

138-144 Friar Street
Reading
RG1 1EX

Daylight & Sunlight Report

PROJECT INFORMATION

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Statements and opinions in this report are expressed on behalf of Delva Patman Redler LLP.

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1.0 Introduction

- 1.1. DPR LLP (“we”) have been engaged by the Applicant to assess the potential effects of the Proposed Development at 138-144 Friar Street, Reading (“the Site”) on daylight and sunlight to neighbouring buildings and the daylight, sunlight and overshadowing provision to new dwellings and amenity area. This report has been prepared to accompany the Applicant’s planning application.
- 1.2. The Site is shown outlined in red in 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 Reading Borough Council planning jurisdiction. The site sits within the central area of Reading where higher levels of obstruction are apparent, and lower available levels of daylight and sunlight are inevitable, especially when considering the emerging developments located along Friar Street and densification of the immediate surrounding context.
- 1.4. The Site currently contains a cluster of low-level commercial properties. The proposed scheme on the QVS2 site will consist of the construction of a new residential building containing co-living dwellings. We understand that QVS1 has been constructed and therefore the new building has been included as built in the surrounding context.
- 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. We have also tested a secondary future baseline scenario included the consented 136-137 Friar Street, Reading scheme which is located directly to the west of the site. The proposal has currently not been implemented but we have included it as built in the surround context in Figure 3.

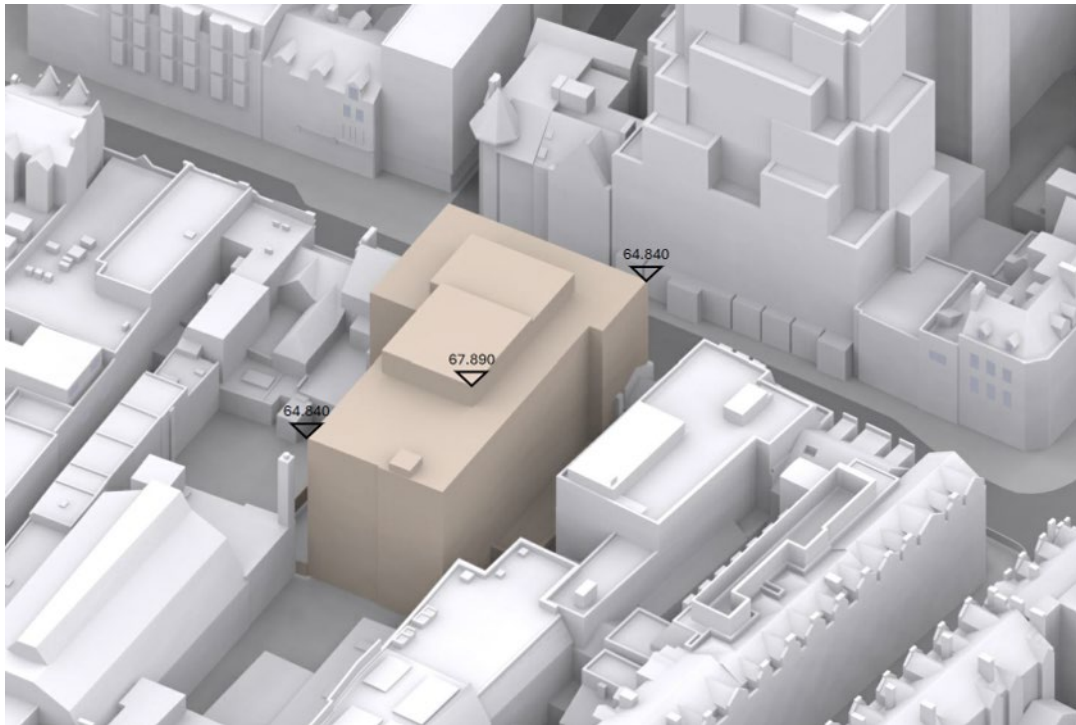


Figure 2 – Computer model of Proposed Development and surrounding context

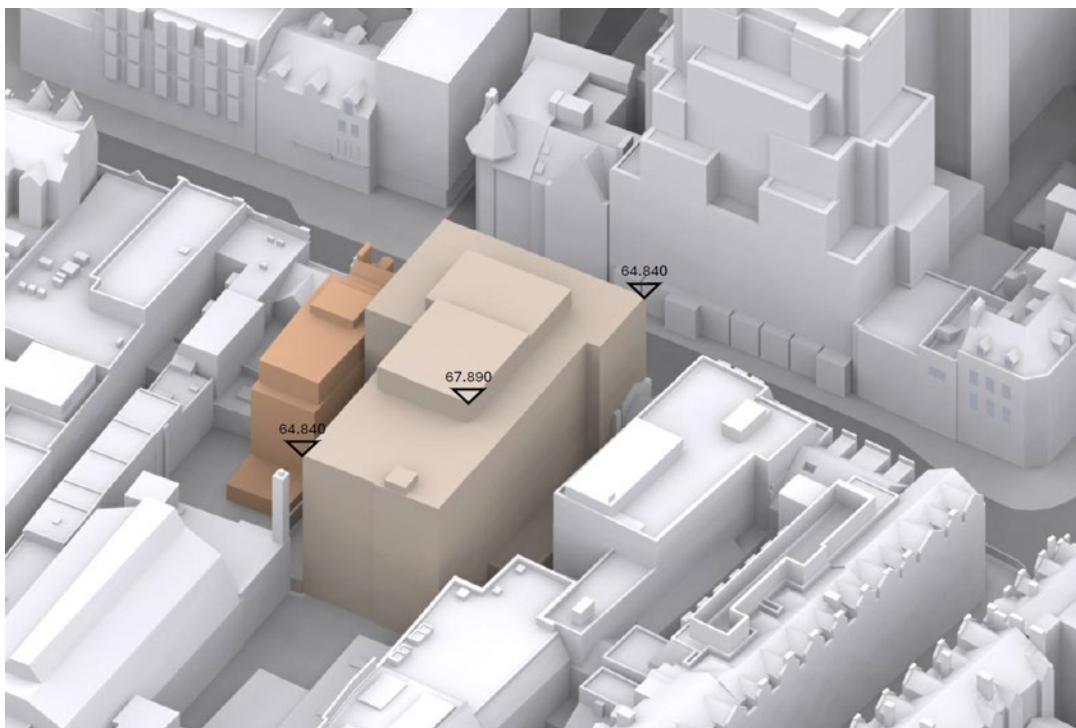


Figure 3 – Computer model of Proposed Development and future surrounding context

- 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 Planning policy and guidance

National Planning Policy and Guidance

National Planning Policy Framework (December 2024)

- 2.1. 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.
- 2.2. 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.
- 2.3. 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)

- 2.4. 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.
- 2.5. Paragraph 71 of the guidance dealing with built form states:

Proposals for tall buildings (and other buildings with a significantly larger scale or bulk than their surroundings) require special consideration. This includes their location and siting; relationship to context; impact on local character, views and sight lines; composition - how they meet the ground and the sky; and environmental impacts, such as sunlight, daylight, overshadowing and wind. These need to be resolved satisfactorily in relation to the context and local character.
- 2.6. 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)

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

2.8. 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.

2.9. 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)

2.10. 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.

2.11. The BRE guide states:

Summary

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...

Introduction

(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...

British Standard, BS EN 17037:2018, 'Daylight in buildings' (May 2019)

- 2.12. British Standard, BS EN 17037:2018, 'Daylight in buildings' provides a standard and methodology by which to assess daylight and sunlight provision in new buildings. Its general recommendations for daylight provision in a space may not be achievable for some buildings in the UK, particularly dwellings; for example, those with basement rooms or significant external obstructions, such as those in dense urban areas or in existing buildings being refurbished or converted into dwellings. The standard's National Annex therefore provides guidance on minimum daylight provision in UK dwellings.

Regional planning policy and guidance

Local planning policy

Reading Borough Council Local Plan

- 2.13. The Local Plan (adopted November 2019) contains the following policies that are relevant to daylight and sunlight.

- 2.14. Policy CC8: Safeguarding Amenity states:

Development will not cause a detrimental impact on living environment of existing residential properties or unacceptable living condition for new residential properties in terms of Access to sunlight and daylight....

Reading Borough Council Local Plan Partial Update (November 2024)

- 2.15. The Partial Local Plan Update contain the policies for how Reading will develop up to 2041. The updated plan does not contain any new policies relating to daylight and sunlight and Policy CC8 remains the same.

3.0 Acceptability of daylight/sunlight levels and effects

- 3.1. The assessment of the effects of development on daylight and sunlight amenity is a two-part process¹: 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.
- 3.2. 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.
- 3.3. Refer to Section 5.0, Flexible application of the guidelines and alternative target values for further information on the above.
- 3.4. 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.

¹ Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]

4.0 Assessment methodology and numerical guidelines

- 4.1. 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.
- 4.2. 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

- 4.3. 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).
- 4.4. 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.
- 4.5. 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.
- 4.6. 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).
- 4.7. 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.
- 4.8. For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation.
- 4.9. 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.
- 4.10. 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

- 4.11. 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.
- 4.12. 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.

- 4.13. 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.
- 4.14. 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.
- 4.15. 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.
- 4.16. 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.

