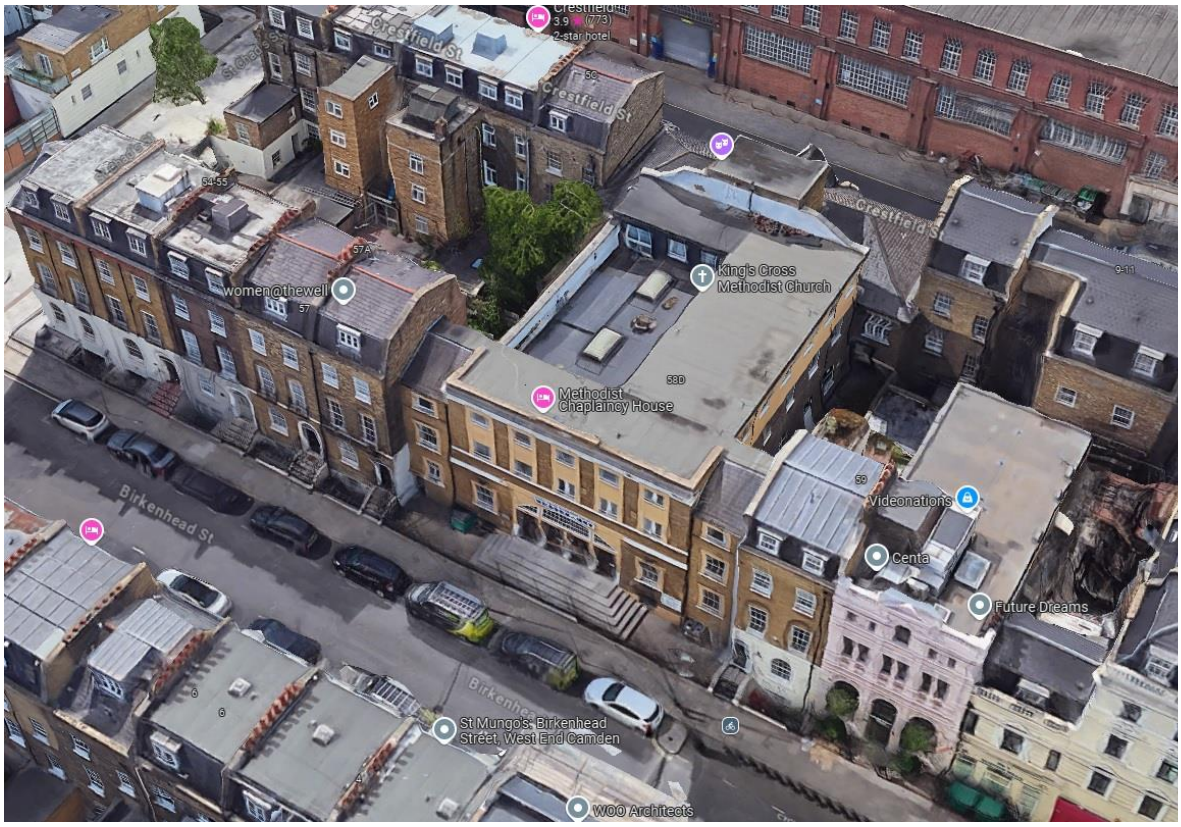


Figure 1 - Aerial photo of the Site and neighbouring properties (© Google)

1.3. The Site is located within the London Borough of Camden.

1.4. The Proposed Development comprises the part demolition, extension and reconfiguration of the existing building to provide replacement church (Use Class F1) with ancillary café and student accommodation (Sui Generis), together with associated plant, cycle and refuse storage ('the Proposed Development').

1.5. Our 3D computer model of the Proposed Development and its surroundings is illustrated in Figure 2 below and on our plan and 3D view drawings at Appendix 2.

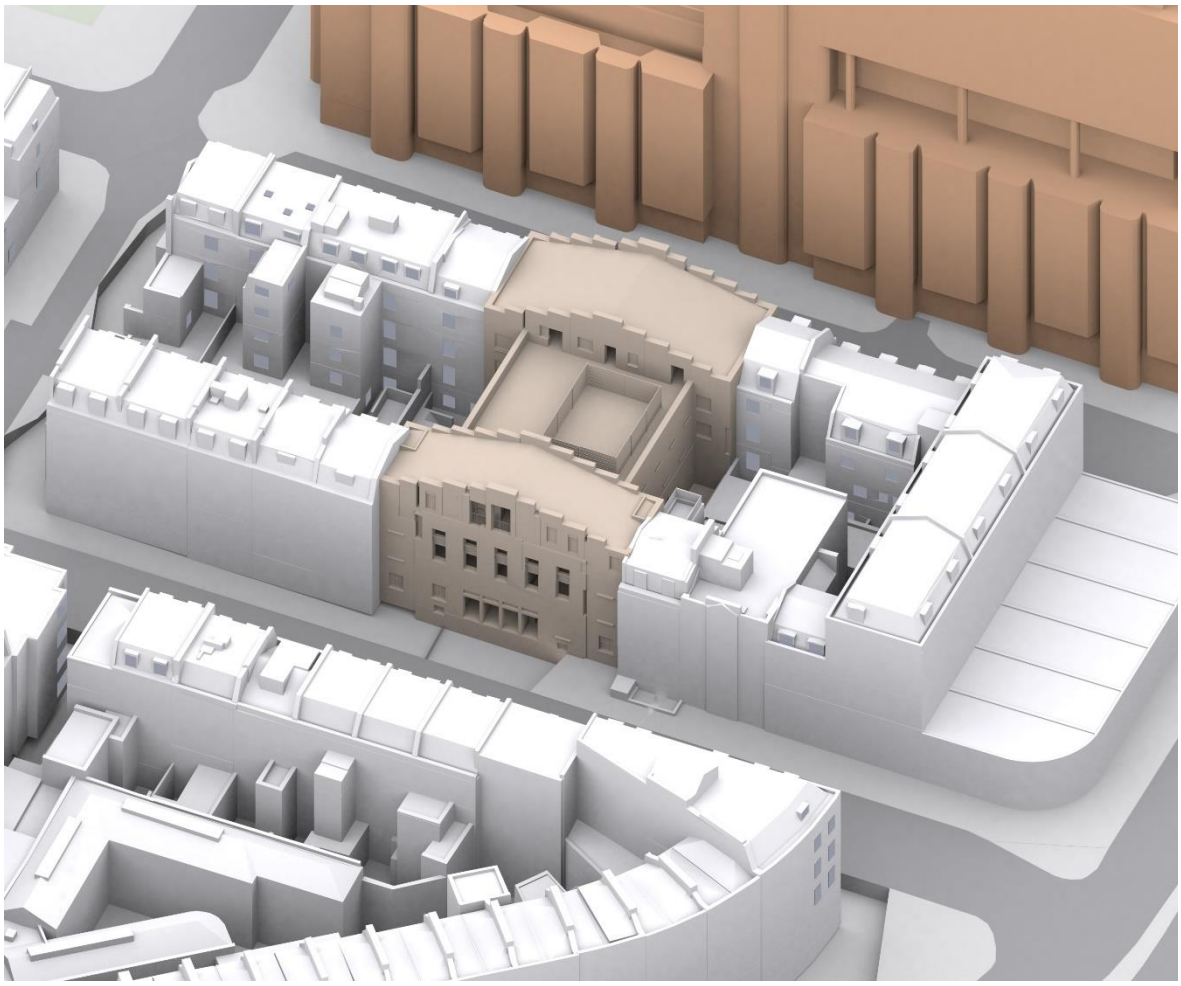


Figure 2 – Computer model of Proposed Development and surrounding context

1.6. Our daylight and sunlight study has been carried out using the assessment methodologies recommended in *'Site Layout Planning for Daylight and Sunlight: A guide to good practice'* (BR209, 2022 edition) published by the Building Research Establishment and the RICS Professional Standard, *'Daylighting and sunlighting'* (1st edition, 2012), published by the Royal Institution of Chartered Surveyors.

1.7. This report is accompanied by the Appendices listed on the Contents page, including an explanation of the BRE assessment methodologies, a glossary of technical terms, drawings, and tabulated results.

2.0 Executive summary

2.1. The Site is in an urban location within the London Borough of Camden.

2.2. Our study assessed the potential effects of the Proposed Development on daylight and sunlight to the neighbouring buildings identified on the location plan in Figure 3 below.

Figure 3 - Location of neighbouring buildings included in our assessment

2.3. The assessment of the effects of development on daylight and sunlight amenity is a two-part process:

- first, as a matter of calculation, whether there would be a material deterioration in conditions by reference to the BRE guidelines[1], and
- secondly, as a matter of judgment, whether that deterioration would be acceptable in the circumstances.

2.4. For the first part of the assessment, we calculated the potential impacts of the Proposed Development using the BRE assessment methodology and default numerical guidelines, which are explained in Section 5.0, Assessment methodology and numerical guidelines, and Appendix 1. The method used to categorise the magnitudes of impact and significance of effects is explained in Section 6.0, Categorisation of magnitudes of impact and significance of effects.

2.5. The second part of the assessment brings into play much wider considerations, such as: proximity of a neighbouring building to its site boundary; balconies or other projections from a neighbouring building that limit its view of sky; and whether the site context justifies a higher degree of obstruction. Refer to Section 3.0, Planning policy and guidance and Section 3.0, Planning policy and Guidance.

2.6. The detailed numerical results of our daylight (VSC and NSL) and sunlight (APSH – annual and winter) assessments of neighbouring buildings are attached at Appendix 3 and summarised in the charts in Figure 4 below.

[1] Site Layout Planning for Daylight and Sunlight: A guide to good practice' (Building Research Establishment, BR209, 2022 edition)

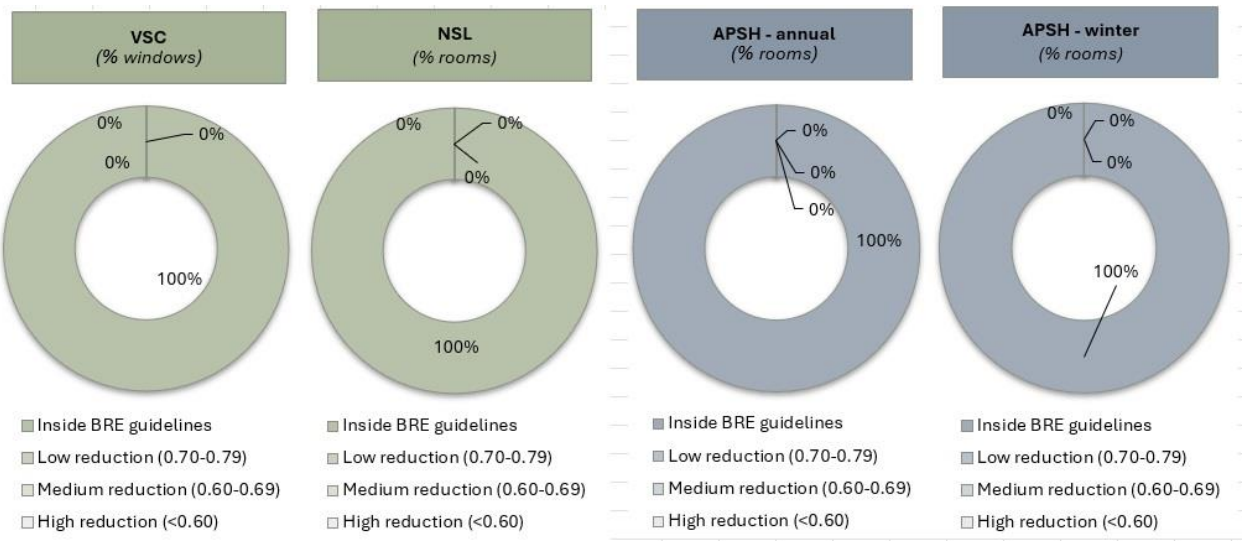


Figure 4 – Summary of potential daylight and sunlight impacts from the Proposed Development

2.7. The Proposed Development shows 100% level of adherence to BRE numerical guidelines, with 100% of windows meeting VSC guidelines, 100% of rooms meeting NSL guidelines, 100% of rooms meeting annual sunlight guidelines and 100% meeting winter sunlight guidelines.

2.8. Having considered the numerical results and the wider considerations, we submit that the Proposed Development would not cause unacceptable harm to daylight and sunlight amenity to the occupiers of the surrounding buildings or users of the nearby public outdoor amenity areas. In our opinion, the proposal is consistent with planning policy relating to daylight and sunlight.

3.0 Planning policy and guidance

National Planning Policy and Guidance

National Planning Policy Framework (December 2024)

3.1. The National Planning Policy Framework (NPPF) sets out the Government's planning policies and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. It places an emphasis on sustainable development and delivery of housing.

3.2. Chapter 11 of the NPPF, entitled *"Making effective use of land"*, promotes the effective use of land in meeting the need for homes and other uses. It gives examples such as developing under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained and available sites could be used more effectively, and upward extensions to create new homes, where they would be consistent with the prevailing height and form of neighbouring buildings and the overall street scene.

3.3. In particular, paragraph 130 of the NPPF states:

> *Area-based character assessments, design guides and codes and masterplans can be used to help ensure that land is used efficiently while also creating beautiful and sustainable places. 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).*

National Design Guide (January 2021)

3.4. The National Design Guide is part of a suite of planning practice guidance that supports the NPPF. The National Design Guide outlines the Government's priorities for well-designed places.

3.5. Paragraphs 126 and 130 of the guidance dealing with homes and buildings state:

> *Well-designed homes and communal areas within buildings provide a good standard and quality of internal space. This includes room sizes, floor-to-ceiling heights, internal and external storage, sunlight, daylight and ventilation. The quality of internal space needs careful consideration in higher density developments, particularly for family accommodation, where access, privacy, daylight and external amenity space are also important.*
>
> *Well-designed private or shared external spaces are fit for purpose and incorporate planting wherever possible. The appropriate size, shape and position for an external amenity space can be defined by considering:*
>
> - *how the associated building sits in the wider context, including access to public and open spaces;*
> - *how the amenity space will be used, what for, and by whom;*
> - *environmental factors that may affect its usability, such as sunlight and shade, noise or pollution;*
> - *wider environmental factors affecting its quality or sustainability, such as a green corridor or drainage.*

National Model Design Code (June 2021)

3.6. The National Model Design Code provides detailed guidance on the production of design codes, guides and policies to promote successful design.

3.7. Paragraphs 114 to 117 of section B.2. dealing with built form states:

> *Building height may also have an impact on local environmental conditions in neighbouring properties, amenity spaces and public spaces in terms of daylight, sunlight, overshadowing, wind and micro-climate. The placing of tall buildings needs to maximise user comfort of spaces between buildings by taking into account their impact on orientation and overshadowing of public and private spaces, quality of external spaces at ground level, wind tunnel effect, noise pollution and enable safe dispersion of pollutants.*
>
> *Tall buildings can be considered in design codes. It may be appropriate to include criteria for the locations of tall buildings in some area types.... Tools that can assist with this include ... characterisation studies and design strategies, dealing with issues such as urban form, historic character, building typologies, prevailing sunlight and daylight levels, green infrastructure, amenity space and quality of external spaces at ground level.*

3.8. Paragraph 188 of section H.2 dealing with health and wellbeing states:

> *The built environment has a significant impact on people's health and wellbeing. This relates across the design code with regard to walkable neighbourhoods, access to greenery and recreation, attractive buildings and public spaces, space standards, and strong communities. There are also specific elements relating to the impact of the design of homes and buildings that affect wellbeing including daylight, aspect and privacy, noise mitigation, security and access to private outdoor space.*
>
> *Good quality housing creates a pleasant indoor environment with adequate levels of natural lighting, and sunlight, without problems of overheating, good quality ventilation, privacy from overlooking and minimal noise impact.*

BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (2022)

3.9. The leading publication providing national guidance on the provision of daylight and sunlight to new development, and the impacts of development on daylight and sunlight to neighbouring buildings and open spaces, is BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (third edition, 2022). It is referred to in the development plan documents or supplementary planning documents of most planning authorities. This guide supersedes the 2011 edition, which is now withdrawn.

3.10. The BRE guide states:

> *<u>Summary</u>*
>
> *This guide gives advice on site layout planning to achieve good sunlighting and daylighting, both within buildings and in the open spaces between them. It is intended to be used in conjunction with the interior daylight recommendations for new buildings in the British Standard, 'Daylight in buildings', BS EN 17037. It contains guidance on site layout to provide good natural lighting within a new development; safeguarding of daylight and sunlight within existing buildings nearby; and the protection of daylighting of adjoining land for future development. ... It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location...*
>
> *<u>Introduction</u>*
>
> *(Its) main aim is ... to help to ensure good conditions in the local environment considered broadly, with enough sunlight and daylight on or between the buildings for good interior and exterior conditions.*
>
> *This guide is intended for building designers and their clients, consultants and planning officials. The advice given is not mandatory and the guide should not be seen as an*

> *instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of the 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... The calculation methods ... are entirely flexible in this respect...*

Regional planning policy and guidance

The London Plan (March 2021)

3.11. The London Plan 2021 is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. Its policies should inform decisions on planning applications across the capital.