Sunlight to neighbouring gardens and amenity spaces

- 4.17. Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas such as in public squares, and focal points for views, such as a group of monuments or fountains.
- 4.18. The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March – the two-hours sun-on-ground (SOG) test.
- 4.19. If, following development, the area of the garden or other amenity space that can receive two hours of direct sunlight on 21 March is reduced to both less than 50% of its total area and less than 0.80 times its former value, the loss of sunlight is likely to be noticeable and the space will tend to look more heavily overshadowed.
- 4.20. The assessment normally excludes sunlight at an altitude of 10° or less and ignores fences or walls less than 1.5 metres high, and trees and shrubs. Front gardens, driveways and hard standings for cars need not be assessed.

Where a large building is proposed which may affect a number of gardens or open spaces, it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. Mid-summer (21 June) is an optional addition date when there would be greater sunlight availability and reduced overshadowing.

Daylight to new dwellings

- 4.21. Detailed recommendations for daylight in new buildings are given in BS EN 17037, 'Daylight in Buildings' ('the British Standard') and repeated in the BRE guide. Appendix C of the BRE guide gives guidance on how to calculate the amount of daylight inside a room, which is summarised at Appendix 1 of this report.
- 4.22. Daylight provision in new rooms may be checked using either of the methods described in the BRE guide: either direct prediction of daylight illuminance levels using hourly climate data, or the use of the daylight factor, which is a ratio of unobstructed external illuminance under overcast sky

conditions. Both are measures of the overall amount of daylight in a space. We have calculated daylight provision using the illuminance method.

4.23. The amount of daylight inside a room will depend on:

- the view of sky and level of obstruction outside the window(s);
- the surface reflectances of the external environment;
- the size, position and diffuse light transmittance of the window glazing; and
- the surface reflectances of the room surfaces.

4.24. Appendix C of the BRE guide gives recommendations for typical and maximum reflectances of exterior and interior surfaces and glazing transmittance, which are repeated at Appendix 1 of this report.

Numerical guidelines

4.25. The following minimum recommendations are given for housing in the UK:

- 100 lux in bedrooms
- 150 lux in living rooms
- 200 lux in kitchens

4.26. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the annual daylight hours.

4.27. They are minimum recommended values for locations where a predominantly daylit appearance is not achievable; for example, in basements or with significant external obstructions, such as in a dense urban area or with tall trees outside, or for existing buildings being refurbished or converted into dwellings.

4.28. Non-daylit internal kitchens should be avoided wherever possible, especially if the kitchen is used as a dining area too. If the layout means that a small internal kitchen is inevitable, it should be directly linked to a well daylit room.

4.29. Where a room has a shared use, the highest target should apply. For example, in a bed-sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. However, the BRE guide advises that local authorities could use discretion here. For example, the target for a living room could be used for a combined living/kitchen/dining area (LKD) of kitchen-diner (KD) if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design. (The kitchen space would still need to be included in the assessment area.) For this reason, we have adopted an alternative target of 150 lux for the student accommodation.

Sunlight to new dwellings

4.30. In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens.

4.31. Site layout is the most important factor affecting the duration of sunlight in buildings. It can be divided into two main issues, orientation and overshadowing.

4.32. A south-facing window will, in general, receive most sunlight, while east- and west-facing windows will receive sunlight only at certain times of the day, and a north-facing elevation will only receive it on a handful of occasions (early morning and late evening in summer).

- 4.33. Sensitive layout design of flats will attempt to ensure that each individual dwelling has at least one main living room which can receive a reasonable amount of sunlight. The overall sunlighting potential of a large residential development may be initially assessed by counting how many dwellings have a window to a main living room facing south, east, or west. The aim should be to minimise the number of dwellings whose living rooms face solely north, northeast, or northwest, unless there is some compensating factor such as an appealing view to the north.
- 4.34. The overall access to sunlight of a new development can be considerably enhanced if the layout of new buildings is designed with care so that they overshadow each other as little as possible.

Numerical guidelines

- 4.35. For interiors, access to sunlight can be quantified. BS EN 17037 recommends that a space should receive a minimum of 1.5 hours of direct sunlight on a selected date between 1 February and 21 March with cloudless conditions. The BRE guide suggests that 21 March (equinox) is used. The medium and high levels of recommendation are three hours and four hours respectively.
- 4.36. The criterion apply to rooms of all orientations, although the BRE guide advises that if a room faces significantly north of due east or west it is unlikely to be met. At least one habitable room per dwelling – preferably a main living room – should meet at least the minimum criterion.

Summary

- 4.37. In general, a dwelling will appear reasonably sunlight provided:
- at least one main window wall faces within 90° of due south; and
 - a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March.
- 4.38. Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings with a main living room that meets the above recommendations.

5.0 Flexible application of the guidelines and alternative target values

- 5.1. As noted in paragraph 2.11 above, the introduction to the BRE guide states that its default numerical guidelines are not mandatory and must be interpreted flexibly because natural lighting is only one of many factors in site layout design. In certain circumstances, such as city centres or areas with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.

- 5.2. This theme is repeated at various points in the guide, as follows:

[Daylight to buildings:] 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. (Paragraph 2.2.3)

[Sunlight to buildings:] In certain situations care needs to be taken in applying these (sunlight) guidelines... The guidelines are purely advisory. Planning authorities may wish to use different criteria based on the requirements for sunlight in particular types of developments in particular areas. Sometimes a larger reduction in sunlight may be necessary if new development is to match the height and proportion of existing buildings nearby. (Paragraph 3.2.10)

- 5.3. We set out below some examples of a flexible approach to applying the BRE guidelines that are of relevance.

Reasonableness of retained values in a site's context

- 5.4. One benchmark that is commonly used in denser, inner-urban areas is to check whether retained VSC values would be in the mid-teens or greater. An example of this approach is the Whitechapel Estate Appeal.² There the Inspector noted that development that resulted in a proportion of residual VSC values in the mid-teens, with a smaller proportion in the bands below 15% VSC, have been found acceptable in major developments across London. He stated:

108. The BRE document offers guidance on generally acceptable standards of daylight and sunlight, but advises that numerical values are not to be rigidly applied and recognises the importance of the specific circumstances of each case. Inner city development is one of the examples where a different approach might be justified. This is specifically endorsed by the [Mayor of London's] Housing SPG, which calls for guidelines to be applied sensitively to higher density developments, especially in (among others) opportunity areas and accessible locations, taking into account local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time. ... I agree with the appellants that blanket application of the BRE guide optimum standards, which are best achieved in relatively low-rise well spaced layouts, is not appropriate in this instance.

109. The SPG advises that the daylight impact on adjacent properties should be assessed drawing on "broadly comparable residential typologies within the area and of a similar nature across London"...

112. The figures [from comparable typologies from a range of example sites across Central London analysed by the appellants, comprising both traditional urban streets and recently permitted areas of significant development] show that a proportion of residual Vertical Sky Component ('VSC') values in the mid-teens have been found acceptable in major developments across London. This echoes the Mayor's endorsement in the preSPG decision at Monmouth House, Islington that VSC values in the mid-teens are acceptable

² Appeal reference APP/E5900/W/17/3171437, **Whitechapel Estate**, Varden Street and Ashfield Street, London E1, London Borough of Tower Hamlets, Inspector's decision dated 21 February 2018
<https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3171437>

in an inner urban environment. They also show a smaller proportion in the bands below 15%...

113. I acknowledge that a focus on overall residual levels could risk losing sight of individual problem areas. It is accepted that light is only one factor in assessing overall levels of amenity, but I consider that the trade-off with other factors, such as access to public transport or green space, is likely to be of more relevance to an occupier of new development than to an existing neighbour whose long-enjoyed living conditions would be adversely affected by new buildings. However, I also consider that Inner London is an area where there should generally be a high expectation of development taking place. This is particularly so in the case of the appeal site, where the Whitechapel Vision Masterplan and the City Fringe Opportunity Area Planning Framework have flagged the desirability of high density development. Existing residents would in my view be prepared for change and would not necessarily expect existing standards of daylight and sunlight to persist after development.

- 5.5. Whilst use of the mid-teen VSC benchmark may be appropriate in denser and more built-up areas, a higher benchmark may be more appropriate in more suburban areas.³
- 5.6. Ultimately, it is for the planning authority to judge whether affected properties would be left with acceptable levels of daylight and sunlight in their neighbourhood context, having regard to all relevant planning policies and guidance and balanced against the merits of the Proposed Development.