3.12. The Plan notes that if London is to meet the challenges of the future, all parts of London will need to embrace and manage change. In many places, change will occur incrementally, especially in outer London, where the suburban pattern of development has significant potential for appropriate intensification over time, particularly for additional housing. The areas that will see the most significant change are identified as Opportunity Areas, many of which are already seeing significant development. London's Central Activities Zone (CAZ) and town centre network have a crucial role to play in supporting London's growth.

Policy GG2 *'Making the best use of land'*

3.13. Policy GG2 states:

> *To create successful sustainable mixed-use places that make the best use of land, those involved in planning and development must:*
>
> *B prioritise sites which are well-connected by existing or planned public transport*
>
> *C proactively explore the potential to intensify the use of land to support additional homes and workspaces, promoting higher density development, particularly in locations that are well-connected to jobs, services, infrastructure and amenities by public transport, walking and cycling*
>
> *D applying a design–led approach to determine the optimum development capacity of sites*

Policy D3 *'Optimising site capacity through the design-led approach'*

3.14. Policy D3 states:

> *A All development must make the best use of land by following a design-led approach that optimises the capacity of sites, including site allocations. Optimising site capacity means ensuring that development is of the most appropriate form and land use for the site...*
>
> *B Higher density developments should generally be promoted in locations that are well connected to jobs, services, infrastructure and amenities by public transport, walking and cycling...*

Housing Design Standards LPG (June 2023)

3.15. The Mayor of London's London Plan Guidance *'Housing Design Standards'* (June 2023) brings together and helps to interpret the housing-related design guidance and policies set out in the London Plan 2021. It is applicable to self-contained residential applications (Use Class C3). It does not provide guidance

on other specialist forms of housing such as shared living, temporary accommodation and student accommodation.

3.16. The standards are broken down into those that are expected to be met, and those that are best practice and therefore strongly encouraged.

3.17. Standards A1.7 to A1.9 dealing with placemaking and the public realm state:

> *The most favourable orientation for each new building will be heavily influenced by the site-specific opportunities and constraints. Layouts should optimise the orientation of new buildings to maximise the quality of daylight and thermal comfort for residents, minimise overheating, and optimise thermal efficiency, by utilising and controlling solar gains.*
>
> *Particular consideration should be given to the impact of new development on the level of daylight and sunlight received by the existing residents in surrounding homes and on existing public green space.*
>
> *The orientation and massing of buildings, and the separation distances between them, should ensure that the public realm is not unduly overshadowed to the detriment of health, wellbeing, biodiversity or amenity. Where demonstration is necessary and/or a building over 30 metres high is proposed, a micro-climate/wind/daylight and sunlight assessment should be submitted.*

3.18. Standard B9.5 dealing with shared outside amenity space states:

> *Maximise the quality and availability of daylight and sunlight in communal outside spaces, particularly in winter. It is particularly important that spaces designed for frequent use (including sitting and play spaces) receive direct sunlight through the day, particularly at times they are most likely to be used.*

3.19. Paragraph 4.1.2 states:

> *The standards in this section [Part C: Homes and private outside space] also aim to complement the consideration of daylight and sunlight impacts using the BRE guidance (Site layout planning for daylight and sunlight). This process involves a two-stage approach: firstly, by applying the BRE guidance; and secondly, by considering the location and wider context when assessing any impacts. With extreme weather events becoming increasingly common, design must balance daylight, passive solar gain and overheating considerations.*

3.20. Standards C2.3 and C2.4 dealing with internal space standards state:

> *A minimum ceiling height of 2.5m is required for at least 75 per cent of the gross internal area (GIA) of each dwelling to enhance the spatial quality; improve daylight penetration and ventilation; and assist with cooling.*
>
> *Best practice: The floor-to-floor height of ground-floor dwellings should be at least 3.5m in order to promote flexibility and greater daylight; and allow for easier conversion to non-residential uses if required*

3.21. Standards C4.1 to C4.3 and C4.7 dealing with aspect, orientation, daylight and sunlight state:

> *New homes should be dual aspect unless exceptional circumstances make this impractical or undesirable; for example, when one side of the dwelling would be subjected to excessive noise or outside air pollution. Where single aspect dwellings are proposed, by exception, they should be restricted to homes with one or two bedspaces; should not face north; and must demonstrate that the units will: have adequate passive ventilation, daylight and privacy; and not overheat (particularly relevant for south or west-facing single*

aspect units). Note: See Appendix 3 [of the Housing Design Standards LPG] for definition of dual aspect.

The location of the main living and eating spaces, and the main private outside space, should be optimised to make the most of the best views and the orientation. These spaces should receive direct sunlight (south-facing is preferable, provided that appropriate shading devices are incorporated) and enjoy reasonable privacy through the careful placement of windows, balcony design or other measures.

All homes should allow for direct sunlight in conjunction with solar shading. As a minimum, at least one habitable room should receive direct sunlight – preferably the living area and/or the kitchen and dining space.

All habitable rooms (including a kitchen/dining room) should receive natural light and have at least one openable window that provides a view out when seated.

3.22. Standard C6.2 dealing with thermal comfort states:

Daylight and overheating assessments should be analysed together to determine the optimal balance. South and west-facing facades are most at risk to overheating, and the use of shading should be used to prevent direct sunlight from entering the home during at-risk periods.

3.23. Clearly, the guidelines and recommendations given in the BRE guide should be applied with an appropriate degree of flexibility and sensitivity to higher-density housing development, especially in opportunity areas, town centres, large sites and accessible locations. Account should be taken of local circumstances, the need to optimise housing capacity and scope for the character and form of an area to change over time.

Local planning policy

Camden Local Plan 2017

3.24. The Camden Local Plan (adopted 3 July 2017) contains the following policies that are relevant to daylight and sunlight.

3.25. 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;
...

The factors we will consider include:
... f. sunlight, daylight and overshadowing;

3.26. The supporting text states, at paragraph 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 on amenity.

3.27. The Council has been consulting on a draft new Local Plan, publishing a consultation version in January 2024. The projected timeframe for adoption of a new Local Plan is Summer 2026.

Camden Planning Guidance, 'Amenity'

3.28. Camden's Planning Guidance on Amenity (adopted January 2021) contains supplementary planning guidance of relevance to daylight and sunlight. It states:

> *The Council expects applicants to consider the impact of development schemes on daylight and sunlight levels. Where appropriate a daylight and sunlight assessment should submitted which should be follow [sic] the guidance in the BRE's 'Site layout planning for daylight and sunlight: A guide to good practice'.*
>
> *Levels of reported daylight and sunlight will be considered flexibly taking into account site-specific circumstances and context.*
>
> *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.*
>
> *3.7 Major developments and proposals for new dwellings are expected to provide daylight and sunlight reports. These should always include the daylight and sunlight levels to any proposed new residential units. The reports should also include any nearby existing residential properties that may be affected. Although it is normally only residential uses that are assessed, there may also be non-residential uses, existing nearby or proposed as part of the application, that are particularly sensitive to light and so justify a report.*
>
> *3.8 To help determine whether a daylight and sunlight report is needed for other types of development, the Council will have regard to several tests, taken from the BRE guidance. These are referred to as the 45-degree test and the 25- degree test.*
>
> *3.9 The BRE guidance should form the basis for daylight and sunlight reports. They should be prepared by a specialist surveyor or consultant and assess the following:*
>
> 1. *Levels of daylight and sunlight that occupiers are likely to experience within the proposed development and gardens and open spaces (where relevant); and*
>
> 2. *The extent that the proposed development is likely to cause on levels of daylight and sunlight entering windows of neighbouring properties, gardens and open spaces (where relevant)*
>
> *3.10 Daylight and sunlight reports should also demonstrate how the design has taken into consideration the guidance contained in the BRE document on passive solar design; and have optimised solar gain.*
>
> *3.11 The Council will expect daylight and sunlight reports to report daylight and sunlight levels using the tools cited in the BRE guidance. The most common tools used are:*
>
> - *Vertical Sky Component (VSC)*
> - *No Sky Line (NSL) also referred to as Daylight Distribution (DD)*
> - *Average Daylight Factor (ADF)*
> - *Annual Probable Sunlight Hours (APSH)*
>
> ***Flexible consideration of daylight and sunlight***
>
> *3.14 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.*
>
> *3.15 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. For example, to enable new development to respect the existing layout and form in some historic areas, or dense*

urban environments, it may be necessary to consider exceptions to the recommendations cited in the BRE guidance. Any exceptions will assessed on a case-by-case basis.

Camden Planning Guidance, 'Housing'

3.29. Camden's Planning Guidance on Housing (adopted January 2021) contains supplementary planning guidance of relevance to daylight and sunlight. It states:

> ***Layout***
>
> *In general, the internal layout should seek to ensure the main living room and other frequently used rooms are on the south side and rooms that require less sunlight (bathrooms, utility rooms) are on the north side. Kitchens are better positioned on the north side to avoid excessive heat gain.*
>
> *Additionally, it is preferable that permanent partitions are present between eating and sleeping areas; and between kitchens and living rooms. Combined kitchens and living areas can be acceptable where sufficient floor area allows a greater range of activity.*
>
> - *Dual aspect – Proposals should achieve good dual aspect [London Housing SPG 2016 Standard 29]. Habitable rooms should also have suitable outlook.*
>
> - *Natural light, Daylight/sunlight - All the habitable rooms must have direct natural light, particularly the main living room. The applicant must ensure that the levels of daylight and sunlight that enter habitable rooms comply with BRE standards and that the report for 'Daylight and Sunlight' is submitted with the proposal [London Housing SPG 2016 Standard 32; CPG for Amenity].*

4.0 Acceptability of daylight/sunlight levels and effects

4.1. The assessment of the effects of development on daylight and sunlight amenity is a two-part process[2]: first, as a matter of calculation, whether there would be a material deterioration in conditions by reference to the BRE guidelines; and second, as a matter of judgment, whether that deterioration would be acceptable in the circumstances.

4.2. The first stage can be addressed by applying the BRE assessment methodology and numerical guidelines. The second stage brings into play much wider considerations, such as:

i) Whether the neighbouring building stands unusually close to the site boundary, including the highway, taking more than its fair share of light, such that a greater reduction in light may be unavoidable if one site is not to be prejudiced by how another has been developed. (A 'mirror-image' study can be informative in such cases.)

ii) Whether windows in neighbouring buildings are self-obstructed by overhanging or inset balconies or other projections such as to make relatively larger reductions unavoidable even if there is a modest new obstruction opposite - in effect themselves taking away more than their fair share of light. (A 'without balconies' study can be informative in such cases.)

iii) In historic city centres or areas characterised by modern tall buildings, high density and close proximity, a higher degree of obstruction may be unavoidable if new buildings are to match the height and proportion of existing buildings.

iv) In areas that are designated by planning authorities for substantial growth or providing opportunities for change and sustainable regeneration, the sort of change that would be brought about by the introduction of taller, denser development is to be expected, including reductions in daylight and sunlight levels, closer proximity, loss of outlook, etc.

4.3. Where a higher degree of obstruction may be unavoidable it is appropriate to consider the reasonableness of the retained levels of daylight and sunlight with the Proposed Development in place.

[2] Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]

5.0 Assessment methodology and numerical guidelines

5.1. The technical assessments that underpin this daylight and sunlight study have been carried out in accordance with the assessment methodology recommended in the BRE guide.

5.2. The principal assessments and numerical criteria are summarised below. A fuller explanation of the assessment methodology is given at Appendix 1 of this report.

Daylight to neighbouring buildings

5.3. The BRE guidelines are intended for use for rooms in adjoining dwellings where daylight is required. Living rooms, dining rooms and kitchens have a greater requirement for daylight. Bedrooms should also be analysed but are less important. Bathrooms, stairwells and other areas without a requirement for daylight need not be assessed. (See BRE paragraphs 2.2.2 and 2.2.10).

5.4. If the head of the new development subtends an angle of more than 25° measured from the centre of the lowest affected window in an existing neighbouring building in a plane perpendicular to the window wall, then a more detailed check is needed to find the loss of skylight.

5.5. The more detailed tests are:

i. vertical sky component (**VSC**) at the centre of each main window, which measures the total amount of skylight available; and

ii. no-sky line (**NSL**) on the working plane inside a room, where room layouts are known, which measures the area that can receive direct skylight and assesses the distribution of daylight around the room.

5.6. The NSL test need only be run where room layouts are known, for example if floor plans are available from the local planning authority's portal (see BRE paragraph 2.2.10).

5.7. Loss of daylight resulting from development will be noticeable if either:

- the VSC at the centre of the window will be reduced to both less than 27% and less than 0.80 times its former value, or
- the area of the working plane in a room that is enclosed by the no-sky line (NSL) and can receive direct skylight will be reduced to less than 0.80 times its former value.

5.8. For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation.

5.9. If there would be a significant loss of light to the main window but the room has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its window.

5.10. It is important to note that these numerical guidelines are purely advisory. The BRE guide (paragraph 2.2.3) 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.*

Sunlight to neighbouring buildings

5.11. In designing new development, care should be taken to safeguard the access to sunlight for existing dwellings and any nearby non-domestic buildings where there is a particular requirement for sunlight.

5.12. Obstruction to sunlight may become an issue if part of the development is situated within 90˚ of due south of a main window wall of an existing building, and in the section drawn perpendicular to this existing window wall, the new development subtends an angle greater than 25˚ to the horizontal measured from the centre of the lowest window to a main living room.

5.13. In housing, the main requirement for sunlight is in living rooms and it is also required in conservatories, but it is viewed as less important in bedrooms and in kitchens. All main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90˚ of due south. Normally loss of sunlight need not be analysed to kitchens and bedrooms, except those that also comprise a living space. (See BRE paragraphs 3.1.2 and 3.2.3). Nevertheless, we have included kitchens and bedrooms in our sunlight assessment, but less weight should be applied to such results.

5.14. The amount of sunlight reaching a room is measured by calculating the percentage of annual probable sunlight hours (**APSH**) at the centre of its windows.

5.15. If, following development, the APSH will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight.

5.16. Sunlight will be adversely affected if the centre of the window will:

- receive less than 25% APSH or less than 5% APSH during the winter months (21 September to 21 March); and
- less than 0.80 times its former sunlight hours during either period; and
- the reduction in sunlight over the whole year will be greater than 4% APSH.

6.0 Categorisation of magnitudes of impact and significance of effects

6.1. In our summary tables, we have counted the number of impacts inside and outside the BRE guidelines and categorised the latter according to their magnitude of impact. The BRE guide does not include a standard scale of impact, so this study adopts the widely used approach in Table 1 below.

Table 1 – Categorisation of magnitudes of impact on existing neighbouring properties

Impact inside BRE guidelines	**Impact outside BRE guidelines**		
	0.70-0.79 times former value *(21% to 30% loss)*	0.60-0.69 times former value *(31% to 40% loss)*	<0.60 times former value *(>40% loss)*
Negligible impact	Low impact	Medium impact	High impact

6.2. To understand the significance of effect on a building, it is necessary to consider both the number and magnitude of impacts and a range of other factors. Appendix H of the BRE guide, which is intended for use in Environmental Impact Assessments, provides the following advice on ascribing significance to effects:

> *Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space.*
>
> *The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.*
>
> *Where the loss of skylight or sunlight fully meets the guidelines in this document, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.*
>
> *Where the loss of skylight or sunlight does not meet the guidelines, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:*
>
> - *only a small number of windows or limited area of open space are affected*
> - *the loss of light is only marginally outside the guidelines*
> - *an affected room has other sources of skylight or sunlight*
> - *the affected building or open space only has a low level requirement for skylight or sunlight*
> - *there are particular reasons why an alternative, less stringent, guideline should be applied, for example an overhang above the window or a window standing unusually close to the boundary.*
>
> *Factors tending towards a major adverse impact include:*
>
> - *a large number of windows or large area of open space are affected;*
> - *the loss of light is substantially outside the guidelines;*
> - *all the windows in a particular property are affected; and*
> - *the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.*

6.3. Although the Proposed Development is not EIA development, the above guidance still has relevance in understanding the likely significance of the daylight and sunlight effects.

6.4. The sensitivities of the various receptors are set out in Table 2 below.

Table 2 – Receptor sensitivity descriptors

Sensitivity	Receptors for daylight assessment	Receptors for sunlight assessment
High	Main living rooms and kitchens	Main living rooms, back gardens, and shared or public amenity spaces
Medium	Bedrooms	-
Low	-	Kitchens and bedrooms
Negligible	Circulation spaces, bathrooms and other non-habitable rooms	Circulation spaces, bathrooms and other non-habitable rooms

7.0 Scope of the assessment

7.1. The principal recommendations in the BRE guide relate to residential buildings. Its guidelines on daylight are intended for use for rooms in neighbouring dwellings where daylight is required, including living rooms, kitchens and bedrooms (BRE paragraph 2.2.2). Its guidelines on sunlight apply to all main living rooms of neighbouring dwellings and conservatories that have a window facing within 90˚ of due south (BRE paragraph 3.2.3).

7.2. Consequently, our assessment has been scoped to include nearby residential accommodation, as is common practice for studies for planning applications. The properties assessed are set out in Section 7.0, 'Scope of the assessment'.

7.3. We identified properties with residential use from a site visit and online research, including the Valuation Office Agency council tax list, local authority planning records, and estate agency websites.

7.4. We have run the BRE daylight and sunlight tests in the existing baseline and Proposed Development scenarios. This establishes the levels that would be retained in the Proposed Development condition and the degree to which they could change from the existing baseline.

7.5. Note that the studies and findings presented here take into account the consented scheme at Belgrove House (ref: 2022/1515/P) which is currently on site and under construction. This consented scheme has been treated fully 'as built'.

8.0 Information used in our technical study

8.1. We have undertaken our technical study using a 3D computer model built in AutoCAD and specialist analysis software, which runs the assessments recommended in the BRE guide.

8.2. We compiled our 3D computer model from the following information:

8.2.1. 3D computer model of the existing buildings on the Site and the contextual massing produced from photogrammetry (aerial photography) supplied by Vertex, subsequently enhanced by us with the more detailed information listed below

8.2.2. Measured survey model point cloud produced by Calidus Surveys, 2D survey drawings: Dwg No's: 12004E1F – 12004E11F, 12004PRF & 12004PSF

8.2.3. Floor plans for neighbouring buildings, where available

8.2.4. Proposed Development: 3D model supplied by Matthew Lloyd Architects on 30 July 2024 (file name: MLA_KXMC_24052_WIP) and 2D drawings received on 03 September 2024

- KXMC_PL200_PROPOSED GROUND FLOOR PLAN_
- KXMC_PL201_PROPOSED FIRST FLOOR PLAN_
- KXMC_PL202_PROPOSED SECOND FLOOR PLAN_
- KXMC_PL203_PROPOSED THIRD FLOOR PLAN_
- KXMC_PL204_PROPOSED ROOF PLAN_
- KXMC_PL221_PROPOSED ELEVATION - EAST_
- KXMC_PL223_PROPOSED ELEVATION - WEST_
- KXMC_PL224_PROPOSED ELEVATION - NORTH_
- KXMC_PL223_PROPOSED ELEVATION - WEST_

8.2.5. Consented scheme at Belgrove House (ref: 2022/1515/P) treated 'as built'.

8.3. Our 3D computer model is illustrated in our plan and 3D view drawings at Appendix 2.

8.4. To aid accuracy of the assessment and interpretation of the results, we carried out online searches to obtain the floor plans for the neighbouring buildings referred to above, including from online planning application records and general estate agency websites. This is the approach recommended in the Professional Guidance Note, 'Daylighting and sunlighting' (1st edition, 2012), published by the Royal Institution of Chartered Surveyors, which states:

> *As a minimum, and subject to any limitations relating to a client instruction, surveyors should undertake searches of the local authority's planning portal to establish existing or proposed room layouts of neighbouring properties if they are available. This will ensure a robust approach and enable the surveyor to produce reliable information for daylight distribution analysis, ... Surveyors should also use the internet to search for other relevant information, including estate agent details, which commonly include plans of properties that can also be useful in determining a room layout or use.*

8.5. Our research yielded the information listed in Table 3 below. The plan ref. refers to the numbering on the location plan at Appendix 2.

Table 3 - Information on internal layouts of neighbouring buildings

Plan ref.	Neighbouring building / property	Information used
1	59 Birkenhead Street	Plans from planning consent ref. 2011/5136/P
6	1 Crestfield Street	Plans from planning consent ref. 2004/3573/P

Plan ref.	Neighbouring building / property	Information used
7	7 Argyle Street	Plans from planning consent ref. 2011/1652/P
12	Zenith House	Plans from planning consent ref. 2017/6687/P
13	7 Birkenhead Street	Plans from planning consent ref. 2015/1803/P
14	6 Birkenhead Street	Plans from planning consent ref. 2010/4348/P
15	2-5 Birkenhead Street	Plans from planning consent ref. 2007/4411/P & 2008/5669/P
16	343-345 Grays Inn Road	Plans from planning archive

8.6. Where we found plans for neighbouring buildings, we used them to model their rooms. Where we were been unable to find plans, we modelled their rooms based on estimated dimensions, typically adopting a generic 4m-deep room for residential premises, unless the style of building suggested otherwise.

Limitations and assumptions

8.7. In compiling our 3D computer model for our technical study, we have sought to be as accurate as reasonably possible within the scope of our instruction. We have relied upon the information noted above.

8.8. Whilst we have used plans for neighbouring buildings where available, we have typically made reasonable assumptions as to their internal floor levels and wall thicknesses.

8.9. We have used proven and trusted specialist computer software (Waldram Tools for AutoCAD®) to run the calculations recommended in the BRE guide.

8.10. To the best of our knowledge, the information and advice contained in this report is accurate at the date of issue, based on the information provided to or procured by us prior to its production.

9.0 Baseline conditions for neighbouring properties

Daylight and sunlight to neighbouring buildings

9.1. We assessed the daylight and sunlight levels to the neighbouring buildings in the existing baseline condition shown in our plan and 3D view drawing no. LOC_DS_001 at Appendix 2. The relevant windows are shown on the window maps at Appendix 2. The neighbouring buildings/properties that were assessed are listed in Table 4 below.

In total, 194 windows serving 151 rooms in 16 buildings were assessed for daylight and 113 rooms in 12 buildings were assessed for sunlight.

9.2. The daylight and sunlight levels in the existing baseline condition are shown in the results tables at Appendix 3 in the columns headed "Exis." (being an abbreviation of "Existing").

9.3. Table 4 below summarises the number of windows and rooms assessed in each neighbouring building/property, and the number inside the BRE guidelines in the existing baseline condition.

Table 4 - Summary of adherence to BRE daylight and sunlight targets in existing baseline condition

Property address	VSC		NSL		APSH (room)			
	No. of windows tested	No. inside VSC guideline	No. of rooms tested	No. inside NSL guideline	No. of rooms tested	No. inside annual & winter guidelines	No. inside annual guideline	No. inside winter guideline
59 Birkenhead Street	11	2	6	2	6	1	1	1
5 Crestfield Street	6	2	6	3	-	0	0	0
4 Crestfield Street	6	2	5	1	-	0	0	0
3 Crestfield Street	6	3	6	3	-	0	0	0
2 Crestfield Street	13	8	9	6	2	2	2	2
1 Crestfield Street	4	1	4	2	-	0	0	0
7 Argyle Square	9	3	6	6	1	1	1	1
54-55 Birkenhead Street	6	6	6	6	6	6	6	6
56 Birkenhead Street	6	3	6	4	6	4	4	5
57 Birkenhead Street	5	2	5	3	5	3	3	3
58 Birkenhead Street	6	3	5	3	5	4	4	4
Zenith House	28	6	16	10	12	8	8	8
7 Birkenhead Street	15	7	11	9	11	10	11	10
6 Birkenhead Street	8	4	8	6	8	7	8	7
2-5 Birkenhead Street	32	16	28	18	28	27	27	27
343-345 Grays Inn Road	33	28	24	17	23	23	23	23
Totals:	**194**	**96**	**151**	**99**	**113**	**96**	**98**	**97**
		49%		66%		85%	87%	86%

9.4. In the baseline condition, the BRE recommended targets for daylight (27% VSC and 80% NSL) are met for 96 windows (49%) and 99 rooms (66%) respectively, and the sunlight recommended targets (25% APSH including 5% APSH in winter) are met for 96 rooms (85%).

10.0 Effects on daylight and sunlight to neighbouring buildings

10.1. The Proposed Development scenario is illustrated on the plan and 3D view drawing no. PR_001 at Appendix 2.

10.2. Detailed daylight and sunlight results tables are attached at Appendix 3.

10.3. Daylight and sunlight levels in the Proposed Development scenario are shown in the results tables in the columns headed "Prop." (being an abbreviation of "Proposed"). The difference between the existing and proposed levels is shown in the columns headed "Loss". The relative impact is shown in the columns headed "Pro./Ex." (an abbreviation of "Proposed/Existing") and is expressed as a ratio or factor of former value (e.g. 0.80 times former value).

Daylight to neighbouring buildings

10.4. The results of the VSC and NSL analyses of the neighbouring buildings are summarised in Table 5 and Table 6 below.

Table 5 – Summary of VSC impacts to neighbouring windows

Property address	No. of windows tested	Windows inside **VSC** guidelines		Windows outside **VSC** guidelines					
				Low reduction 0.79-0.70 x FV		Medium reduction 0.69-0.60 x FV		High reduction <0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
59 Birkenhead Street	11	11	100%	-	-	-	-	-	-
5 Crestfield Street	6	6	100%	-	-	-	-	-	-
4 Crestfield Street	6	6	100%	-	-	-	-	-	-
3 Crestfield Street	6	6	100%	-	-	-	-	-	-
2 Crestfield Street	13	13	100%	-	-	-	-	-	-
1 Crestfield Street	4	4	100%	-	-	-	-	-	-
7 Argyle Square	9	9	100%	-	-	-	-	-	-
54-55 Birkenhead Street	6	6	100%	-	-	-	-	-	-
56 Birkenhead Street	6	6	100%	-	-	-	-	-	-
57 Birkenhead Street	5	5	100%	-	-	-	-	-	-
58 Birkenhead Street	6	6	100%	-	-	-	-	-	-
Zenith House	28	28	100%	-	-	-	-	-	-
7 Birkenhead Street	15	15	100%	-	-	-	-	-	-
6 Birkenhead Street	8	8	100%	-	-	-	-	-	-
2-5 Birkenhead Street	32	32	100%	-	-	-	-	-	-
343-345 Grays Inn Road	33	33	100%	-	-	-	-	-	-
Totals:	**194**	**194**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**

Table 6 - Summary of NSL impacts to neighbouring rooms

Property address	No. of rooms tested	Rooms inside **NSL** guidelines		Rooms outside **NSL** guidelines					
				Low reduction 0.79-0.70 x FV		Medium reduction 0.69-0.60 x FV		High reduction <0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
59 Birkenhead Street	6	6	100%	-	-	-	-	-	-
5 Crestfield Street	6	6	100%	-	-	-	-	-	-
4 Crestfield Street	5	5	100%	-	-	-	-	-	-
3 Crestfield Street	6	6	100%	-	-	-	-	-	-
2 Crestfield Street	9	9	100%	-	-	-	-	-	-
1 Crestfield Street	4	4	100%	-	-	-	-	-	-
7 Argyle Square	6	6	100%	-	-	-	-	-	-
54-55 Birkenhead Street	6	6	100%	-	-	-	-	-	-
56 Birkenhead Street	6	6	100%	-	-	-	-	-	-
57 Birkenhead Street	5	5	100%	-	-	-	-	-	-
58 Birkenhead Street	5	5	100%	-	-	-	-	-	-
Zenith House	16	16	100%	-	-	-	-	-	-
7 Birkenhead Street	11	11	100%	-	-	-	-	-	-

6 Birkenhead Street	8	8	100%	-	-	-	-	-	-
2-5 Birkenhead Street	28	28	100%	-	-	-	-	-	-
343-345 Grays Inn Road	24	24	100%	-	-	-	-	-	-
Totals:	**151**	**151**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**

10.5. In the Proposed Development condition, the daylight impacts would be inside the BRE guidelines to all 194 windows (100%) for VSC and all 151 rooms (100%) for NSL.

Sunlight to neighbouring buildings

10.6. The results of the annual and winter sunlight analyses are summarised in Table 7 below.

Table 7 - Summary of APSH impacts to neighbouring rooms

Property address	No. of rooms tested	Rooms inside **annual & winter** guidelines	**APSH - annual (rooms)** Rooms outside annual guidelines			**APSH - winter (rooms)** Rooms outside winter guidelines		
			Low reduction	*Medium reduction*	*High reduction*	*Low reduction*	*Medium reduction*	*High reduction*
59 Birkenhead Street	6	6	-	-	-	-	-	-
5 Crestfield Street	-	-	-	-	-	-	-	-
4 Crestfield Street	-	-	-	-	-	-	-	-
3 Crestfield Street	-	-	-	-	-	-	-	-
2 Crestfield Street	2	2	-	-	-	-	-	-
1 Crestfield Street	-	-	-	-	-	-	-	-
7 Argyle Square	1	1	-	-	-	-	-	-
54-55 Birkenhead Street	6	6	-	-	-	-	-	-
56 Birkenhead Street	6	6	-	-	-	-	-	-
57 Birkenhead Street	5	5	-	-	-	-	-	-
58 Birkenhead Street	5	5	-	-	-	-	-	-
Zenith House	12	12	-	-	-	-	-	-
7 Birkenhead Street	11	11	-	-	-	-	-	-
6 Birkenhead Street	8	8	-	-	-	-	-	-
2-5 Birkenhead Street	28	28	-	-	-	-	-	-
343-345 Grays Inn Road	23	23	-	-	-	-	-	-
Totals:	**113**	**113**	**0**	**0**	**0**	**0**	**0**	**0**
		100%	0%	0%	0%	0%	0%	0%

10.7. In the Proposed Development condition, the sunlight impacts would be fully inside the BRE guidelines (annual and winter sunlight) to all 113 rooms (100%).

11.0 Conclusion

11.1. The Site is in an urban North London location in the London Borough of Camden

11.2. We assessed the potential effects of the Proposed Development on daylight and sunlight to surrounding residential properties.

11.3. We ran our assessments using methodologies recommended in the BRE guide.

11.4. The neighbouring daylight analyses demonstrates 100% of the neighbouring properties, rooms and windows considered will fully achieving the BRE target criteria in sunlight terms.

11.5. The neighbouring sunlight analyses demonstrates 100% of the neighbouring properties, rooms and windows considered will fully achieving the BRE target criteria in sunlight terms.

11.6. In conclusion, it is submitted that the layout of the Proposed Development is consistent with the Council's local planning policy on daylight and sunlight, particularly having regard to paragraph 125 of the National Planning Policy Framework and paragraphs 1.3.45 and 1.3.46 of the Mayor of London's Housing SPG.

Delva Patman Redler LLP
Chartered Surveyors

Appendix 1

Assessment methodology and glossary

1. This appendix explains the daylight and sunlight assessment methodology recommended in BRE Report 209, *'Site Layout Planning for Daylight and Sunlight: A guide to good practice'* (2022 edition) and provides a glossary of the terminology used.

Assessment methodology

Daylight and sunlight to neighbouring buildings and amenity spaces

Daylight to neighbouring buildings

2. The BRE guide states:

> *In designing a new development or extension to a building, it is important to safeguard the daylight to nearby buildings. A badly planned development may make adjoining properties gloomy and unattractive.*
>
> *The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices.*

3. To quantify the impact of development on daylight to a building, the BRE guide recommends two tests:

   a) calculating the vertical sky component (**VSC**) at the centre of each main window on the outside plane of the window wall, to measure the total amount of skylight available to the window; and

   b) plotting the no-sky line (**NSL**) on the working plane inside a room, where layouts are known, and measuring the area that can receive direct skylight, to assess the distribution of daylight around the room.

4. The VSC measures the skylight available at the window. The guide states:

> *Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window … For a bay window, the centre window facing directly outwards can be taken as the main window. If a room has two or more windows of equal size, the mean of their VSCs may be taken. The reference point is in the external plane of the window wall. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.*

5. The NSL test is described thus:

> *Where room layouts are known (for example if they are available on the local authority's planning portal), the impact on the daylighting distribution in the existing building should be found by plotting the no sky line in each of the main rooms. For houses this would include living rooms, dining rooms and kitchens; bedrooms should also be analysed although they are less important. In non-domestic buildings each main room where daylight is expected should be investigated. The no sky line divides points on the working plane which can and cannot see the sky.*

6. If, following development, the VSC to a neighbouring window will be greater than 27% then enough skylight should still be reaching the window. Any reduction below this level should be kept to a minimum. If the VSC will be both less than 27% and less than 0.80 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window is likely to appear more gloomy and electric lighting will be needed more of the time.

7. If, following development, the no-sky line moves so that the area of the existing room that can receive direct skylight will be reduced to less than 0.80 times its former value, this will be noticeable to the occupants and more of the room will appear poorly lit. This is also true if the no-sky line encroaches on key areas like kitchen sinks and worktops.