Layout and use of affected property

- 5.7. The layout and use of the affected property was considered carefully by the Inspector in her report leading to the Secretary of State's call-in decision to grant planning permission for the redevelopment of the former London Television Centre.⁴ The Secretary of State agreed with the Inspector's conclusions that, despite numerous high-magnitude daylight impacts (greater than 40% reduction), the residents of an affected social housing block would not experience unacceptable levels of loss of daylight and the impact of the proposal would not be unreasonable.
- 5.8. In reaching that conclusion, the Inspector noted that the design of the social housing block addressed its dense urban environment, with many of the dwellings being dual aspect and having balconies and rooms overlooking a central private landscaped green space. Living/kitchen/dining rooms (LKDs) facing the development were well proportioned, had relatively large windows, and took borrowed light from the south-facing entrance halls via internal glazed doors. In other flats, the LKDs faced onto the central garden and their light would be unaffected.
- 5.9. The Inspector regarded the use of some bedrooms for studies or homeworking as a matter of personal choice for the occupiers, but mainly they were used for sleeping. Where desks were evident during her site visit, they were positioned close to a window to maximise the use of natural light and outlook.
- 5.10. The Inspector also noted there is no distinction made between social or private housing in planning terms to the application of the BRE Guide or planning policy.
- 5.11. The dual-aspect nature of an affected social housing block, and the small size of the affected kitchens (which disqualified them from habitable room status), were factors in the Inspector's decision to grant permission in the Graphite Square Appeal.⁵

³ Appeal reference APP/A5840/W/19/3225548, **Burgess Business Park**, Parkhouse Street, London SE5, London Borough of Southwark, Secretary of State's decision dated 29 April 2020, paragraphs IR247 and IR248
<https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3225548>

⁴ Appeal reference APP/N5660/V/22/3306162, **London Television Centre**, 60-72 Upper Ground, London SE1, London Borough of Southwark, Secretary of State's decision dated February 2024
<https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3306162>

⁵ Appeal reference APP/N5660/W/18/3211223 and APP/N5660/W/19/ 3225761, **Graphite Square**, London SE11 in the London Borough of Lambeth dated September 2019

Proximity of neighbouring building to site boundary

- 5.12. Another important issue is whether the existing building is itself a good neighbour, standing a reasonable distance from the boundary and taking no more than its fair share of light. Appendix F of the BRE guide gives further guidance. This involves setting alternative target values generated from the layout dimensions of the existing neighbouring building and its position relative to the boundary. To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for the neighbouring windows could be set to those for a ‘mirror-image’ building of the same height and size, an equal distance away on the other side of the boundary.
- 5.13. This is an acknowledgement that the first-built scheme of a local cluster could otherwise prevent the full potential of adjacent sites from being realised. In such cases, a greater reduction in daylight and sunlight may be unavoidable if one site is not to be unfairly prejudiced by how another has been developed.
- 5.14. In the Appeal at Enterprise House, 21 Buckle Street, London E1, the Inspector interpreted this as applying to buildings built at the back edge of pavement and whose windows were therefore “effectively on the site boundary”.⁶ The Inspector’s decision stated:

19. ... The BRE Guide recognises that windows that are unusually close to the boundary take more than their fair share of light. This is an acknowledgement that the first built scheme of a local cluster could otherwise prevent the full potential of adjacent sites from being realised.

20. In such inequitable circumstances the Rainbird judgement found that ‘If an existing building has been so designed that, whether by the inclusion of balconies or overhangs, it makes relatively larger reductions in daylight unavoidable even if there is a modest new obstruction opposite, that design could be seen as taking for the existing building ‘more than their fair share of light’ in the same way the BRE Guide regards a building that has windows that ‘are unusually close to the site boundary’ as doing; in each case, a greater reduction in daylight and sunlight may be unavoidable if one site is not to be unfairly prejudiced by how another has been developed.’

21. In such a situation the BRE Guide [Appendix F para F5] advises that ‘To ensure that new development matches the height and proportion of existing buildings, the VSC and APSH targets for these windows could be set to those for a ‘mirror-image’ building of the same height and size, an equal distance away on the other side of the boundary.

22. The appellants carried out an assessment of the impact on all affected windows through a range of criteria, including a mirror image exercise with the 28 storey Altitude/Goldpence Apartments building...

23. The mirror-image exercise, although not quite to the letter of the guidelines, gives a clear indication that overall, in this more equitable arrangement, many more flats in the Altitude/Goldpence Apartments building would be affected and many more in the upper storeys would have a material deterioration in daylight and sunlight levels similar to those in the lower storeys. Such an impact would be considered acceptable, in terms of a fair share of light. In my view this provides a reasonable justification for a greater reduction in daylight and sunlight levels in the surrounding buildings as a result of this proposal than might otherwise be considered appropriate. By strictly applying the BRE guidelines, development of the site would be unfairly prejudiced.

Extant planning permission

<https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3211223>

⁶ Appeal reference APP/E5900/W/17/3191757, **Enterprise House**, 21 Buckle Street, London E1 8NN, London Borough of Tower Hamlets, decision dated 17 December 2018

<https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3191757>

- 5.15. Where there is an extant planning consent for the application site and the developer wishes to change the design, the BRE guide states:

In assessing the loss of light to existing windows nearby, a local authority may allow the vertical sky component (VSC) and annual probable sunlight hours (APSH) for the permitted scheme to be used as alternative benchmarks. However, since the permitted scheme only exists on paper, it would be inappropriate for it to be treated in the same way as an existing building, and for the developer to set 0.8 times the values for the permitted scheme as benchmarks.

Self-obstructing balconies, wings and other projections

- 5.16. Balconies and projecting wings to existing neighbouring buildings obstruct the available daylight and sunlight and can therefore cause relative reductions in light to be amplified. The BRE guide states:

2.2.13 Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large relative impact on the VSC, and on the area receiving direct skylight. One way to demonstrate this would be to carry out an additional calculation of the VSC and area receiving direct skylight, for both the existing and proposed situations, without the balcony in place. For example, if the proposed VSC with the balcony was under 0.80 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of light.

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

3.2.11 Balconies and overhangs above an existing window tend to block sunlight, especially in summer above south-facing windows. Even a modest obstruction opposite may result in a large relative impact on the sunlight received. One way to demonstrate this would be to carry out an additional calculation of the APSH, for both the existing and proposed situations, without the balcony in place. For example, if the proposed APSH with the balcony was under 0.80 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.80, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of sunlight.

- 5.17. Clearly, balconies, wings and other projections from buildings can be a factor in the relative light loss to such buildings. In such instances it can be helpful to run a supplementary assessment with the projections removed, in order to understand the degree to which they contribute to the relative light loss.

Deep, side-lit rooms

- 5.18. Another example where the standard numerical guidelines need to be applied sensibly is in relation to deep, side-lit rooms. The BRE guide states:

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

Co-living and purpose-built co-living developments

5.19. In co-living developments, occupiers will often have access to other communal living spaces. Where these spaces are well designed and provide good amenity, shortfalls in daylight and sunlight levels individual flats should be considered in that context.

5.20. For example, in one Appeal decision the Inspector stated:⁷

In addition, the proposal is for a Build to Rent product with significant communal areas. The external communal areas would all meet the BRE guidance. Any deficiencies to individual flats or habitable rooms must be considered in this context because the living experience for future residents would not be confined to their individual dwellings. Therefore, whilst there would be a technical conflict with the BRE standards, the proposed flats would provide acceptable living conditions for future occupiers in respect of sunlight and daylight.

⁷ Appeal Ref. APP/Y19456/W/23/3317838 - 50 Clarendon Road, Watford WD17 1TX

6.0 Scope of the assessment

- 6.1. 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).
- 6.2. Consequently, our assessment has been scoped to include nearby residential accommodation, as is common practice for studies for planning applications.
- 6.3. 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.
- 6.4. 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.
- 6.5. We have tested the internal daylight and sunlight levels to all proposed habitable rooms within QVS2.

7.0 Information used in our technical study

- 7.1. 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.
- 7.2. We compiled our 3D computer model from the following information:
 - 7.2.1. 3D computer model of the existing buildings on the Site and the contextual massing produced from photogrammetry (aerial photography) supplied by ZMapping, subsequently enhanced by us with the more detailed information listed below
 - 7.2.2. Floor plans for neighbouring buildings, where available
 - 7.2.3. Proposed Development: 3D model supplied by Falconer Chester Hall Architects on 23 July 2026 (file name: E17-AR-2026-07-23) and accompanying 2D drawings (file name: P21109-FCH-XX-00-DR-A-1300-1305 and 1400-1404), and 20.07.2022 for QVS1 proposal (file name: 220719-massing model 03.skp)
- 7.3. Our 3D computer model is illustrated in our plan and 3D view drawings at Appendix 2.
- 7.4. 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.

- 7.5. Our research yielded the information listed in Table 1 below. The plan ref. refers to the numbering on the location plan at Appendix 2.

Table 1 - Information on internal layouts of neighbouring buildings

Plan ref.	Neighbouring building / property	Information used
1	32 Princess Victoria Street	Planning drawing from planning portal
2	20-22 Friar Street & 1 Station Road	Planning drawing from planning portal
3	136-137 Friar Street	Planning drawing from planning portal

- 7.6. 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.
- 7.7. For the daylight illuminance assessment, we used the window and room parameters stated in Table 2.

Table 2 – Window and room parameters used in daylight illuminance calculations

Parameter	Value – Neighbouring Buildings
Maintenance factor (dirt on glass)	0.92 for vertical windows with normal exposure in residential developments in urban locations with good maintenance
Diffuse light transmittance of glazing	0.8 for single glazing, 0.68 for double glazing
Frame and glazing bar factor	0.75 based on measuring a sample of windows
Internal surface reflectance	Reflectances from the guidelines: 0.8 for white ceilings 0.8 for white walls 0.4 for light wood floors
External surface reflectance	0.2 for neighbouring external surfaces 0.2-0.4 for the proposed scheme depending on material types

Limitations and assumptions

- 7.8. 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.
- 7.9. 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.
- 7.10. We have used proven and trusted specialist computer software (Waldram Tools for AutoCAD®) to run the calculations recommended in the BRE guide.
- 7.11. 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.