Sunlight to neighbouring buildings

8. The BRE guide states:

> *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 be 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.*
>
> *A point at the centre of the window on the outside face of the window wall may be taken [as the calculation point].*

9. To quantify the available sunlight, the BRE guide advises measuring the percentage of annual probable sunlight hours (**APSH**), which is defined as follows:

> *'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question.*

10. The assessment calculates the percentage of APSH over the whole year (annual sunlight) and between 21 September and 21 March (winter sunlight).

11. If, following development, the APSH to a neighbouring window will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight. Any reduction in sunlight access below this level should be kept to a minimum.

12. If the available sunlight hours will be both less than the above amounts and less than 0.80 times their former value, either over the whole year or just in the winter months, then the occupants of the building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH, the room may appear colder and less cheerful and pleasant.

Glossary of terms

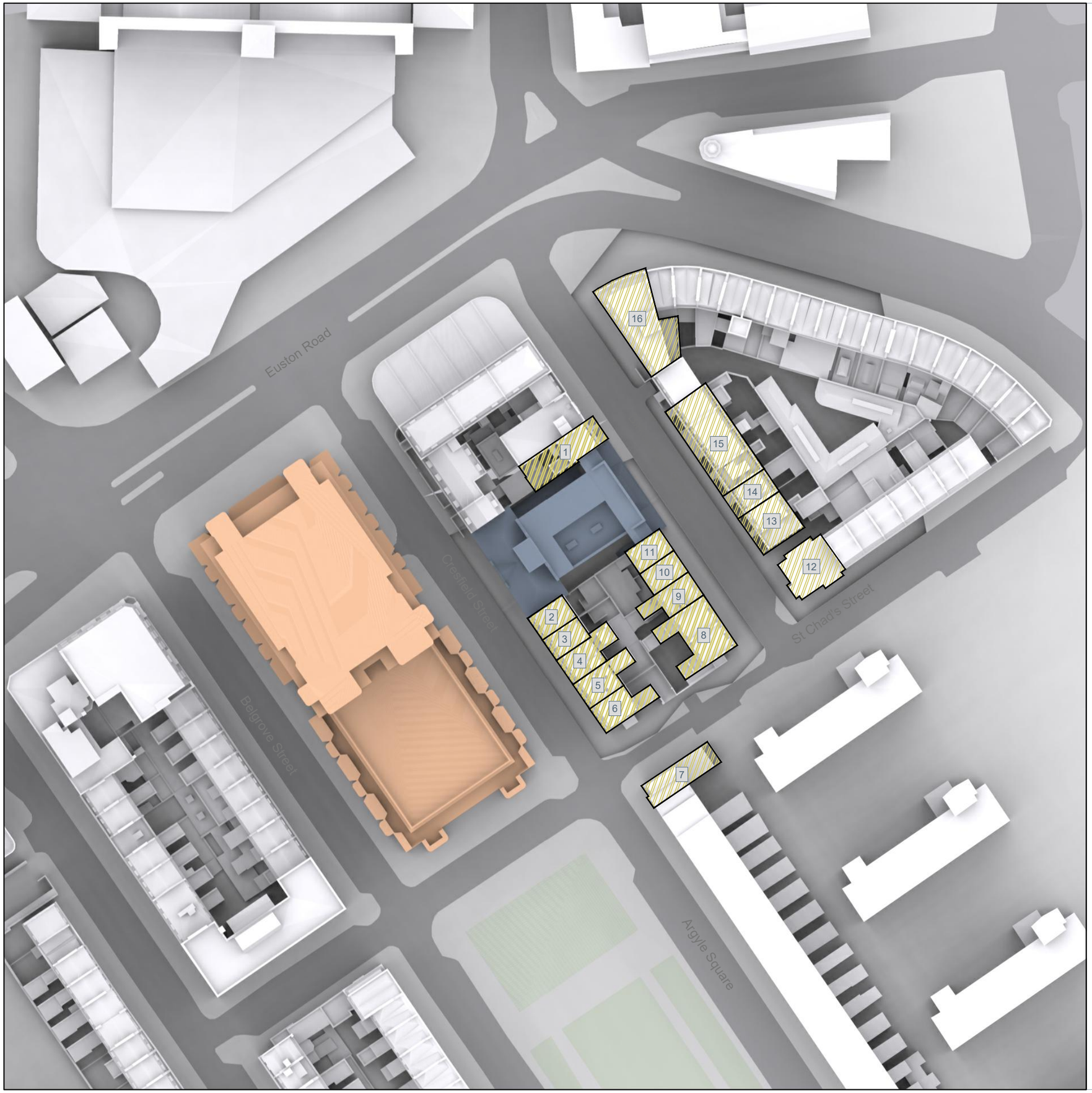
13. The daylight and sunlight terminology used in our report is explained below.

Term	Meaning
Annual probable sunlight hours (**APSH**)	The long-term average of the total number of hours during a year in which direct sunlight is expected to shine on the unobstructed ground, allowing for average levels of cloudiness for the location in question.
Daylight, natural light	Combined skylight and sunlight.
No-sky line (**NSL**)	The outline on the working plane of the area from which no sky can be seen. It divides points on the working plane which can and cannot see the sky.
Obstruction angle	The angular altitude of the top of an obstruction above the horizontal, measured from a reference point in a vertical plane in a section perpendicular to the vertical plane.
Sky factor	Ratio of the parts of illuminance at a point on a given plane that would be received directly through unglazed openings from a sky of uniform luminance, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The sky factor does not include reflected light, either from outdoor or indoor surfaces.
Sun on ground (**SOG**)	The measure of sunlight potential to gardens and amenity spaces. It is measured in hours on the spring equinox (21 March) at a point on the ground accounting for the latitude of the site location. Sunlight below an altitude of 10° is usually discounted as it is likely to be prevented from reaching the ground by fences, plants or other low-level obstructions.
Vertical sky component (**VSC**)	The amount of daylight falling on a vertical wall or window. It is the ratio of that part of illuminance, at a point on a given vertical plane (e.g. window), that is received directly from a CIE standard overcast sky, to simultaneous illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The VSC does not include reflected light, either from the ground or from other buildings. The ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall.
Working plane	Horizontal, vertical or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in housing.

Appendix 2

Location drawings

Site location plan
Plan & 3D view drawings
Window maps



NEIGHBOURING PROPERTIES CONSIDERED FOR ANALYSIS

1: 59 Birkenhead Street
Dwg No: 24340-LOC-001

2: 5 Crestfield Street
Dwg No: 24340-LOC-002

3: 4 Crestfield Street
Dwg No: 24340-LOC-002

4: 3 Crestfield Street
Dwg No: 24340-LOC-002

5: 2 Crestfield Street
Dwg No: 24340-LOC-002

6: 1 Crestfield Street
Dwg No: 24340-LOC-002

7: 7 Argyle Square
Dwg No: 24340-LOC-003

8: 54-55 Birkenhead Street
Dwg No: 24340-LOC-004

9: 56 Birkenhead Street
Dwg No: 24340-LOC-004

10: 57 Birkenhead Street
Dwg No: 24340-LOC-004

11: 58 Birkenhead Street
Dwg No: 24340-LOC-004

12: Zenith House
Dwg No: 24340-LOC-005

13: 7 Birkenhead Street
Dwg No: 24340-LOC-006

14: 6 Birkenhead Street
Dwg No: 24340-LOC-006

15: 2-5 Birkenhead Street
Dwg No: 24340-LOC-007

16: 343-345 Grays Inn Road
Dwg No: 24340-LOC-008

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing
Consented
Proposed
Cumulative
Cutback Envelope

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

All neighbouring properties considered for analysis

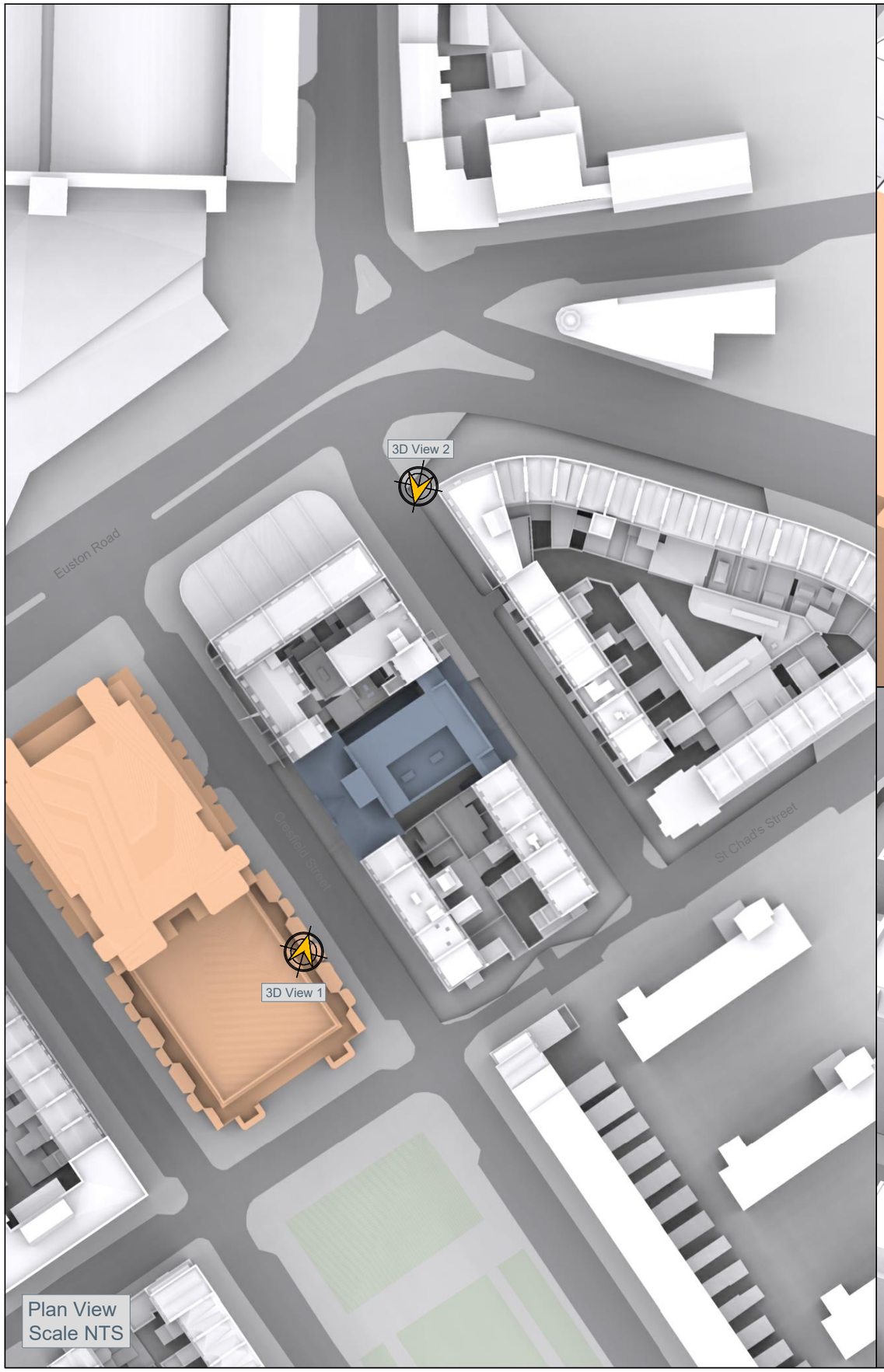
Rev	Description	Drawn	Date

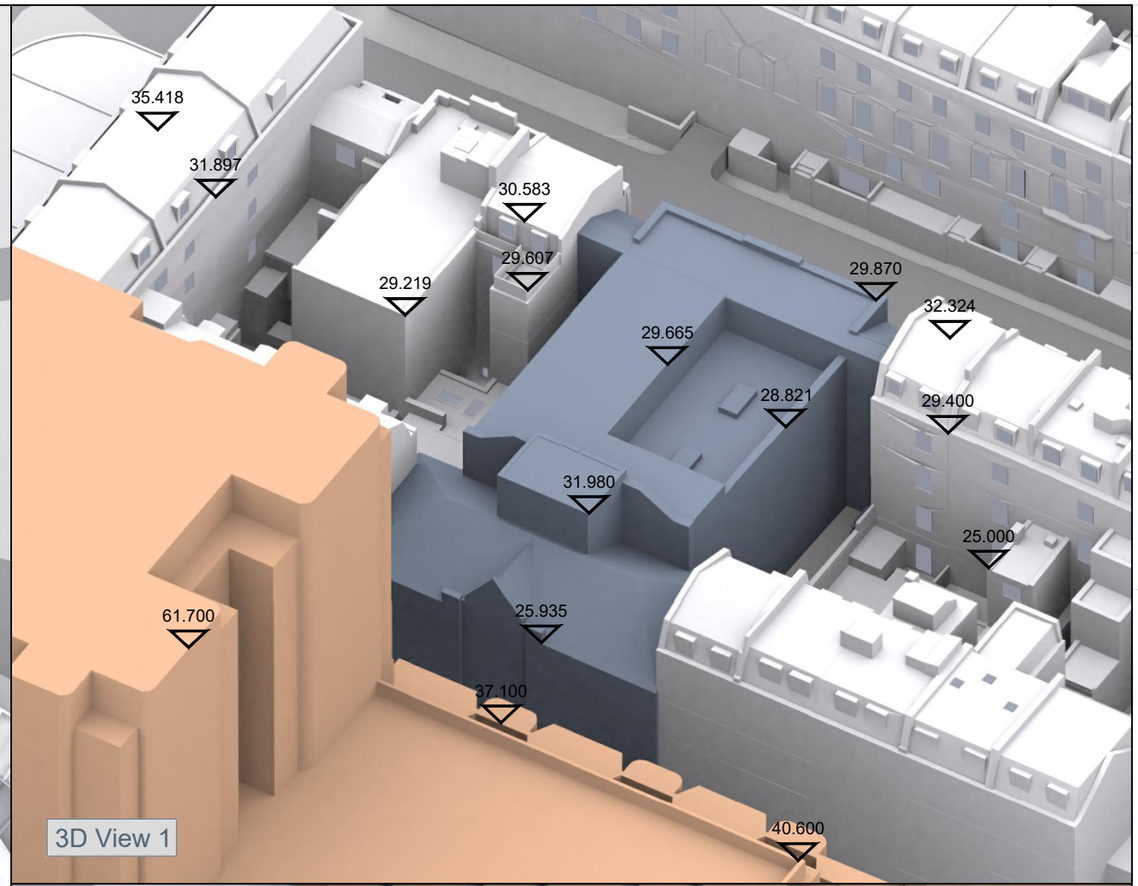
dpr
London 020 7936 3668
Liverpool 0151 242 0980
www.dpr.uk.com
Bristol 0117 450 9703
Dublin +353 1 575 8844
info@dpr.uk.com

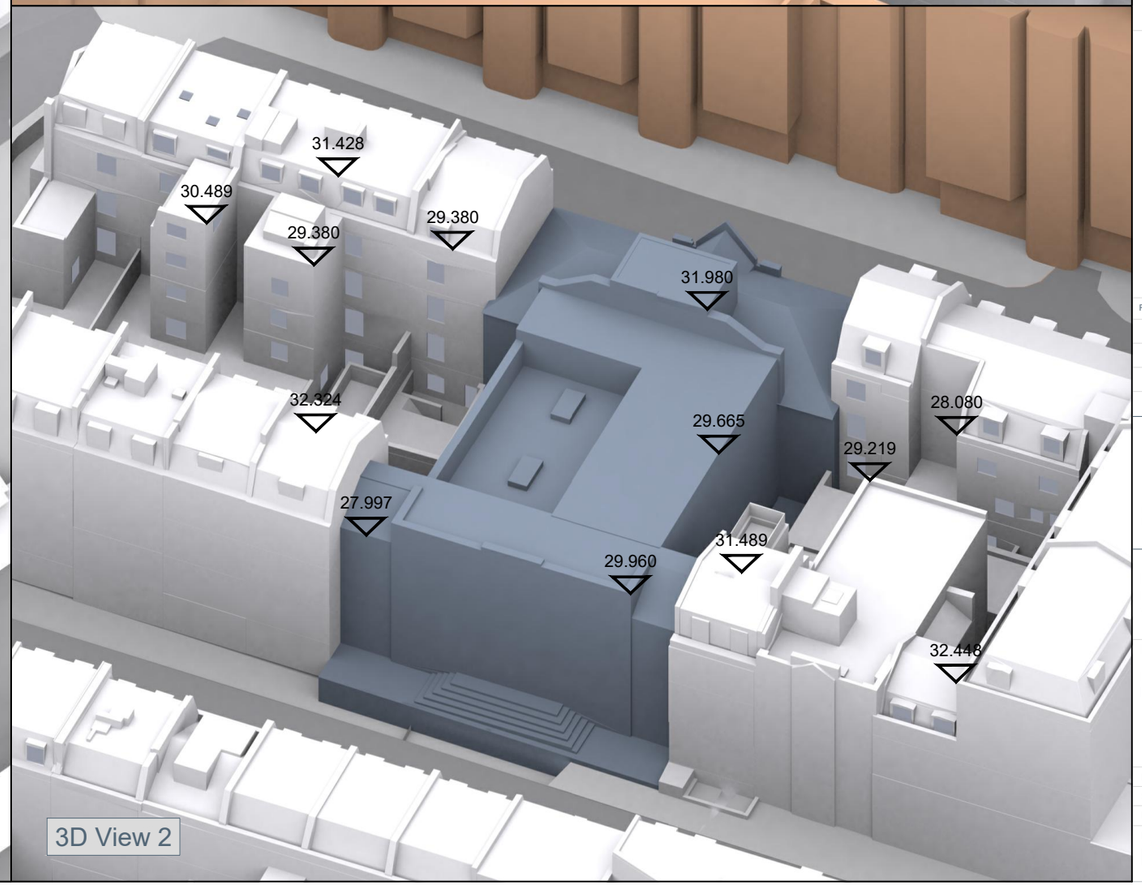
TITLE:
KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:
LOCATION PLAN
Plan View
-
-
-