8.0 Effects on daylight and sunlight to neighbouring buildings

- 8.1. We assessed the daylight and sunlight levels to the neighbouring buildings shown in our plan and 3D view drawing no. LOC-NDS-001 at Appendix 2. The relevant windows are shown on the window maps at Appendix 2. The existing baseline condition and the proposed scheme is shown on drawing S06-A01-EXI-PR-001.
- 8.2. In total, 18 windows serving 14 rooms in 5 buildings were assessed for daylight and 9 rooms in 3 buildings were assessed for sunlight. All other rooms are either located too far away to experience an alteration in sunlight or predominately north facing.
- 8.3. Detailed daylight and sunlight results tables are attached at Appendix 3.
- 8.4. 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). Any potential impacts outside the BRE guidelines are identified in red font.

Daylight to neighbouring buildings

- 8.5. The results of the VSC and NSL analyses of the neighbouring buildings are summarised in Table 3 and Table 4 below.

Table 3 – 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.	%
32 Friar Street	3	3	100%	-	-	-	-	-	-
23 Friar Street	1	1	100%	-	-	-	-	-	-
20-22 Friar Street & 1 Station Road	9	9	100%	-	-	-	-	-	-
46 Broad Street	1	1	100%	-	-	-	-	-	-
8-9 Union Street	4	4	100%	-	-	-	-	-	-
Totals:	18	18	100%	0	0%	0	0%	0	0%

Table 4 - 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.	%
32 Friar Street	2	2	100%	-	-	-	-	-	-
23 Friar Street	1	1	100%	-	-	-	-	-	-
20-22 Friar Street & 1 Station Road	6	6	100%	-	-	-	-	-	-
46 Broad Street	1	1	100%	-	-	-	-	-	-
8-9 Union Street	4	4	100%	-	-	-	-	-	-
Totals:	14	14	100%	0	0%	0	0%	0	0%

- 8.6. In the Proposed Development condition, the daylight impacts would be inside the BRE guidelines to all 18 windows (100%) for VSC and to all 14 rooms (100%) for NSL.
- 8.7. Overall, the daylight results indicate that the proposed scheme will fully satisfy the BRE guidelines and only have a negligible effect on the daylight levels to the neighbouring residential properties.

Sunlight to neighbouring buildings

8.8. The results of the annual and winter sunlight analyses are summarised in Table 5 below.

Table 5 - Summary of APSH impacts to neighbouring rooms

Property address	No. of rooms tested	Rooms inside APSH annual guidelines		Rooms outside APSH annual 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.	%
32 Friar Street	2	2	100%	-	-	-	-	-	-
23 Friar Street	1	1	100%	-	-	-	-	-	-
20-22 Friar Street & 1 Station Road	6	6	100%	-	-	-	-	-	-
46 Broad Street	-	-	-	-	-	-	-	-	-
8-9 Union Street	-	-	-	-	-	-	-	-	-
Totals:	9	9	100%	0	0%	0	0%	0	0%

8.9. In the Proposed Development condition, the sunlight impacts would be fully inside the BRE guidelines (annual and winter sunlight) to all (100%) of windows tested.

8.10. Overall, the sunlight results indicate that all neighbouring properties will fully satisfy the BRE guidelines in sunlight terms and only have a negligible effect on the sunlight levels to the neighbouring residential properties.

9.0 Internal daylight and sunlight to proposed dwellings

- 9.1. We assessed 149 habitable rooms within the proposed development.
- 9.2. The room uses and reference numbers of the rooms that are included in our assessment are shown on the room location plans at Appendix 4.
- 9.3. The daylight and sunlight assessment results are tabulated at Appendix 4. Coloured font has been used in the table to identify results that would be below the numerical guidelines, as follows:
- 9.4. To recap, the numerical guidelines are:
 - 9.4.1. Daylight: 100 lux in bedrooms, 150 lux in living rooms, or 200 lux in kitchens or multi-purpose rooms containing a kitchen, e.g., LKDs. (Note: These are the median illuminances to be exceeded over at least 50% of the assessment points in the room for at least half of the annual daylight hours.)
 - 9.4.2. Sunlight: At least 1.5 hours of sunlight on 21 March to at least one habitable room per dwelling, preferably a main living room.

Daylight to new dwellings

- 9.5. The level of adherence to the BRE daylight guidelines is summarised in [Table 7](#) below.

Table 7 – Daylight illuminance summary table

Building	No. of rooms tested	Daylight illuminance		
		Meeting guideline		Below guideline
		No.	%	
Proposed	149	109	73%	40
Totals:	149	109	73%	40
				27%

- 9.6. Of the 149 rooms tested, 109 (73%) satisfy the BRE guidelines, and a further 17 (11%) are within 10% of the recommended levels.
- 9.7. It is inevitable in a dense town centre location that some dwellings on the lower floors will fall below the BRE recommendations, however, we are of the opinion that the scheme provides acceptable living standards, which are commensurate with other recently consented residential developments in Friar Street.
- 9.8. Furthermore, the scheme is a co-living development and following a recent appeal decision for this type of scheme, the Inspector concluded that the future occupiers are not to be confined to their individual dwellings and have the opportunity to use communal areas. Generally, the communal areas within the scheme have been designed to ensure good levels of daylight are achieved.

Sunlight to new dwellings

9.9. All rooms in our assessment have been assessed for sunlight regardless of orientation or room use.

9.10. The level of adherence to the BRE sunlight guidelines is summarised in Table 8 below.

Table 8 – Sunlight exposure summary table – rooms

Building	No. of rooms tested	Sunlight exposure (all rooms)		Below guideline
		Meeting guideline		
		No.	%	
Proposed	149	81	54%	68
Totals:	149	81		68
		54%		46%

9.11. Of the 149 rooms tested, 81 (54%) would satisfy the sunlight guideline (1.5 hours on 21 March). The guidelines state that all rooms regardless of orientation should receive at least 1.5 hours of direct sunlight in March. It is common for co-living schemes to have a lower level of adherence to the BRE recommendations. This is because the BRE guidelines for sunlight are more appropriate for new proposed residential dwellings rather than co-living accommodation as to the meet the guidelines only one room per dwelling needs to comply. Whereas co-living accommodation is tested on a room by room basis and some rooms will inevitably face predominantly north, east or west.

9.12. Overall, the sunlight exposure results indicate that all dwellings will benefit from acceptable levels of sunlight in the post development condition.

Sunlight results to new amenity spaces

9.13. The results of the two-hour sun-on-ground analysis of the new amenity spaces within the proposed schemes are shown in Appendix 5.

9.14. In summary, the proposed amenity space will satisfy the BRE guidelines for sun on ground.

10.0 Future Baseline Condition Assessment

- 10.1. We have assessed the internal daylight and sunlight levels to all proposed habitable rooms with the consented scheme at 136-137 Friar Street including in the surrounding context to present the potential future baseline condition. The detailed daylight, sunlight and overshadowing results can be found in Appendix 6. 136-137 Friar Street does not have any windows directly facing the development site, and therefore a neighbouring assessment in the future baseline condition has not been undertaken.

Daylight to new dwellings – Future Baseline scenario

- 10.2. The level of adherence to the BRE daylight guidelines is summarised in [Table 9](#) below.

Table 9 – Daylight illuminance summary table

Building	No. of rooms tested	Daylight illuminance		Below guideline
		Meeting guideline		
		No.	%	
Proposed	149	98	66%	51
Totals:	149	98		51
		66%		34%

- 10.3. Of the 149 rooms assessed, 98 (66%) would satisfy the BRE guidelines, with 18 (12%) achieving daylight levels which are within 10% of BRE recommendations.
- 10.4. There is a minor reduction when 136-137 Friar Street is included as-built in the surrounding context. However, the proposed daylight results indicate that the scheme will continue to provide a level of daylight that is commensurate with other nearby residential developments.

Sunlight to new dwellings – Future Baseline scenario

- 10.5. The level of adherence to the BRE sunlight guidelines is summarised in [Table 10](#) below.

Table 10 – Sunlight exposure summary table – rooms

Building	Sunlight exposure (all rooms)			
	No. of rooms tested	Meeting guideline		Below guideline
		No.	%	
Proposed	149	76	51%	73
Totals:	149	76		73
		51%		49%

- 10.6. Of the 149 rooms tested, 76 (51%) satisfy the BRE guidelines. would satisfy the sunlight guideline (1.5 hours on 21 March). The guidelines state that all rooms regardless of orientation should receive at least 1.5 hours of direct sunlight in March.
- 10.7. When compared to the existing baseline condition reported in Section 9.0, 5 additional rooms fall below the suggest BRE guidelines. Overall, the scheme still provides a level of adherence to the BRE guidelines which is commensurate with other recently consented schemes in the immediate surrounding area.

Sunlight results to new amenity spaces

- 10.8. The results of the two-hour sun-on-ground analysis of the new amenity spaces within the proposed schemes are shown in Appendix 6.
- 10.9. In summary, 46% of the proposed amenity space will receive at least 2 hours of direct sunlight on 21 March in the future baseline scenario. This indicates that good levels of direct sunlight will be available to the proposed amenity space throughout the spring and summer months.