DRAWN: MJ
SCALE: NTS
DATE: 25.09.2024
JOB NBR: 24340
DWG NO: LOC-DS-001
REV:







NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

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Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

All heights given in m AOD

Rev	Description	Drawn	Date

dpr

London 020 7936 3668 Bristol 0117 450 9703
Liverpool 0151 242 0980 Dublin +353 1 575 8844
www.dpr.uk.com info@dpr.uk.com

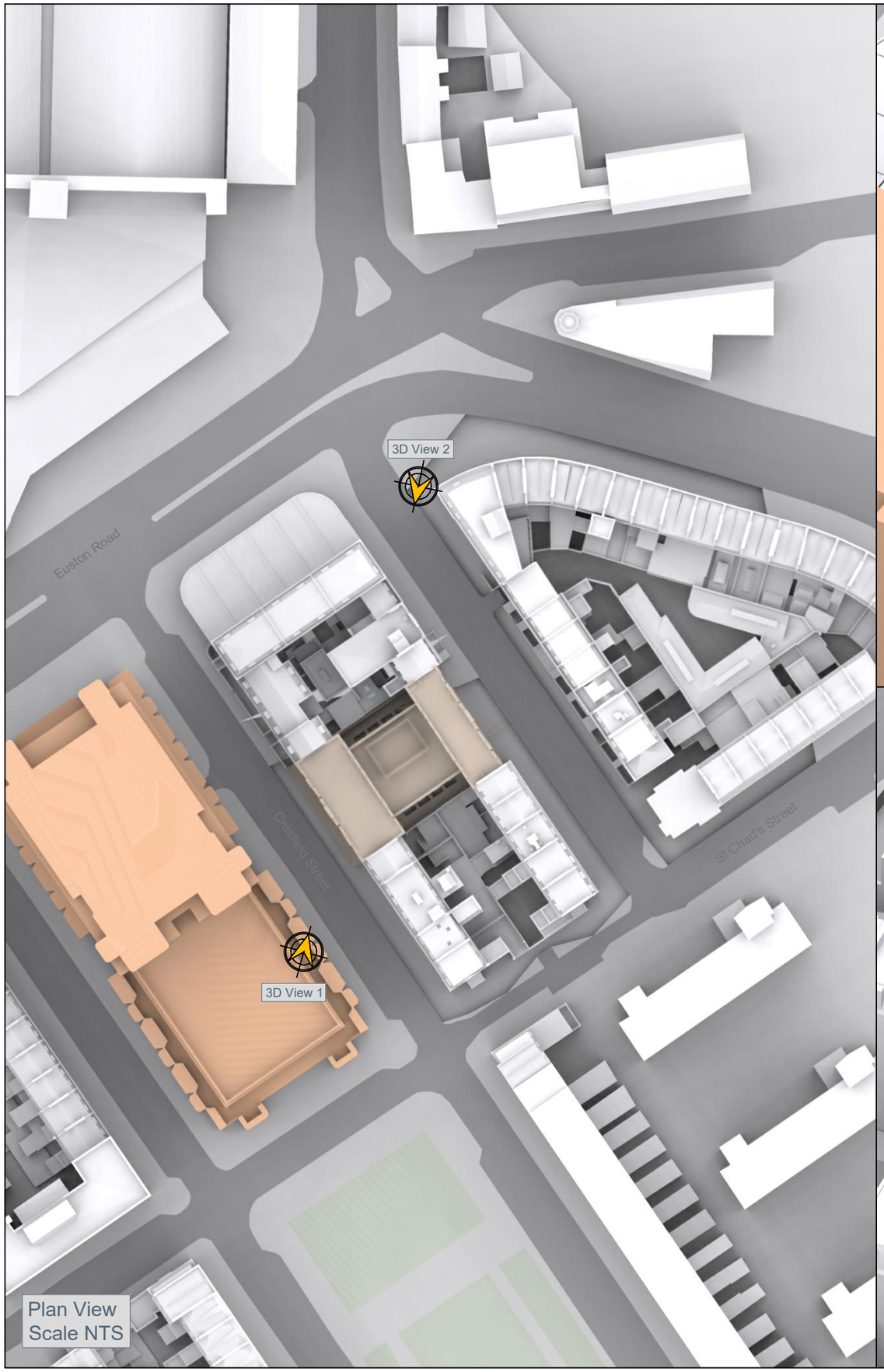
TITLE:

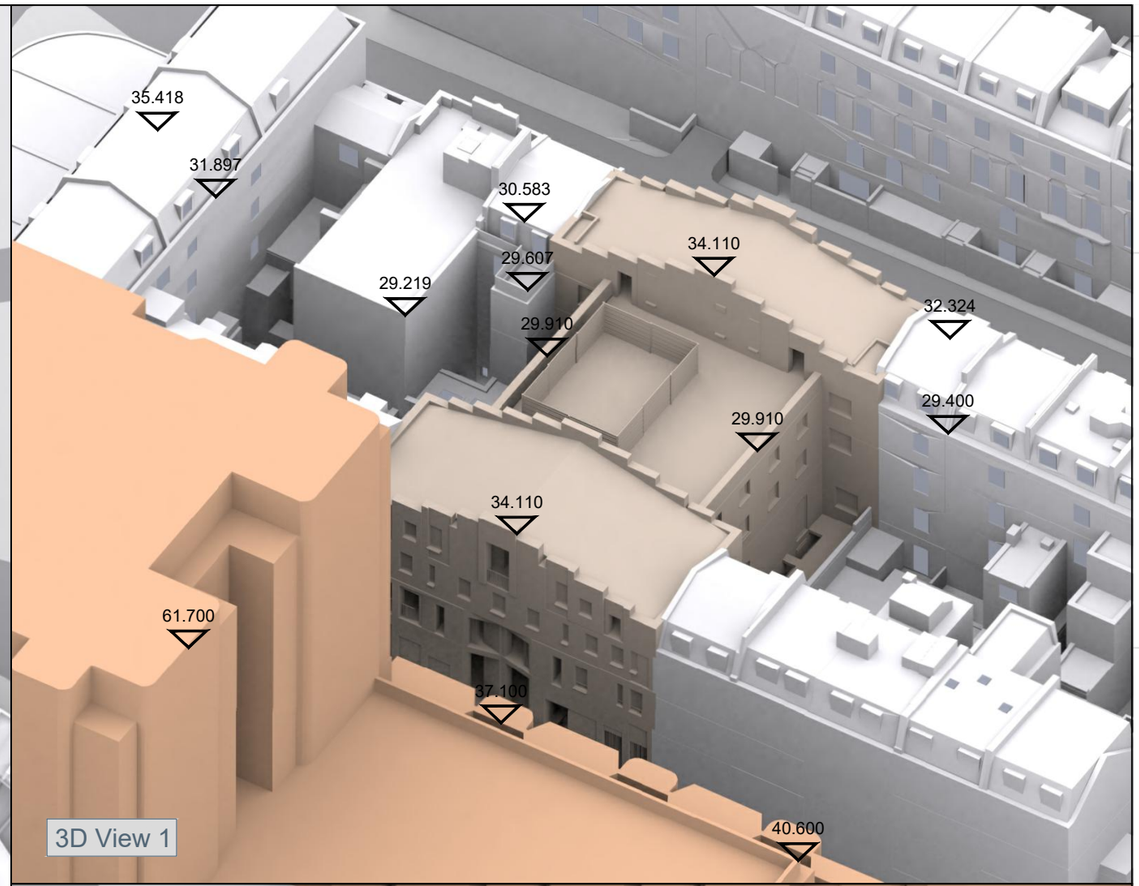
KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

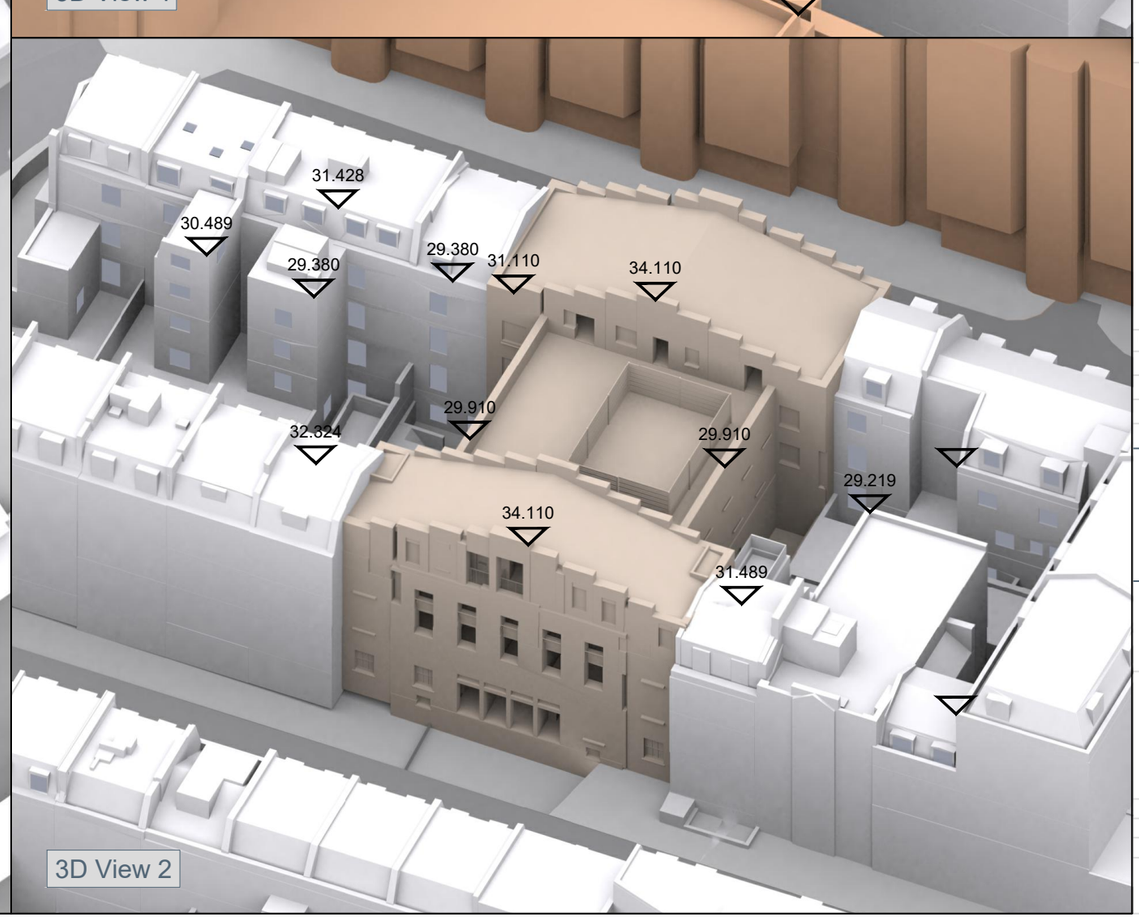
DRAWING:

EXISTING SCENARIO
Plan and 3D Views
-
-
-

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	
DWG NO: EX-001	REV:







NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Consented
- Proposed
- Cumulative
- Cutback Envelope

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F,
12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51,
LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316,
1355-P301 RevC to 1355-P307 RevC,
1355-P402 RevC to 1355-P413 RevC

PROPOSED BUILDINGS:
Matthew Lloyd Architects
3D model received on 30/07/2024
MLA_KXMC_240520_WIP
2D drawings received on 03/09/2024
KXMC_PL200_PROPOSED GROUND FLOOR PLAN_
KXMC_PL201_PROPOSED FIRST FLOOR PLAN_
KXMC_PL202_PROPOSED SECOND FLOOR PLAN_
KXMC_PL203_PROPOSED THIRD FLOOR PLAN_
KXMC_PL204_PROPOSED ROOF PLAN_
KXMC_PL221_PROPOSED ELEVATION - EAST_
KXMC_PL223_PROPOSED ELEVATION - WEST_
KXMC_PL224_PROPOSED ELEVATION - NORTH_
KXMC_PL223_PROPOSED ELEVATION - WEST_

NOTES:

All heights given in m AOD

Rev	Description	Drawn	Date

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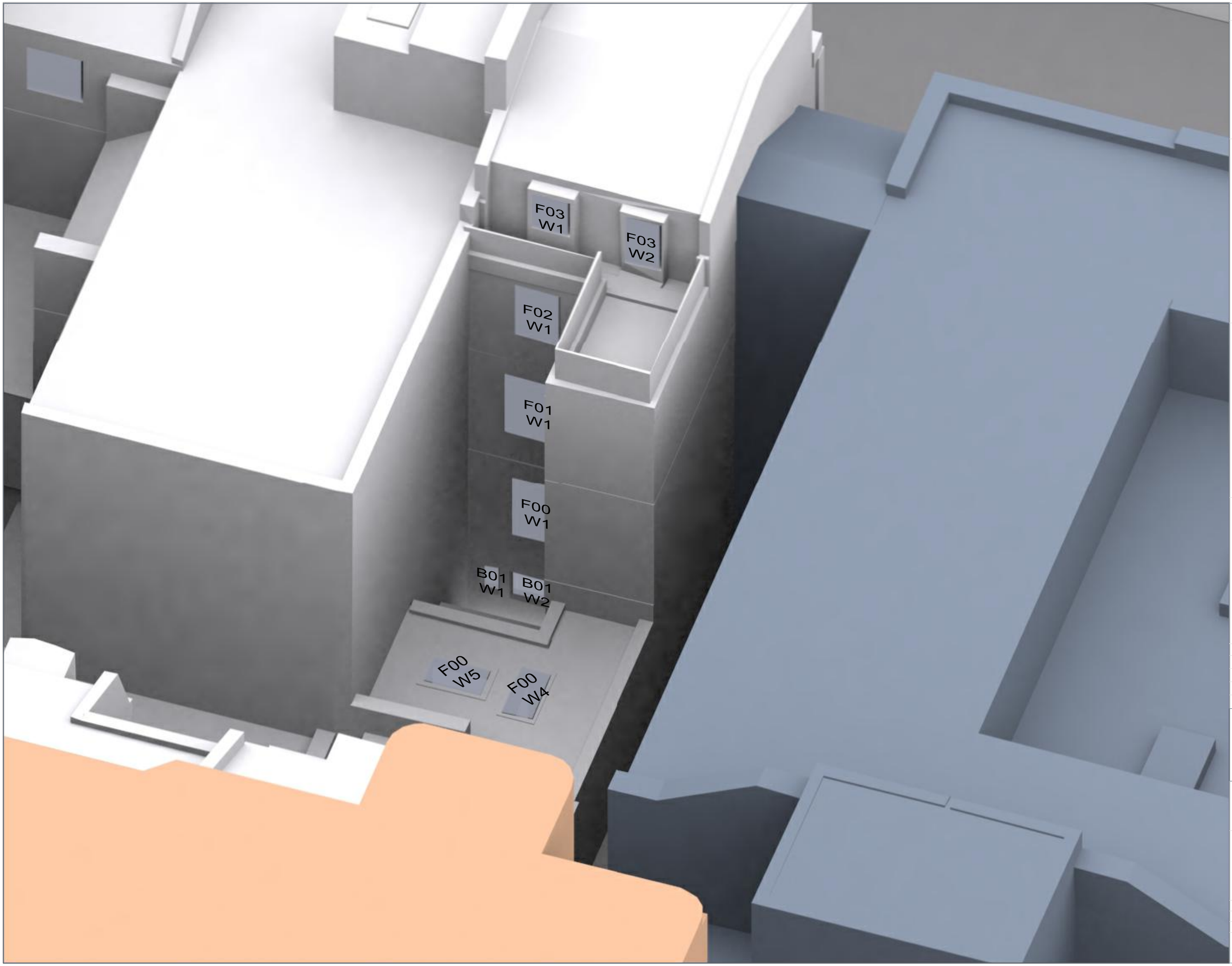
TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

PROPOSED SCENARIO
Plan and 3D Views
-
-
-

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	
DWG NO: PR-001	REV:



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
59 Birkenhead Street

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	
DWG NO: LOC-001	REV:

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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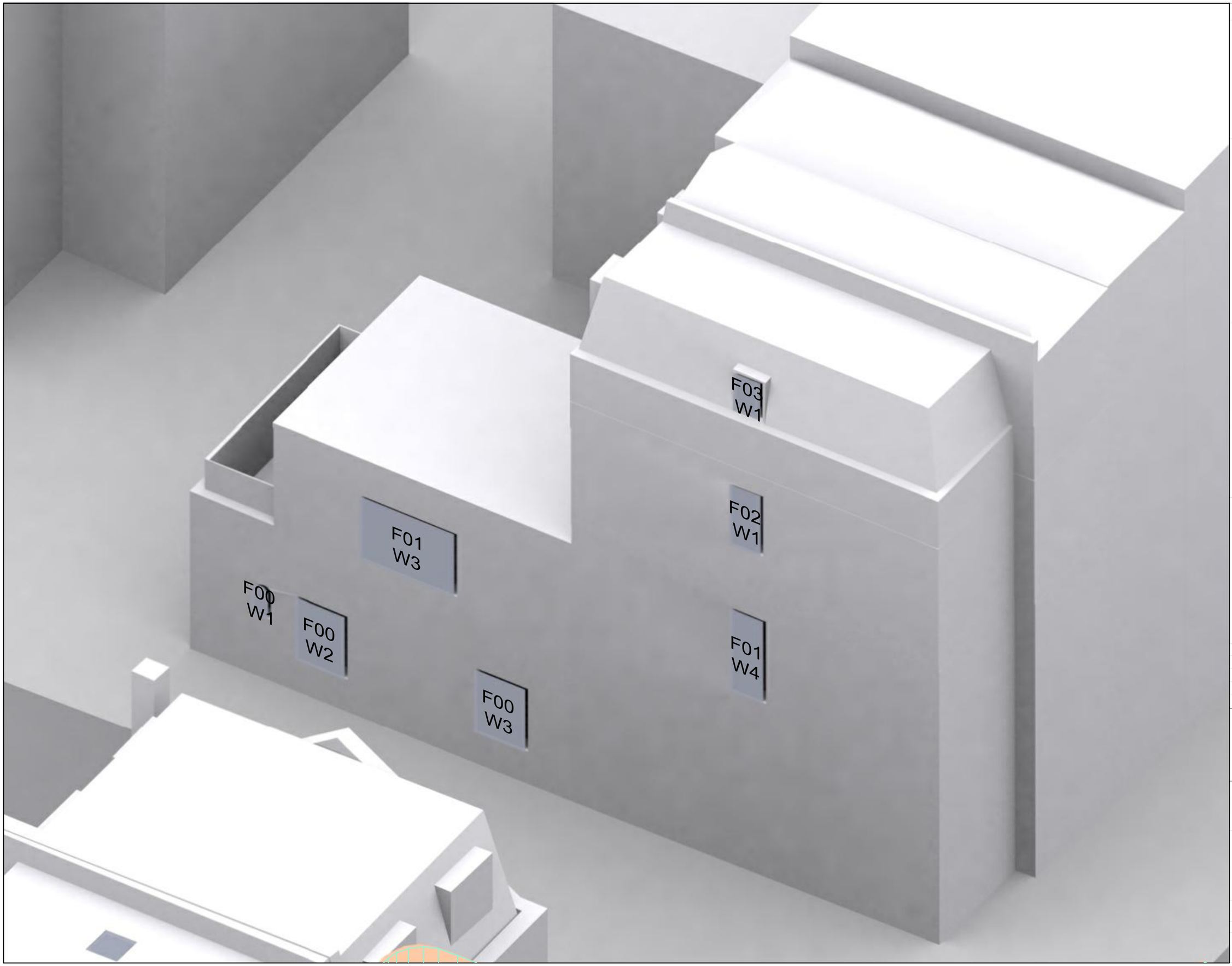
info@dpr.uk.com

TITLE:
KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:
KEY WINDOW LOCATIONS
3D View
-
-
5, 4, 3, 2 & 1 Crestfield Street

DRAWN: MJ
SCALE: NTS
DATE: 25.09.2024
JOB NBR: 24340
DWG NO: LOC-002
REV:



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
7 Argyle Square

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	

DWG NO: LOC-003

REV:

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
54-55, 56, 57 & 58 Birkenhead Street

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	

DWG NO: LOC-004

REV:

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

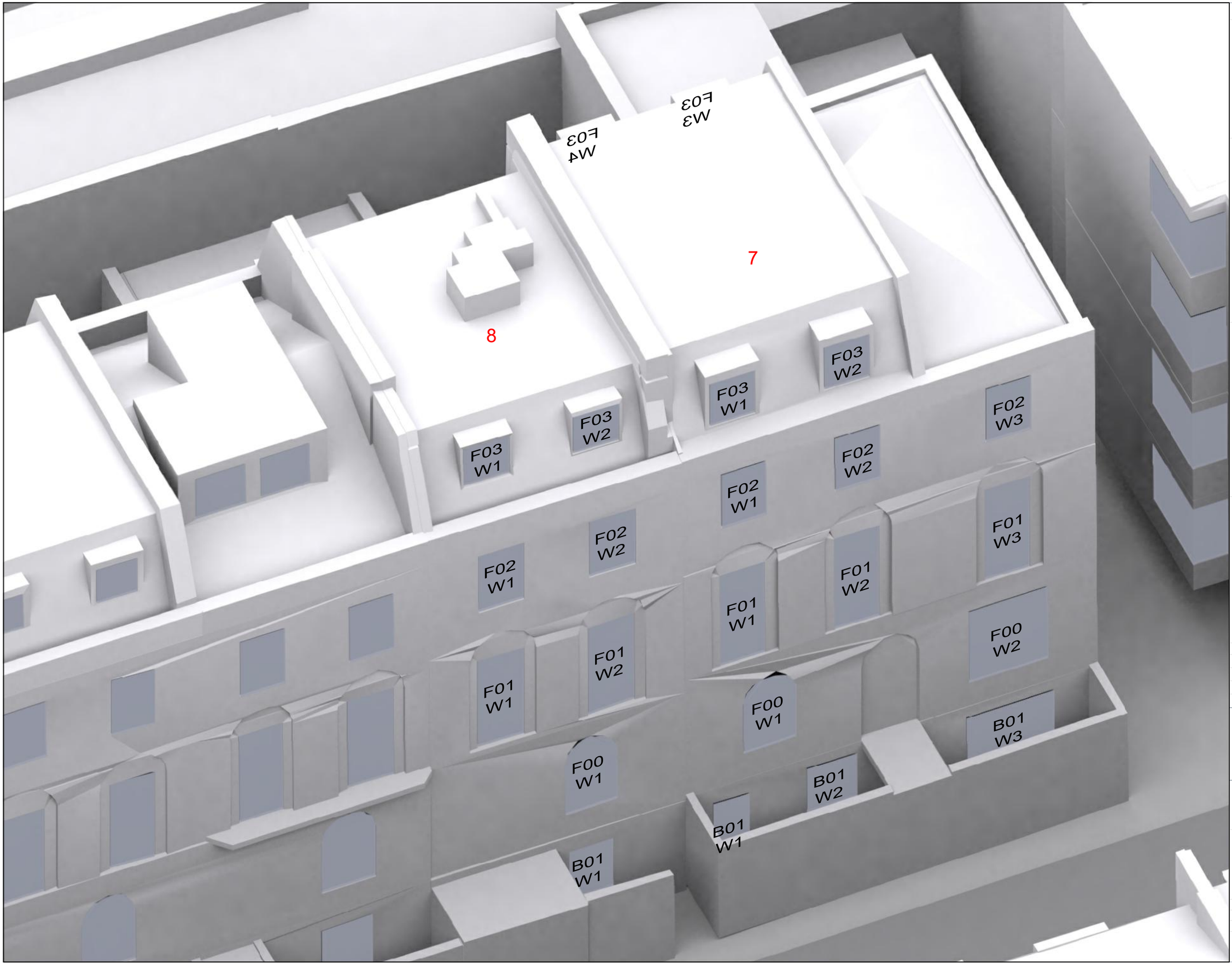
DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
Zenith House

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	

DWG NO: LOC-005

REV:



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

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TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

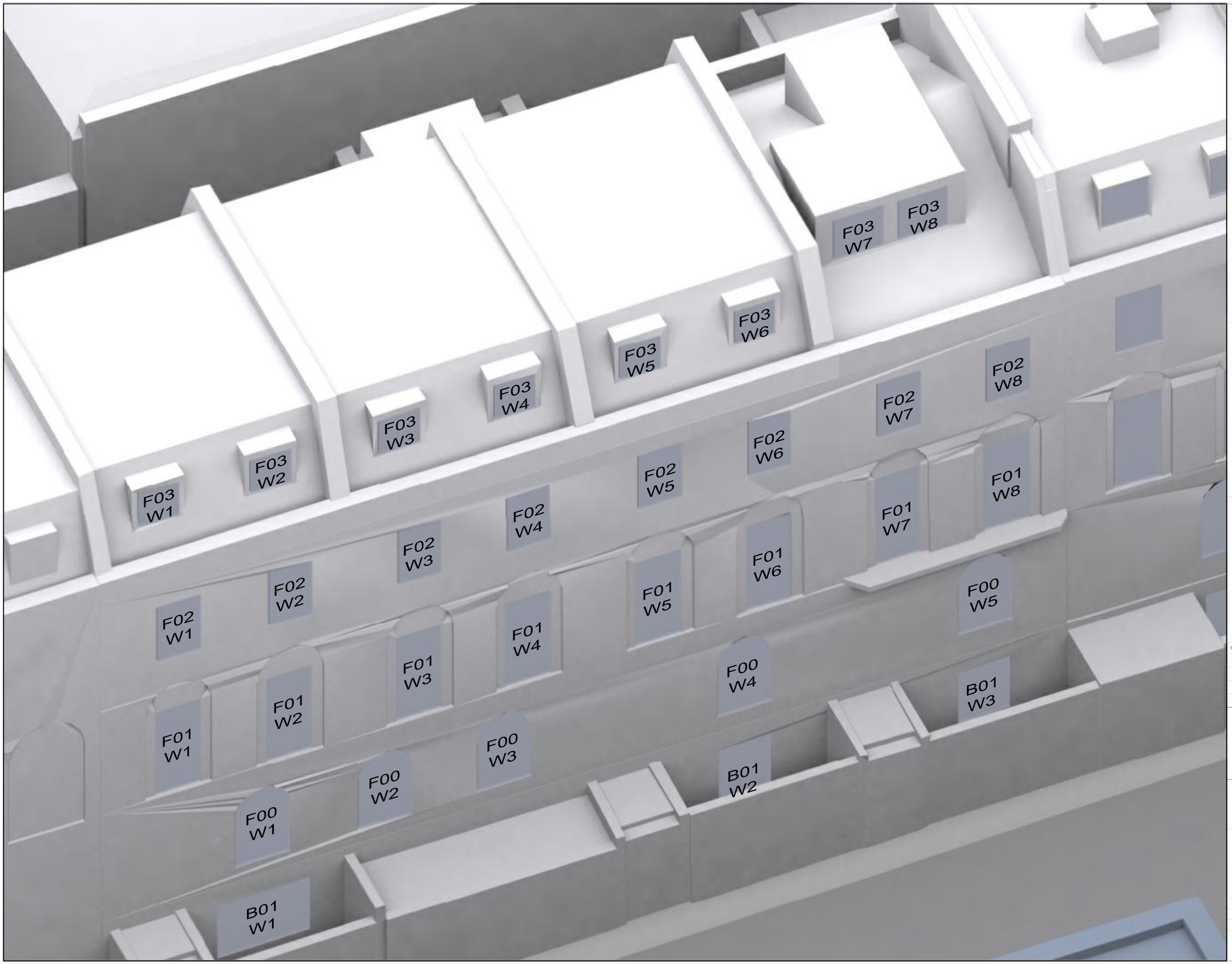
KEY WINDOW LOCATIONS
3D View
-
-
7 & 6 Birkenhead Street

DRAWN: MJ
SCALE: NTS
DATE: 25.09.2024

JOB NBR: 24340

DWG NO: LOC-006

REV:



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

dpr

London 020 7936 3668
Liverpool 0151 242 0980
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Dublin +353 1 575 8844
info@dpr.uk.com

TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

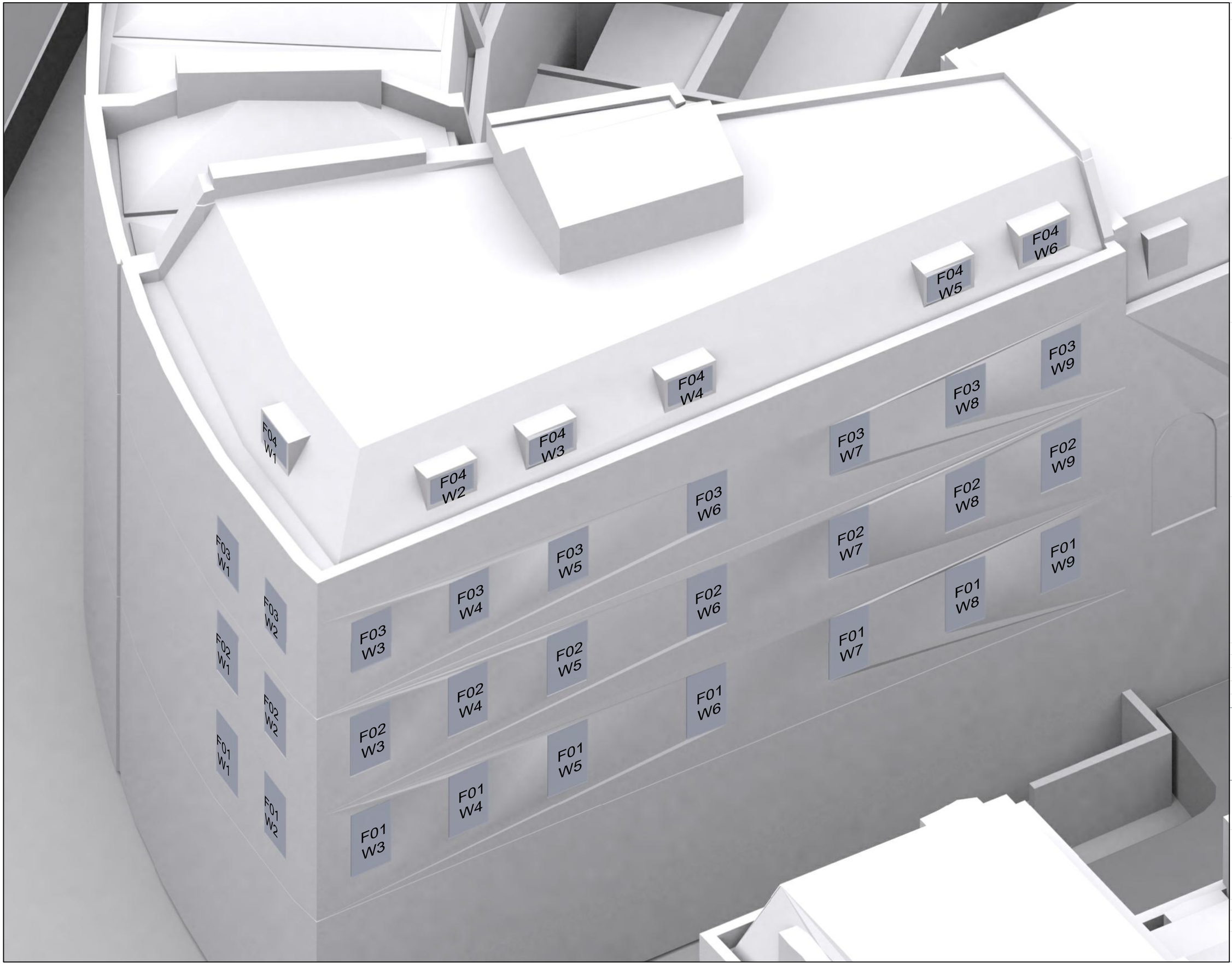
DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
2-5 Birkenhead Street

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	

DWG NO: LOC-007

REV:



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

EXISTING & SURROUNDING BUILDINGS:
Vertex 3D Context Model
Callidus Surveys
2D Survey Drawings
Drwg no's: 12004E1F to 12004E11F, 12004PRF, 12004PSF
LanyonHogg Architects
59 Birkenhead Street consented scheme
Drwg no's: LHA-517.51, LHA-517.51 RevA to LHA-517.55 RevA
SCP Architects Ltd
Northumberland Hotel Scheme
Drwg no's: 1355-P311 to 1355-P316, 1355-P301 RevC to 1355-P307 RevC, 1355-P402 RevC to 1355-P413 RevC

NOTES:

Rev	Description	Drawn	Date

dpr

London 020 7936 3668
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www.dpr.uk.com
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info@dpr.uk.com

TITLE:

KINGS CROSS METHODIST CHURCH
LONDON
WC1H 8BW

DRAWING:

KEY WINDOW LOCATIONS
3D View
-
-
343-345 Grays Inn Road

DRAWN: MJ	JOB NBR: 24340
SCALE: NTS	
DATE: 25.09.2024	
DWG NO: LOC-008	REV:

Appendix 3

Daylight and sunlight results for neighbouring buildings

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref. Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Annual (%APSH) Prop.	Annual (%APSH) Loss	Annual (%APSH) Pro./Ex.	Winter (%APSH) Exis.	Winter (%APSH) Prop.	Winter (%APSH) Pro./Ex.
Note: Red = outside BRE guidelines; Blue = gain in light																						
59 Birkenhead Street																						
B01	R1	Bedroom	W1 ↙	3.6	3.5	0.1	0.97															
		Bedroom	W2 ↙	2.7	2.7	0.0	1.00	2.9	2.9	0.0	1.00	21%	20%	0.06	0.97	8	7	1	0.88	0	0	N/A
F00	R1	Kitchen	W1 ↙	4.0	4.0	0.0	1.00															
		Kitchen	W2 ↙	3.2	3.2	0.0	1.00	3.8	3.8	0.0	1.00	33%	33%	0.01	1.00	5	5	0	1.00	0	0	N/A
	R2	Living Room	W3 ↗	1.0	1.0	0.0	1.00															
		Living Room	W4 Hz	38.4	37.6	N/A	N/A															
		Living Room	W5 Hz	34.6	33.6	N/A	N/A	10.2	10.0	0.2	0.98	99%	98%	0.05	1.00	18	14	4	N/A*	2	0	N/A*
F01	R1	Study	W1 ↙	5.8	5.8	0.0	1.00	5.8	5.8	0.0	1.00	51%	51%	0.00	1.00	7	7	0	1.00	0	0	N/A
F02	R1	Bedroom	W1 ↙	11.4	11.4	0.0	1.00	11.4	11.4	0.0	1.00	47%	47%	0.00	1.00	14	14	0	1.00	0	0	N/A
F03	R1	Bedroom	W1 ↙	25.7	25.2	0.5	0.98															
		Bedroom	W2 ↙	25.6	23.2	2.4	0.91	25.7	24.1	1.6	0.94	84%	82%	0.27	0.98	50	49	N/A	N/A	17	16	N/A
5 Crestfield Street																						
B01	R1	Dining Room	W1 ↗	11.5	10.4	1.1	0.90	11.5	10.4	1.1	0.90	30%	24%	0.71	0.80	North	North	N/A	N/A	North	North	N/A
	R2	Living Room	W2 ↗	11.8	10.9	0.9	0.92	11.8	10.9	0.9	0.92	35%	30%	0.39	0.85	North	North	N/A	N/A	North	North	N/A
F00	R1	Kitchen	W1 ↗	17.7	16.4	1.3	0.93	17.7	16.4	1.3	0.93	73%	62%	1.29	0.85	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↗	24.3	22.5	1.8	0.93	24.3	22.5	1.8	0.93	97%	97%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	31.6	29.5	N/A	N/A	31.6	29.5	N/A	N/A	98%	97%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	36.6	35.4	N/A	N/A	36.6	35.4	N/A	N/A	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
4 Crestfield Street																						
B01	R1	Dining Room	W1 ↗	7.1	7.0	0.1	0.99	7.1	7.0	0.1	0.99	21%	20%	0.10	0.95	North	North	N/A	N/A	North	North	N/A
F00	R1	Bedroom	W1 ↗	12.3	11.4	0.9	0.93	12.3	11.4	0.9	0.93	43%	43%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↗	16.1	15.1	1.0	0.94	16.1	15.1	1.0	0.94	67%	67%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	21.7	20.8	0.9	0.96	21.7	20.8	0.9	0.96	79%	79%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	36.1	35.7	N/A	N/A															
		Bedroom	W2 ↗	37.0	36.5	N/A	N/A	36.5	36.1	N/A	N/A	85%	85%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
3 Crestfield Street																						
B01	R1	Bedroom	W1 ↖	11.0	9.5	1.5	0.86	11.0	9.5	1.5	0.86	40%	32%	0.87	0.81	North	North	N/A	N/A	North	North	N/A
F00	R1	Bedroom	W1 ↗	18.2	17.6	0.6	0.97	18.2	17.6	0.6	0.97	51%	50%	0.10	0.98	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↗	23.5	22.8	0.7	0.97	23.5	22.8	0.7	0.97	78%	78%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	29.1	28.5	N/A	N/A	29.1	28.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Unknown	W1 ↗	35.5	35.5	N/A	N/A	35.5	35.5	N/A	N/A	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Unknown	W2 ↗	32.7	32.5	N/A	N/A	32.7	32.5	N/A	N/A	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
2 Crestfield Street																						
F00	R1	Dining Room	W1 ↗	12.3	12.3	0.0	1.00	12.3	12.3	0.0	1.00	73%	73%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Unknown	W2 ↗	17.2	17.0	0.2	0.99	17.2	17.0	0.2	0.99	43%	43%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↗	16.8	16.8	0.0	1.00	16.8	16.8	0.0	1.00	87%	87%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Unknown	W2 ↗	22.7	22.5	0.2	0.99	22.7	22.5	0.2	0.99	76%	76%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref. Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH)				Winter (%APSH)		
																Exis.	Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
F02	R1	Bedroom	W1 ↗	24.0	24.0	0.0	1.00	24.0	24.0	0.0	1.00	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Unknown	W2 ↗	28.3	28.1	N/A	N/A	28.3	28.1	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Unknown	W1 ↗	35.8	35.7	N/A	N/A															
		Unknown	W5 Hz	93.8	93.8	N/A	N/A	48.2	48.1	N/A	N/A	98%	98%	0.00	1.00	79	79	N/A	N/A	17	17	N/A
	R2	Unknown	W2 ↗	36.7	36.6	N/A	N/A															
		Unknown	W6 Hz	95.3	95.3	N/A	N/A															
		Unknown	W7 Hz	89.5	89.5	N/A	N/A	65.8	65.7	N/A	N/A	97%	97%	0.00	1.00	89	89	N/A	N/A	26	26	N/A
	R3	Unknown	W3 ↗	33.4	33.2	N/A	N/A															
		Unknown	W4 ↖	27.1	26.8	0.3	0.99	30.3	30.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
1 Crestfield Street																						
F00	R1	Study	W1 ↖	11.3	11.1	0.2	0.98	11.3	11.1	0.2	0.98	45%	45%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Dining Room	W2 ↗	10.7	10.7	0.0	1.00	10.7	10.7	0.0	1.00	63%	63%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↗	22.8	22.8	0.0	1.00	22.8	22.8	0.0	1.00	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	31.7	31.7	N/A	N/A	31.7	31.7	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
7 Argyle Square																						
F00	R1	Bedroom	W1 ↖	25.6	25.5	0.1	1.00															
		Bedroom	W2 ↖	25.1	24.9	0.2	0.99	25.1	25.0	0.1	1.00	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W3 ↖	23.5	23.5	0.0	1.00	23.5	23.5	0.0	1.00	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↘	17.2	17.2	0.0	1.00															
		Bedroom	W2 ↗	23.3	23.3	0.0	1.00															
		Bedroom	W3 ↖	27.9	27.8	N/A	N/A	24.6	24.5	0.1	1.00	99%	99%	0.00	1.00	38	38	N/A	N/A	6	6	N/A
	R2	Unknown	W4 ↖	26.2	26.1	0.1	1.00	26.2	26.1	0.1	1.00	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Unknown	W1 ↖	30.2	30.2	N/A	N/A	30.2	30.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Unknown	W1 ↖	33.5	33.4	N/A	N/A	33.5	33.4	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
54-55 Birkenhead Street																						
F02	R1	Kitchen	W1 ↙	30.6	30.5	N/A	N/A	30.6	30.5	N/A	N/A	98%	98%	0.00	1.00	56	55	N/A	N/A	20	20	N/A
	R2	Living Room	W2 ↙	31.4	31.3	N/A	N/A	31.4	31.3	N/A	N/A	97%	97%	0.00	1.00	57	57	N/A	N/A	21	21	N/A
F03	R1	Unknown	W1 ↙	31.9	31.9	N/A	N/A	31.9	31.9	N/A	N/A	88%	88%	0.00	1.00	59	59	N/A	N/A	22	22	N/A
	R2	Unknown	W2 ↙	32.9	32.8	N/A	N/A	32.9	32.8	N/A	N/A	86%	86%	0.00	1.00	56	56	N/A	N/A	20	20	N/A
	R3	Unknown	W3 ↙	33.2	33.2	N/A	N/A	33.2	33.2	N/A	N/A	91%	91%	0.00	1.00	59	59	N/A	N/A	23	23	N/A
	R4	Unknown	W4 ↙	33.7	33.7	N/A	N/A	33.7	33.7	N/A	N/A	92%	92%	0.00	1.00	57	57	N/A	N/A	22	22	N/A
56 Birkenhead Street																						
F00	R1	Kitchen	W1 ↙	13.5	13.3	0.2	0.99	13.5	13.3	0.2	0.99	33%	33%	0.00	1.00	24	24	0	1.00	8	8	N/A
F01	R1	Bedroom	W1 ↙	17.7	17.5	0.2	0.99	17.7	17.5	0.2	0.99	37%	37%	0.00	1.00	34	34	N/A	N/A	9	9	N/A
	R2	Unknown	W2 ↙	19.0	19.0	0.0	1.00	19.0	19.0	0.0	1.00	94%	94%	0.00	1.00	23	23	0	1.00	2	2	N/A*
F02	R1	Unknown	W1 ↙	29.5	29.4	N/A	N/A	29.5	29.4	N/A	N/A	98%	98%	0.00	1.00	54	53	N/A	N/A	20	20	N/A
F03	R1	Unknown	W1 ↙	31.6	31.6	N/A	N/A	31.6	31.6	N/A	N/A	90%	90%	0.00	1.00	57	57	N/A	N/A	22	22	N/A
	R2	Unknown	W2 ↙	31.9	31.9	N/A	N/A	31.9	31.9	N/A	N/A	93%	93%	0.00	1.00	55	55	N/A	N/A	21	21	N/A

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
																Annual *(%APSH)*				Winter *(%APSH)*		
Floor	Room	Room use	Window Ref. Orientation	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% rm)*	Prop. *(% rm)*	Loss *(m^2)*	Pro./Ex. ratio	Exis.	Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
57 Birkenhead Street																						
B01	R1	Bedroom	W1 ↙	9.8	9.5	0.3	0.97	9.8	9.5	0.3	0.97	24%	23%	0.08	0.97	7	7	0	1.00	0	0	N/A
F00	R1	Bedroom	W1 ↙	14.2	13.9	0.3	0.98	14.2	13.9	0.3	0.98	52%	52%	0.00	1.00	14	14	0	1.00	0	0	N/A
F01	R1	Bedroom	W1 ↙	23.3	23.0	0.3	0.99	23.3	23.0	0.3	0.99	92%	92%	0.00	1.00	43	43	N/A	N/A	11	11	N/A
F02	R1	Bedroom	W1 ↙	28.8	28.6	N/A	N/A	28.8	28.6	N/A	N/A	92%	92%	0.00	1.00	53	53	N/A	N/A	20	20	N/A
F03	R1	Bedroom	W1 ↙	31.1	31.0	N/A	N/A	31.1	31.0	N/A	N/A	80%	80%	0.00	1.00	55	55	N/A	N/A	21	21	N/A
58 Birkenhead Street																						
B01	R1	Dining Room	W1 ↙	12.5	12.1	0.4	0.97	12.5	12.1	0.4	0.97	30%	29%	0.05	0.98	21	21	0	1.00	0	0	N/A
F00	R1	Kitchen	W1 ↙	17.7	17.1	0.6	0.97	17.7	17.1	0.6	0.97	60%	60%	0.05	0.99	34	34	N/A	N/A	5	5	N/A
F01	R1	Kitchen	W1 ↙	23.6	23.0	0.6	0.97	23.6	23.0	0.6	0.97	90%	90%	0.00	1.00	45	45	N/A	N/A	15	15	N/A
F02	R1	Kitchen	W1 ↙	28.1	27.5	N/A	N/A	28.1	27.5	N/A	N/A	90%	90%	0.00	1.00	52	51	N/A	N/A	20	20	N/A
F03	R1	LKD	W1 ↙	30.0	24.6	5.4	0.82															
		LKD	W2 ↙	30.3	30.2	N/A	N/A	30.2	27.8	N/A	N/A	85%	78%	1.08	0.92	54	53	N/A	N/A	20	20	N/A
Zenith House																						
F00	R1	Unknown	W1 ↖	5.9	5.9	0.0	1.00															
		Unknown	W2 ↙	11.7	11.5	0.2	0.98	7.5	7.4	0.1	0.99	74%	68%	0.60	0.91	12	12	0	1.00	0	0	N/A
	R2	Unknown	W3 ↖	11.0	10.7	0.3	0.97	11.0	10.7	0.3	0.97	65%	65%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Unknown	W4 ↙	21.8	21.6	0.2	0.99	21.8	21.6	0.2	0.99	89%	89%	0.00	1.00	33	33	N/A	N/A	9	9	N/A
	R4	Unknown	W5 ↖	14.9	14.7	0.2	0.99															
		Unknown	W6 ↙	22.7	22.5	0.2	0.99															
		Unknown	W7 ↘	11.1	11.1	0.0	1.00	18.9	18.8	0.1	0.99	77%	77%	0.01	1.00	39	39	N/A	N/A	7	7	N/A
F01	R1	Unknown	W1 ↖	8.0	8.0	0.0	1.00															
		Unknown	W2 ↙	13.6	13.4	0.2	0.99	9.6	9.5	0.1	0.99	75%	75%	0.01	1.00	16	15	1	0.94	0	0	N/A
	R2	Unknown	W3 ↖	13.4	13.1	0.3	0.98	13.4	13.1	0.3	0.98	71%	71%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Unknown	W4 ↙	25.0	24.8	0.2	0.99	25.0	24.8	0.2	0.99	92%	92%	0.00	1.00	38	38	N/A	N/A	10	10	N/A
	R4	Unknown	W5 ↖	16.5	16.3	0.2	0.99															
		Unknown	W6 ↙	26.0	25.9	0.1	1.00															
		Unknown	W7 ↘	13.0	13.0	0.0	1.00	21.6	21.5	0.1	1.00	83%	83%	0.00	1.00	46	46	N/A	N/A	9	9	N/A
F02	R1	Unknown	W1 ↖	13.9	13.9	0.0	1.00															
		Unknown	W2 ↙	15.9	15.7	0.2	0.99	14.5	14.4	0.1	0.99	79%	79%	0.00	1.00	20	20	0	1.00	2	2	N/A*
	R2	Unknown	W3 ↖	18.8	18.5	0.3	0.98	18.8	18.5	0.3	0.98	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Unknown	W4 ↙	28.1	28.0	N/A	N/A	28.1	28.0	N/A	N/A	92%	92%	0.00	1.00	44	43	N/A	N/A	12	12	N/A
	R4	Unknown	W5 ↖	18.1	17.9	0.2	0.99															
		Unknown	W6 ↙	29.1	29.0	N/A	N/A															
		Unknown	W7 ↘	15.1	15.1	0.0	1.00	24.2	24.1	0.1	1.00	97%	97%	0.00	1.00	57	56	N/A	N/A	14	14	N/A
F03	R1	Unknown	W1 ↖	28.5	28.5	N/A	N/A															
		Unknown	W2 ↙	20.9	20.8	0.1	1.00	26.3	26.3	0.0	1.00	100%	100%	0.00	1.00	23	23	0	1.00	3	3	N/A*
	R2	Unknown	W3 ↖	28.1	27.9	N/A	N/A	28.1	27.9	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Unknown	W4 ↙	31.7	31.7	N/A	N/A	31.7	31.7	N/A	N/A	92%	92%	0.00	1.00	54	53	N/A	N/A	15	15	N/A
	R4	Unknown	W5 ↖	22.1	22.0	0.1	1.00															
		Unknown	W6 ↙	32.0	31.9	N/A	N/A															