11.0 Conclusion

- 11.1. The site currently contains a cluster of low-level commercial buildings located to the south of Friar Street. The proposed scheme will consist of constructing a residential co-living development on the part of the site known as QVS2.
- 11.2. We assessed the potential effects of the Proposed Development on daylight and sunlight to surrounding residential properties and the daylight and sunlight provision to all proposed dwellings, as well as overshadowing to the proposed amenity area.
- 11.3. Two scenarios have been tested, the first considers the current surrounding context assuming QVS1 as-built. The second includes the consented 136-137 Friar Street scheme in the surrounding context representing the potential future baseline condition.
- 11.4. The daylight, sunlight and overshadowing assessment to neighbouring residential properties indicate that all neighbouring windows/rooms and amenity areas will satisfy the BRE guidelines. Therefore, the proposed scheme is only expected to have a negligible effect on the neighbouring residential properties.
- 11.5. The internal daylight results indicate that 73% of rooms in the development will satisfy the BRE recommendations. This reduces to 66% in the future baseline condition.
- 11.6. Turning to sunlight, 54% of the rooms tested will fully satisfy the BRE guidelines, reducing marginally to 51% in the future baseline condition. This is considered an acceptable level of adherence for co-living dwellings.
- 11.7. The overshadowing results to the proposed amenity area indicate that the scheme will fully satisfy the BRE guidelines, providing good levels of direct sunlight in both the existing and future baseline conditions.
- 11.8. Overall, the results demonstrate that the proposed scheme is expected to provide future occupiers with sufficient levels of natural light that is commensurate with other residential led schemes in central Reading.
- 11.9. The advice in the BRE guide is not mandatory, and its numerical guidelines should be interpreted flexibly. As noted in the NPPF, greater flexibility should be afforded when applying the guidelines to the Site because it is in an urban location.
- 11.10. The BRE guide has been developed with lower density suburban situations in mind and acknowledge that the numerical guidelines should therefore be operated more flexibly in more urban locations. The daylight and sunlight results demonstrate generally the habitable rooms within the scheme will benefit from levels of natural light that are commensurate with other permanent residential led schemes in the immediate surrounding area.
- 11.11. 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 130 of the National Planning Policy Framework and Policy CC8 of the Council's local plan.

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.
8. A third daylight test in the BRE guide is daylight illuminance, which assesses the overall level of daylight inside a room. It is a detailed calculation that takes account of window and room parameters, including the net glazed area of each window (after discounting frames and glazing bars), the diffuse light transmittance of the glazing, the total surface area of the room and the reflectance of those surfaces, the reflectance of the exterior surfaces, plus the amount of sky visible at each of the windows. It is therefore primarily intended for assessing daylight within proposed buildings, where such parameters can be readily established. It may also be used to assess neighbouring consented development that is not yet built and could be affected by a proposed development.
9. Using the supplementary daylight illuminance test for existing neighbouring buildings can potentially be a useful supplementary test to aid a more rounded and balanced judgement on the acceptability of VSC and NSL effects, as the post-development retained daylight illuminance values may be checked against the minimum recommendations for new dwellings. These are 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the annual daylight hours.

Sunlight to neighbouring buildings

10. 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].

11. 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.

12. The assessment calculates the percentage of APSH over the whole year (annual sunlight) and between 21 September and 21 March (winter sunlight).
13. 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.
14. 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.

Sunlight to neighbouring gardens and amenity spaces

15. Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.

16. The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March - the 'two-hours sun-on-ground' (**SOG**) test.
17. It is recommended that at least half of the area of a garden or amenity space should be able to receive at least two hours of sunlight on 21 March. If such a space is already heavily obstructed, then any further loss of sunlight should be kept to a minimum. In this poorly sunlit case, if, following development, the area which can receive two hours of direct sunlight on 21 March is reduced to less than 0.80 times its former size, this loss of sunlight is likely to be noticeable. In such cases the garden or amenity area will tend to look more heavily overshadowed.
18. Sunlight at an altitude of 10° or less is ignored, because it is likely to be blocked by planting, and fences or walls less than 1.5 metres high can also be ignored. Front gardens, driveways and hard standing for cars are usually omitted. Normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building.
19. Where a large building is proposed which may affect a number of gardens or open spaces, the guide advises it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. Mid-summer (21 June) is an optional addition date when there would be greater sunlight availability and reduced overshadowing.

Glossary of terms

20. 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.
Daylight illuminance	Illuminance from daylight that should be achieved for at least half of annual daylight hours across half of the reference plane in a habitable room in a dwelling.
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.

Term	Meaning
	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: 32 Friar Street
Dwg No: 22262-LOC-001
- 2: 23 Friar Street
Dwg No: 22262-LOC-001
- 3: 20-22 Friar Street & 1 Station
Road
Dwg No: 22262-LOC-001
- 4: 46 Broad Street
Dwg No: 22262-LOC-002
- 5: 8-9 Union Street
Dwg No: 22262-LOC-002

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

- KEY:
- Existing
 - Residential
Uses
 - All Other
Uses

SOURCE DATA:
Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

NOTES:
All neighbouring properties
considered for analysis

Rev	Description	Drawn	Date

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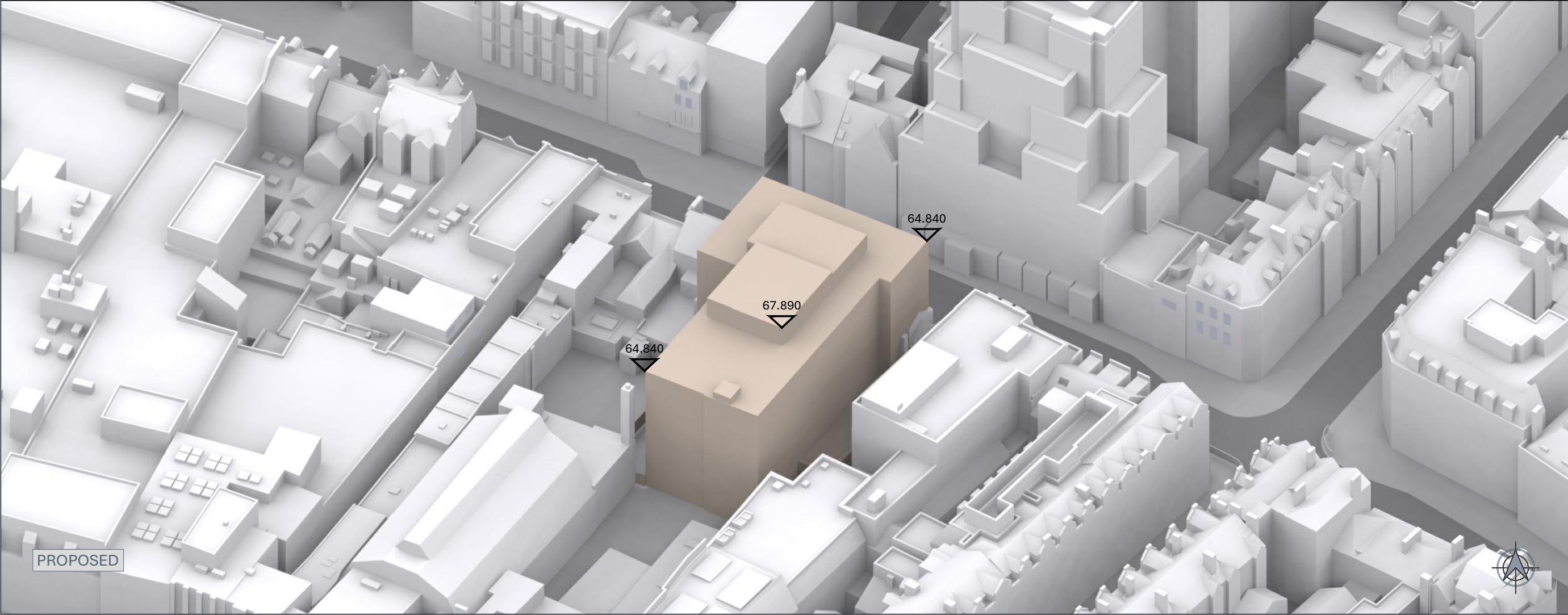
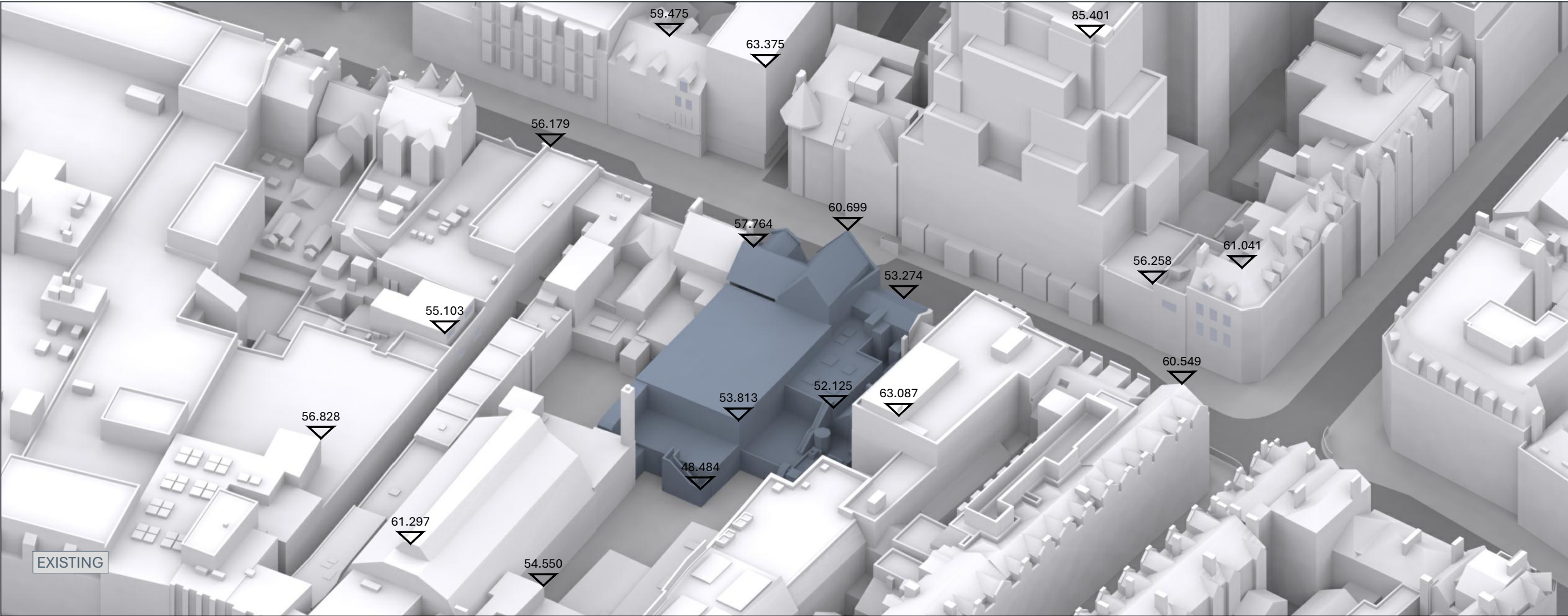
info@dpr.uk.com

TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:
LOCATION PLAN
Daylight and Sunlight

DRAWN: VK	JOB NBR:
SCALE: 1:500@A3	22262
DATE: 31/07/2026	
DWG NO:	REV:
S00-A00-LOC-NDS-001	





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing

Proposed

Cutback Envelope

Consented

Cumulative

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

All heights given in m AOD

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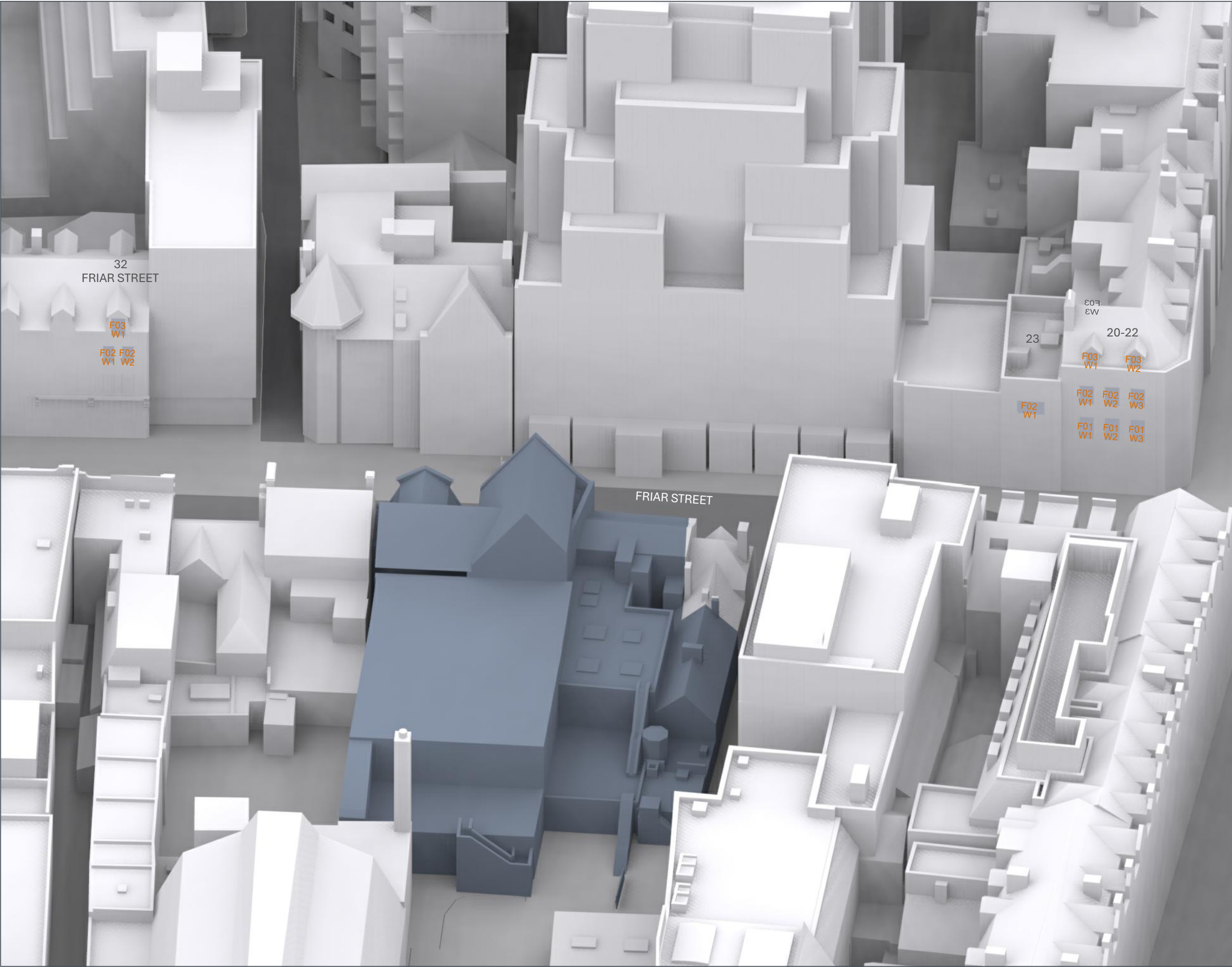
TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

EXISTING & PROPOSED SCENARIO
3D View

DRAWN: VK	JOB NBR:
SCALE: NTS	22262
DATE: 31/07/2026	
DWG NO:	REV:
S06-A01-EXI-PRO-001	



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

W1Windows tested
Daylight only

W1Windows tested
Daylight & Sunlight

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

NOTES:

Rev	Description	Drawn	Date

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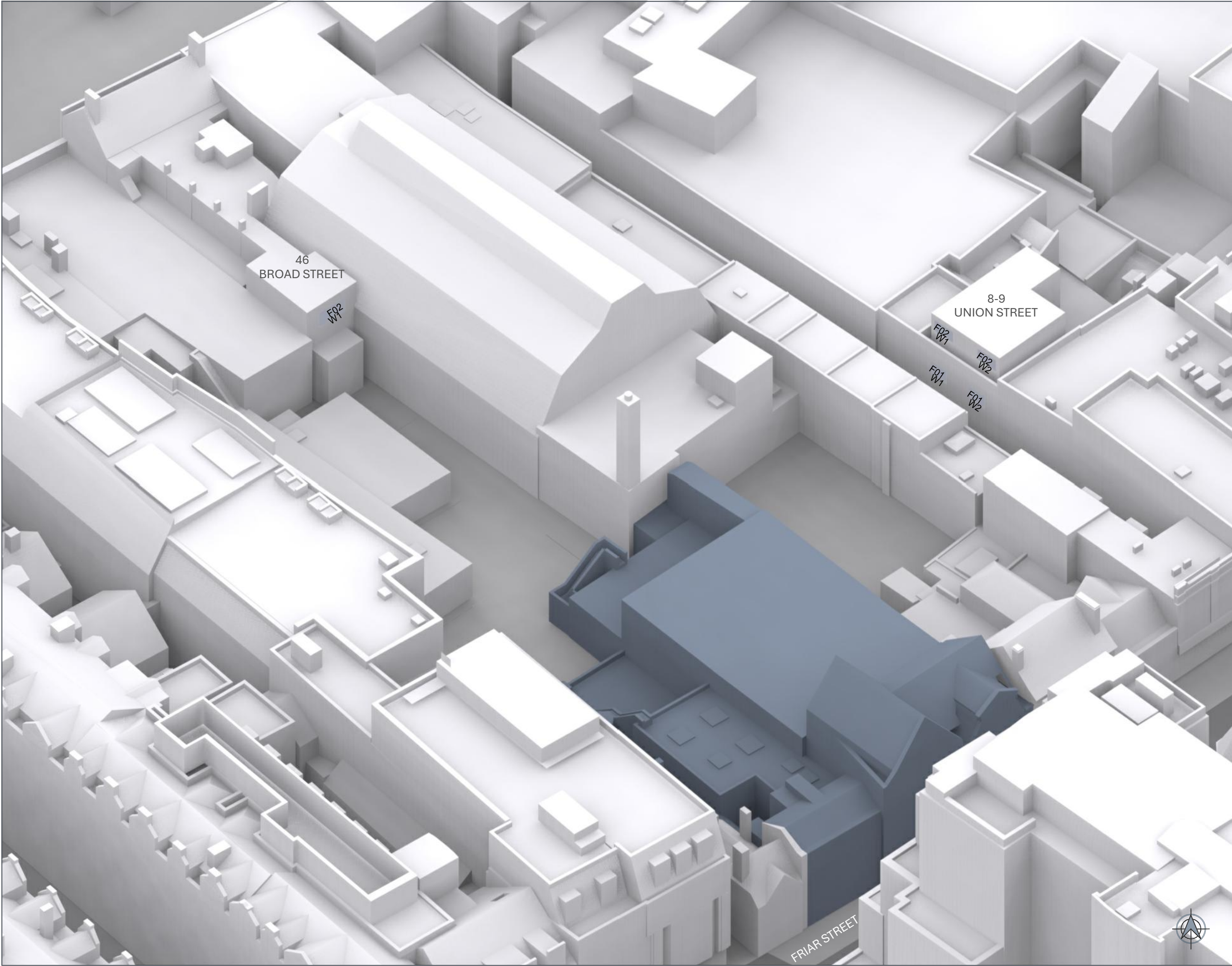
TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