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
																Annual *(%APSH)*				Winter *(%APSH)*		
Floor	Room	Room use	Window Ref. Orientation	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% rm)*	Prop. *(% rm)*	Loss *(m^2)*	Pro./Ex. ratio	Exis.	Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
		Unknown	W7 ↘	18.4	18.4	0.0	1.00	27.4	27.3	N/A	N/A	100%	100%	0.00	1.00	63	63	N/A	N/A	17	17	N/A
7 Birkenhead Street																						
B01	R1	Bedroom	W1 ↙	10.7	10.7	0.0	1.00															
		Bedroom	W2 ↙	16.5	16.0	0.5	0.97	13.3	13.1	0.2	0.98	47%	45%	0.37	0.95	32	31	1	N/A	4	4	N/A*
	R2	Living Room	W3 ↙	18.7	18.5	0.2	0.99	18.7	18.5	0.2	0.99	52%	50%	0.19	0.97	31	31	N/A	N/A	5	5	N/A
F00	R1	Bedroom	W1 ↙	23.3	22.8	0.5	0.98	23.3	22.8	0.5	0.98	82%	82%	0.00	1.00	42	40	N/A	N/A	8	8	N/A
	R2	Bedroom	W2 ↙	23.3	22.9	0.4	0.98	23.3	22.9	0.4	0.98	99%	99%	0.00	1.00	43	42	N/A	N/A	10	10	N/A
F01	R1	Bedroom	W1 ↙	26.5	26.2	0.3	0.99	26.5	26.2	0.3	0.99	92%	92%	0.00	1.00	45	43	N/A	N/A	10	10	N/A
	R2	Kitchen	W2 ↙	26.6	26.2	0.4	0.98	26.6	26.2	0.4	0.98	98%	98%	0.00	1.00	47	46	N/A	N/A	12	12	N/A
	R3	Bedroom	W3 ↙	26.6	26.3	0.3	0.99	26.6	26.3	0.3	0.99	96%	96%	0.00	1.00	47	46	N/A	N/A	12	12	N/A
F02	R1	Bedroom	W1 ↙	31.0	30.7	N/A	N/A	31.0	30.7	N/A	N/A	94%	94%	0.00	1.00	59	59	N/A	N/A	20	20	N/A
	R2	Dressing Room	W2 ↙	31.0	30.7	N/A	N/A	31.0	30.7	N/A	N/A	97%	97%	0.00	1.00	59	59	N/A	N/A	20	20	N/A
	R3	Bedroom	W3 ↙	31.1	30.8	N/A	N/A	31.1	30.8	N/A	N/A	96%	96%	0.00	1.00	57	57	N/A	N/A	18	18	N/A
F03	R1	Studio Flat	W1 ↙	33.2	33.1	N/A	N/A															
		Studio Flat	W2 ↙	33.3	33.2	N/A	N/A															
		Studio Flat	W3 ↗	37.2	37.2	N/A	N/A															
		Studio Flat	W4 ↗	37.4	37.4	N/A	N/A	35.3	35.2	N/A	N/A	93%	93%	0.00	1.00	92	92	N/A	N/A	26	26	N/A
6 Birkenhead Street																						
B01	R1	Bedroom	W1 ↙	16.0	15.7	0.3	0.98	16.0	15.7	0.3	0.98	43%	39%	0.46	0.93	30	30	0	N/A	4	4	N/A*
F00	R1	Bedroom	W1 ↙	23.1	22.5	0.6	0.97	23.1	22.5	0.6	0.97	74%	74%	0.01	1.00	43	41	N/A	N/A	9	9	N/A
F01	R1	Bedroom	W1 ↙	26.4	26.0	0.4	0.98	26.4	26.0	0.4	0.98	98%	98%	0.00	1.00	46	44	N/A	N/A	11	11	N/A
	R2	Bedroom	W2 ↙	26.4	26.0	0.4	0.98	26.4	26.0	0.4	0.98	96%	96%	0.00	1.00	46	43	N/A	N/A	11	11	N/A
F02	R1	Bedroom	W1 ↙	30.6	30.4	N/A	N/A	30.6	30.4	N/A	N/A	98%	98%	0.00	1.00	60	59	N/A	N/A	20	20	N/A
	R2	Bedroom	W2 ↙	30.7	30.4	N/A	N/A	30.7	30.4	N/A	N/A	94%	94%	0.00	1.00	59	59	N/A	N/A	20	20	N/A
F03	R1	Bedroom	W1 ↙	33.1	33.0	N/A	N/A	33.1	33.0	N/A	N/A	89%	89%	0.00	1.00	62	62	N/A	N/A	21	21	N/A
	R2	Bedroom	W2 ↙	33.1	33.0	N/A	N/A	33.1	33.0	N/A	N/A	86%	86%	0.00	1.00	57	57	N/A	N/A	19	19	N/A
2-5 Birkenhead Street																						
B01	R1	Kitchen	W1 ↙	19.0	17.4	1.6	0.92	19.0	17.4	1.6	0.92	47%	41%	1.10	0.88	35	32	N/A	N/A	6	5	N/A
	R2	Living Room	W2 ↙	15.2	15.1	0.1	0.99	15.2	15.1	0.1	0.99	27%	21%	1.07	0.80	22	22	0	1.00	1	1	N/A*
	R3	Home Office	W3 ↙	18.9	17.5	1.4	0.93	18.9	17.5	1.4	0.93	30%	24%	1.05	0.81	35	32	N/A	N/A	6	6	N/A
F00	R1	Living Room	W1 ↙	23.5	22.0	1.5	0.94	23.5	22.0	1.5	0.94	60%	52%	1.19	0.85	45	43	N/A	N/A	13	12	N/A
	R2	Living Room	W2 ↙	23.4	21.9	1.5	0.94															
		Living Room	W3 ↙	23.4	21.8	1.6	0.93	23.4	21.9	1.5	0.94	63%	56%	1.35	0.89	45	42	N/A	N/A	13	12	N/A
	R3	Living Room	W4 ↙	23.5	21.9	1.6	0.93	23.5	21.9	1.6	0.93	64%	52%	1.65	0.82	41	38	N/A	N/A	9	9	N/A
	R4	Office	W5 ↙	21.9	20.7	1.2	0.95	21.9	20.7	1.2	0.95	73%	63%	1.41	0.87	39	36	N/A	N/A	9	9	N/A
F01	R1	Bedroom	W1 ↙	26.6	25.2	1.4	0.95	26.6	25.2	1.4	0.95	93%	93%	0.00	1.00	48	47	N/A	N/A	15	14	N/A
	R2	Bedroom	W2 ↙	26.5	25.2	1.3	0.95	26.5	25.2	1.3	0.95	75%	63%	1.00	0.83	48	46	N/A	N/A	16	14	N/A
	R3	Bedroom	W3 ↙	26.5	25.4	1.1	0.96	26.5	25.4	1.1	0.96	93%	91%	0.16	0.97	48	47	N/A	N/A	15	14	N/A
	R4	Bedroom	W4 ↙	26.6	25.5	1.1	0.96	26.6	25.5	1.1	0.96	94%	93%	0.07	0.99	47	46	N/A	N/A	15	14	N/A
	R5	Bedroom	W5 ↙	26.6	25.7	0.9	0.97	26.6	25.7	0.9	0.97	95%	95%	0.03	1.00	50	49	N/A	N/A	15	14	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref. Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH)				Winter (%APSH)		
																Exis.	Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
	R6	Bedroom	W6 ↙	26.6	25.8	0.8	0.97	26.6	25.8	0.8	0.97	96%	96%	0.00	1.00	51	48	N/A	N/A	16	14	N/A
	R7	Bedroom	W7 ↙	26.7	26.1	0.6	0.98	26.7	26.1	0.6	0.98	96%	96%	0.00	1.00	48	47	N/A	N/A	14	14	N/A
	R8	Bedroom	W8 ↙	26.5	26.0	0.5	0.98	26.5	26.0	0.5	0.98	95%	95%	0.01	1.00	47	46	N/A	N/A	13	13	N/A
F02	R1	Bedroom	W1 ↙	30.3	29.0	N/A	N/A	30.3	29.0	N/A	N/A	87%	87%	0.01	1.00	58	57	N/A	N/A	19	18	N/A
	R2	Bedroom	W2 ↙	30.3	29.0	N/A	N/A	30.3	29.0	N/A	N/A	94%	93%	0.02	1.00	59	57	N/A	N/A	20	18	N/A
	R3	Bedroom	W3 ↙	30.4	29.3	N/A	N/A	30.4	29.3	N/A	N/A	95%	95%	0.00	1.00	59	57	N/A	N/A	20	18	N/A
	R4	Bedroom	W4 ↙	30.4	29.5	N/A	N/A	30.4	29.5	N/A	N/A	89%	89%	0.03	1.00	59	58	N/A	N/A	20	19	N/A
	R5	Bedroom	W5 ↙	30.4	29.8	N/A	N/A	30.4	29.8	N/A	N/A	97%	97%	0.00	1.00	59	59	N/A	N/A	20	20	N/A
	R6	Bedroom	W6 ↙	30.4	30.0	N/A	N/A	30.4	30.0	N/A	N/A	96%	96%	0.00	1.00	59	59	N/A	N/A	20	20	N/A
	R7	Bedroom	W7 ↙	30.3	30.0	N/A	N/A	30.3	30.0	N/A	N/A	96%	96%	0.00	1.00	58	58	N/A	N/A	20	20	N/A
	R8	Bedroom	W8 ↙	30.3	30.0	N/A	N/A	30.3	30.0	N/A	N/A	96%	96%	0.00	1.00	57	56	N/A	N/A	19	19	N/A
F03	R1	Bedroom	W1 ↙	32.1	31.7	N/A	N/A															
		Bedroom	W2 ↙	32.2	31.8	N/A	N/A	32.1	31.7	N/A	N/A	81%	81%	0.00	1.00	63	62	N/A	N/A	21	20	N/A
	R2	Bedroom	W3 ↙	32.3	32.0	N/A	N/A	32.3	32.0	N/A	N/A	83%	83%	0.01	1.00	63	63	N/A	N/A	21	21	N/A
	R3	Bedroom	W4 ↙	32.4	32.3	N/A	N/A	32.4	32.3	N/A	N/A	78%	78%	0.00	1.00	62	62	N/A	N/A	21	21	N/A
	R4	Bedroom	W5 ↙	32.6	32.5	N/A	N/A															
		Bedroom	W6 ↙	32.6	32.6	N/A	N/A	32.6	32.6	N/A	N/A	79%	79%	0.00	1.00	63	63	N/A	N/A	21	21	N/A
	R5	Bedroom	W7 ↙	30.5	30.5	N/A	N/A															
		Bedroom	W8 ↙	32.2	32.2	N/A	N/A	31.3	31.3	N/A	N/A	97%	97%	0.00	1.00	61	61	N/A	N/A	20	20	N/A
343-345 Grays Inn Road																						
F01	R1	Bedroom	W1 ↖	33.0	33.0	N/A	N/A															
		Bedroom	W2 ↖	33.2	33.2	N/A	N/A															
		Bedroom	W3 ↙	28.6	28.5	N/A	N/A	31.6	31.6	N/A	N/A	98%	98%	0.00	1.00	57	57	N/A	N/A	15	15	N/A
	R2	Bedroom	W4 ↙	27.5	27.4	N/A	N/A	27.5	27.4	N/A	N/A	86%	86%	0.00	1.00	54	54	N/A	N/A	14	14	N/A
	R3	Bedroom	W5 ↙	26.7	26.5	0.2	0.99	26.7	26.5	0.2	0.99	79%	79%	0.00	1.00	53	53	N/A	N/A	14	14	N/A
	R4	Bedroom	W6 ↙	26.2	25.9	0.3	0.99	26.2	25.9	0.3	0.99	84%	84%	0.00	1.00	53	52	N/A	N/A	15	14	N/A
	R5	Bedroom	W7 ↙	25.9	25.4	0.5	0.98															
		Bedroom	W8 ↙	25.9	25.2	0.7	0.97	25.9	25.3	0.6	0.98	90%	90%	0.02	1.00	52	51	N/A	N/A	15	14	N/A
	R6	Bedroom	W9 ↙	26.1	25.2	0.9	0.97	26.1	25.2	0.9	0.97	81%	80%	0.09	0.99	49	47	N/A	N/A	15	13	N/A
F02	R1	Bedroom	W1 ↖	34.4	34.4	N/A	N/A															
		Bedroom	W2 ↖	34.5	34.5	N/A	N/A															
		Bedroom	W3 ↙	30.7	30.6	N/A	N/A	33.2	33.2	N/A	N/A	98%	98%	0.00	1.00	61	61	N/A	N/A	18	18	N/A
	R2	Bedroom	W4 ↙	29.9	29.7	N/A	N/A	29.9	29.7	N/A	N/A	89%	89%	0.00	1.00	58	58	N/A	N/A	16	16	N/A
	R3	Bedroom	W5 ↙	29.2	29.0	N/A	N/A	29.2	29.0	N/A	N/A	83%	83%	0.00	1.00	59	59	N/A	N/A	17	17	N/A
	R4	Bedroom	W6 ↙	28.8	28.5	N/A	N/A	28.8	28.5	N/A	N/A	88%	88%	0.00	1.00	58	58	N/A	N/A	17	17	N/A
	R5	Bedroom	W7 ↙	28.6	28.2	N/A	N/A															
		Bedroom	W8 ↙	28.7	28.0	N/A	N/A	28.7	28.1	N/A	N/A	95%	95%	0.00	1.00	56	55	N/A	N/A	17	16	N/A
	R6	Bedroom	W9 ↙	28.8	28.0	N/A	N/A	28.8	28.0	N/A	N/A	83%	83%	0.01	1.00	54	51	N/A	N/A	17	14	N/A
F03	R1	Bedroom	W1 ↖	35.7	35.7	N/A	N/A															
		Bedroom	W2 ↖	35.8	35.8	N/A	N/A															
		Bedroom	W3 ↙	32.0	31.9	N/A	N/A	34.5	34.4	N/A	N/A	98%	98%	0.00	1.00	62	62	N/A	N/A	18	18	N/A
	R2	Bedroom	W4 ↙	31.6	31.4	N/A	N/A	31.6	31.4	N/A	N/A	91%	91%	0.00	1.00	61	61	N/A	N/A	18	18	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref. Orientation	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% VSC)*	Prop. *(% VSC)*	Loss *(% VSC)*	Pro./Ex. ratio	Exis. *(% rm)*	Prop. *(% rm)*	Loss *(m^2)*	Pro./Ex. ratio	Annual *(%APSH)*				Winter *(%APSH)*		
																Exis.	Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
	R3	Bedroom	W5 ↙	31.2	31.0	N/A	N/A	31.2	31.0	N/A	N/A	89%	89%	0.00	1.00	60	60	N/A	N/A	17	17	N/A
	R4	Bedroom	W6 ↙	31.1	30.8	N/A	N/A	31.1	30.8	N/A	N/A	88%	88%	0.00	1.00	60	60	N/A	N/A	17	17	N/A
	R5	Bedroom	W7 ↙	31.0	30.7	N/A	N/A															
		Bedroom	W8 ↙	31.0	30.6	N/A	N/A	31.0	30.6	N/A	N/A	98%	98%	0.00	1.00	59	59	N/A	N/A	18	18	N/A
	R6	Bedroom	W9 ↙	31.1	30.6	N/A	N/A	31.1	30.6	N/A	N/A	82%	82%	0.00	1.00	58	58	N/A	N/A	18	18	N/A
F04	R1	Bedroom	W1 ↖	36.9	36.9	N/A	N/A	36.9	36.9	N/A	N/A	39%	39%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2 ↙	33.0	32.9	N/A	N/A	33.0	32.9	N/A	N/A	78%	78%	0.00	1.00	63	63	N/A	N/A	20	20	N/A
	R3	Bedroom	W3 ↙	32.8	32.7	N/A	N/A	32.8	32.7	N/A	N/A	75%	75%	0.00	1.00	62	62	N/A	N/A	19	19	N/A
	R4	Bedroom	W4 ↙	32.8	32.7	N/A	N/A	32.8	32.7	N/A	N/A	68%	68%	0.00	1.00	61	61	N/A	N/A	18	18	N/A
	R5	Bedroom	W5 ↙	32.8	32.6	N/A	N/A	32.8	32.6	N/A	N/A	64%	64%	0.00	1.00	61	61	N/A	N/A	19	19	N/A
	R6	Bedroom	W6 ↙	32.8	32.7	N/A	N/A	32.8	32.7	N/A	N/A	73%	73%	0.00	1.00	61	61	N/A	N/A	19	19	N/A

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