LOCATION PLAN
Daylight and Sunlight

DRAWN: VK	JOB NBR: 22262
SCALE: NTS	
DATE: 31/07/2026	
DWG NO: S00-A00-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 and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

NOTES:

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

LOCATION PLAN
Daylight and Sunlight

DRAWN: VK	JOB NBR:
SCALE: NTS	22262
DATE: 31/07/2026	
DWG NO:	REV:
S00-A00-LOC-002	

Appendix 3

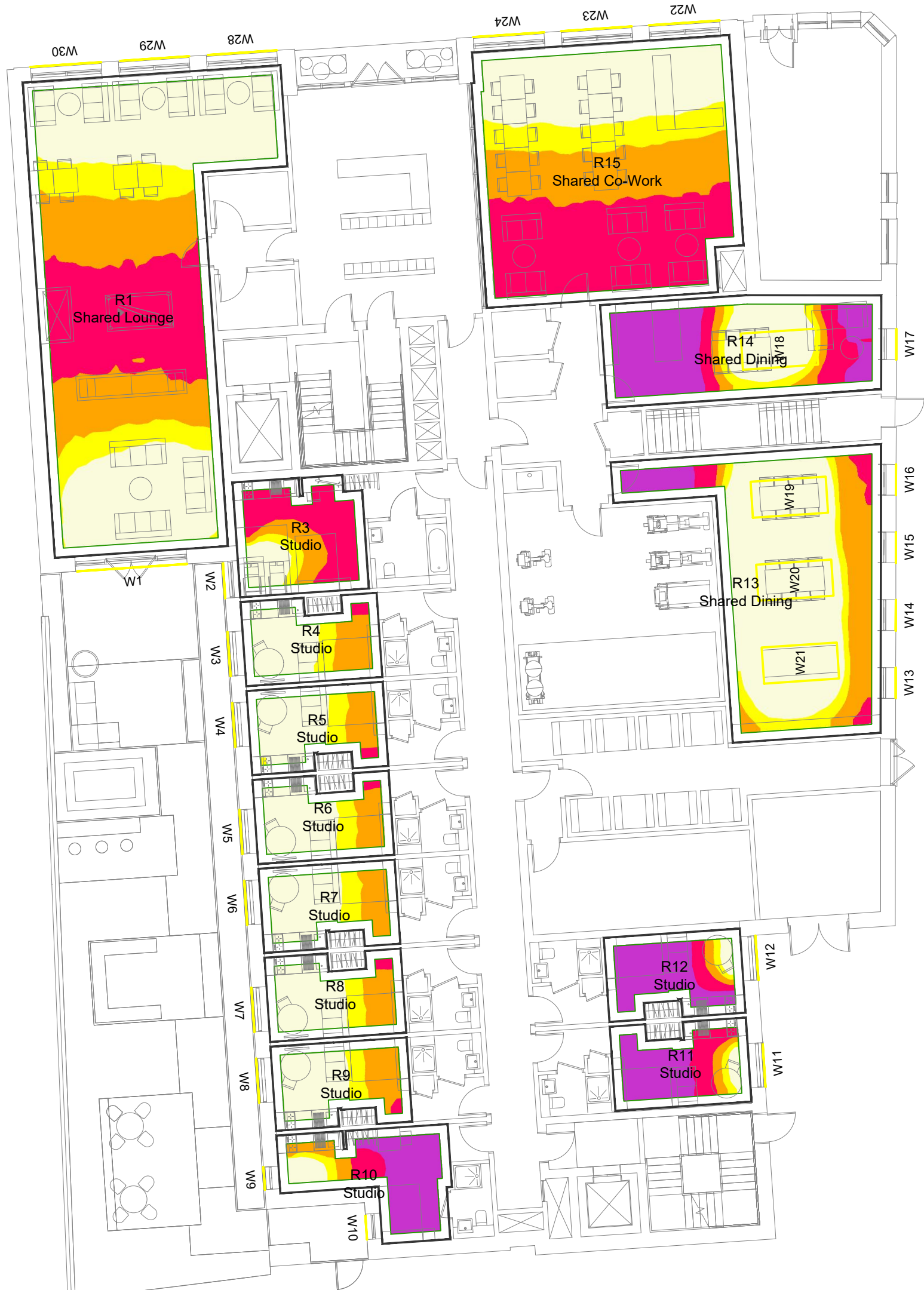
Daylight and sunlight results for neighbouring buildings



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	Exis.	Annual (%APSH)			Winter (%APSH)		
																		Prop.	Loss	Pro./Ex.	Exis.	Prop.	Pro./Ex.
Note: <i>Dark grey</i> = Existing; <i>Brown</i> = Proposed; <i>Red</i> = outside BRE guidelines; <i>Blue</i> = gain in light																							
32 Friar Street																							
F02	R1	Living Room	W1	↓	35.4	34.0	N/A	N/A															
		Living Room	W2	↓	35.4	34.0	N/A	N/A	35.4	34.0	N/A	N/A	98%	98%	0.00	1.00	83	82	N/A	N/A	26	25	N/A
F03	R1	Bedroom	W1	↓	37.4	36.0	N/A	N/A	37.4	36.0	N/A	N/A	96%	96%	0.00	1.00	85	83	N/A	N/A	28	26	N/A
23 Friar Street																							
F02	R1	Unknown-Resi	W1	↓	31.0	30.1	N/A	N/A	31.0	30.1	N/A	N/A	97%	97%	0.00	1.00	79	78	N/A	N/A	22	21	N/A
20-22 Friar Street & 1 Station Road																							
F01	R1	LK	W1	↓	28.7	28.1	N/A	N/A															
		LK	W2	↓	28.8	28.4	N/A	N/A	28.7	28.2	N/A	N/A	99%	99%	0.00	1.00	75	73	N/A	N/A	18	16	N/A
	R2	Bedroom	W3	↓	29.0	28.6	N/A	N/A	29.0	28.6	N/A	N/A	95%	95%	0.00	1.00	74	73	N/A	N/A	17	16	N/A
F02	R1	LK	W1	↓	32.9	32.4	N/A	N/A															
		LK	W2	↓	33.1	32.6	N/A	N/A	33.0	32.5	N/A	N/A	99%	99%	0.00	1.00	84	83	N/A	N/A	27	26	N/A
	R2	Bedroom	W3	↓	33.1	32.7	N/A	N/A	33.1	32.7	N/A	N/A	95%	95%	0.00	1.00	83	82	N/A	N/A	26	25	N/A
F03	R1	LK	W1	↓	34.8	34.2	N/A	N/A															
		LK	W3	↑	22.1	22.1	0.0	1.00	28.0	27.7	N/A	N/A	87%	87%	0.02	1.00	84	83	N/A	N/A	29	28	N/A
	R2	Bedroom	W2	↓	34.9	34.4	N/A	N/A	34.9	34.4	N/A	N/A	89%	89%	0.00	1.00	84	83	N/A	N/A	29	28	N/A
46 Broad Street																							
F02	R1	LKD	W1	↑	28.0	27.0	N/A	N/A	28.0	27.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
8-9 Union Street																							
F01	R1	LKD	W1	→	21.9	21.9	0.0	1.00	21.9	21.9	0.0	1.00	56%	56%	0.06	0.99	North	North	N/A	N/A	North	North	N/A
		Bedroom	W2	→	22.2	22.0	0.2	0.99	22.2	22.0	0.2	0.99	81%	75%	0.63	0.92	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	→	33.8	30.4	N/A	N/A	33.8	30.4	N/A	N/A	99%	97%	0.21	0.98	North	North	N/A	N/A	North	North	N/A
		Bedroom	W2	→	33.9	30.0	N/A	N/A	33.9	30.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

Appendix 4

Internal daylight and sunlight results



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:
Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:
Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-...dwg

NOTES:
Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:
DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO: S06-A01-IDS-001	





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-.....dwg

NOTES:

Illuminance level calculated in accordance with the BRE guide 2022:
"A space is considered to provide adequate daylight if a target illuminance level is achieved across a 50% of the space for at least half of the daylight hours (4,380) in the year."
SDA presents percentage of area achieves the target illuminance (lux) for at least half of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A01-IDS-001 (1)





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

- ≥ 200
- ≥ 150
- ≥ 100
- ≥ 50
- < 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-.....dwg

NOTES:

Illuminance level calculated in accordance with the BRE guide 2022:
"A space is considered to provide adequate daylight if a target illuminance level is achieved across a 50% of the space for at least half of the daylight hours (4,380) in the year."
SDA presents percentage of area achieves the target illuminance (lux) for at least half of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A01-IDS-001 (2)



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:
Median illuminance (lux)
BRE 2022
≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:
Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-.....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:
DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	
DWG NO:	REV:
S06-A01-IDS-001 (3)	





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance with the BRE guide 2022:
"A space is considered to provide adequate daylight if a target illuminance level is achieved across a 50% of the space for at least half of the daylight hours (4,380) in the year."
SDA presents percentage of area achieves the target illuminance (lux) for at least half of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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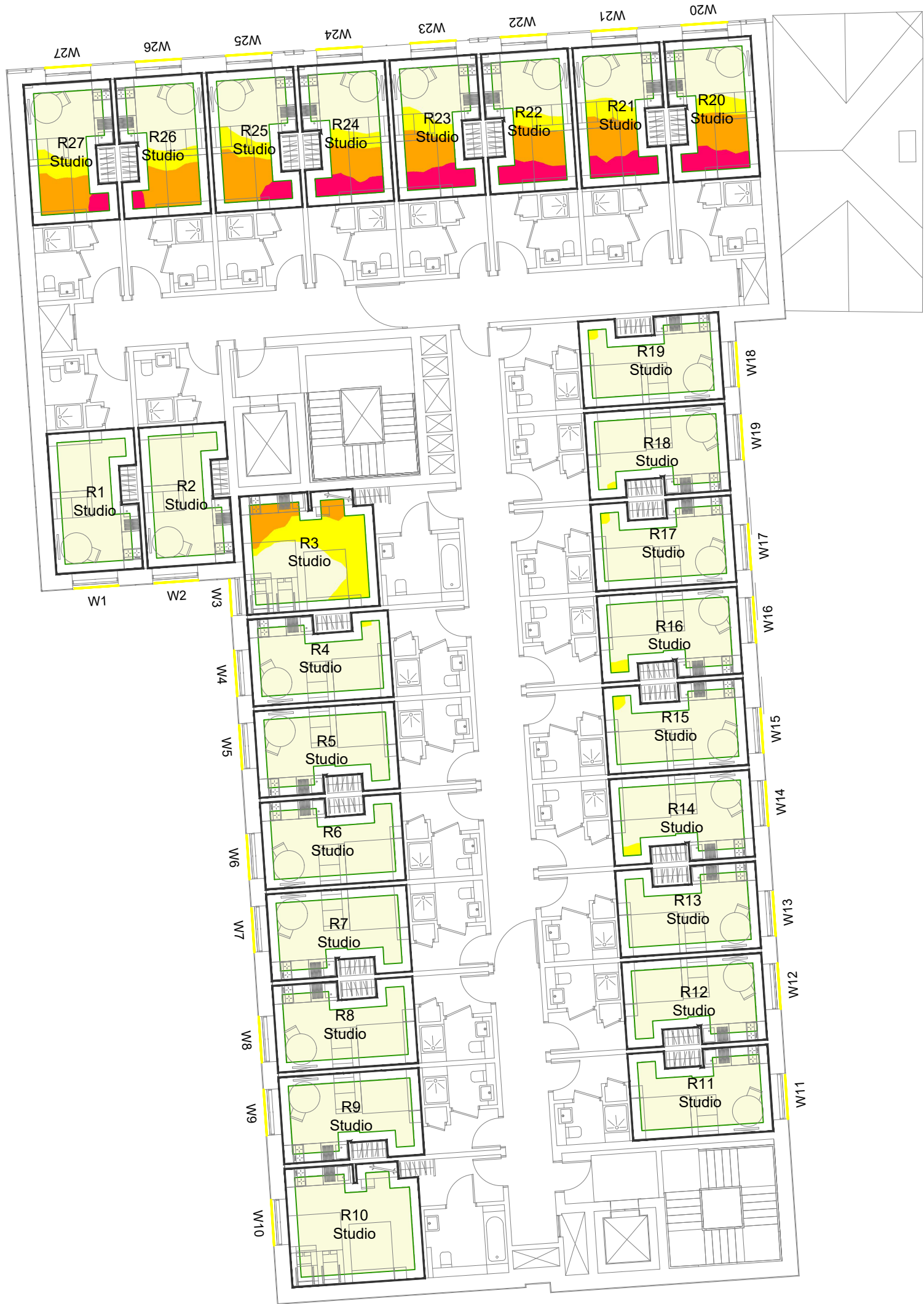
TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A01-IDS-001 (4)



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

Orange	≥ 200
Yellow	≥ 150
Light Orange	≥ 100
Red	≥ 50
Purple	< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-.....dwg

NOTES:

Illuminance level calculated in accordance with the BRE guide 2022:
"A space is considered to provide adequate daylight if a target illuminance level is achieved across a 50% of the space for at least half of the daylight hours (4,380) in the year."
SDA presents percentage of area achieves the target illuminance (lux) for at least half of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:
DAYLIGHT ILLUMINANCE STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO: S06-A01-IDS-001 (5)	

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?

Proposed									
F00	F00-	R1	Residential	Shared Lounge	150	163	54%	4.0	
	F00-	R3	Residential	Studio	150	95	27%	2.7	
	F00-	R4	Residential	Studio	150	247	70%	3.0	
	F00-	R5	Residential	Studio	150	251	76%	2.8	
	F00-	R6	Residential	Studio	150	262	76%	2.7	
	F00-	R7	Residential	Studio	150	283	76%	2.7	
	F00-	R8	Residential	Studio	150	248	76%	2.7	
	F00-	R9	Residential	Studio	150	254	70%	1.0	
	F00-	R10	Residential	Studio	150	36	14%	0.0	
	F00-	R11	Residential	Studio	150	47	14%	0.0	
	F00-	R12	Residential	Studio	150	37	9%	0.0	
	F00-	R13	Residential	Shared Dining	150	295	73%	0.0	
	F00-	R14	Residential	Shared Dining	150	57	35%	0.0	
	F00-	R15	Residential	Shared Co-Work	150	125	41%	0.0	No
F01	F01-	R1	Residential	Studio	150	263	75%	3.9	
	F01-	R2	Residential	Studio	150	236	68%	3.5	
	F01-	R3	Residential	Studio	150	133	40%	2.9	
	F01-	R4	Residential	Studio	150	301	95%	3.2	
	F01-	R5	Residential	Studio	150	322	96%	3.2	
	F01-	R6	Residential	Studio	150	325	97%	3.2	
	F01-	R7	Residential	Studio	150	332	99%	3.2	
	F01-	R8	Residential	Studio	150	314	97%	3.2	
	F01-	R9	Residential	Studio	150	319	99%	3.2	
	F01-	R10	Residential	Studio	150	205	85%	1.6	
	F01-	R11	Residential	Studio	150	81	27%	0.0	
	F01-	R12	Residential	Studio	150	79	25%	0.0	
	F01-	R13	Residential	Studio	150	81	29%	0.1	
	F01-	R14	Residential	Studio	150	58	11%	1.4	
	F01-	R15	Residential	Studio	150	51	9%	1.1	
	F01-	R16	Residential	Studio	150	47	6%	0.3	
	F01-	R17	Residential	Studio	150	46	8%	0.0	
	F01-	R18	Residential	Studio	150	52	8%	0.0	
	F01-	R19	Residential	Studio	150	39	8%	0.0	
	F01-	R20	Residential	Studio	150	126	44%	0.0	
	F01-	R21	Residential	Studio	150	131	43%	0.0	
	F01-	R22	Residential	Studio	150	120	42%	0.0	
	F01-	R23	Residential	Studio	150	129	44%	0.0	
	F01-	R24	Residential	Studio	150	135	47%	0.0	
	F01-	R25	Residential	Studio	150	141	48%	0.0	
	F01-	R26	Residential	Studio	150	163	51%	0.0	
	F01-	R27	Residential	Studio	150	156	52%	0.0	No

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
F02	F02-	R1	Residential	Studio	150	304	92%	4.0	
	F02-	R2	Residential	Studio	150	274	84%	3.5	
	F02-	R3	Residential	Studio	150	156	58%	2.9	
	F02-	R4	Residential	Studio	150	349	99%	3.2	
	F02-	R5	Residential	Studio	150	364	100%	3.2	
	F02-	R6	Residential	Studio	150	385	100%	3.2	
	F02-	R7	Residential	Studio	150	386	100%	3.2	
	F02-	R8	Residential	Studio	150	365	100%	3.2	
	F02-	R9	Residential	Studio	150	377	100%	3.2	
	F02-	R10	Residential	Studio	150	251	100%	2.5	
	F02-	R11	Residential	Studio	150	155	53%	0.8	
	F02-	R12	Residential	Studio	150	136	44%	0.9	
	F02-	R13	Residential	Studio	150	126	44%	2.2	
	F02-	R14	Residential	Studio	150	76	19%	2.0	
	F02-	R15	Residential	Studio	150	67	19%	1.1	
	F02-	R16	Residential	Studio	150	62	15%	0.3	
	F02-	R17	Residential	Studio	150	63	20%	0.1	
	F02-	R18	Residential	Studio	150	69	25%	0.1	
	F02-	R19	Residential	Studio	150	53	19%	0.2	
	F02-	R20	Residential	Studio	150	147	49%	0.0	
	F02-	R21	Residential	Studio	150	146	48%	0.0	
	F02-	R22	Residential	Studio	150	147	49%	0.0	
	F02-	R23	Residential	Studio	150	145	49%	0.0	
	F02-	R24	Residential	Studio	150	167	53%	0.0	
	F02-	R25	Residential	Studio	150	169	54%	0.0	
	F02-	R26	Residential	Studio	150	176	55%	0.0	
	F02-	R27	Residential	Studio	150	187	58%	0.0	No
F03	F03-	R1	Residential	Studio	150	347	100%	4.3	
	F03-	R2	Residential	Studio	150	304	100%	3.7	
	F03-	R3	Residential	Studio	150	173	73%	2.9	
	F03-	R4	Residential	Studio	150	375	100%	3.2	
	F03-	R5	Residential	Studio	150	391	100%	3.2	
	F03-	R6	Residential	Studio	150	414	100%	3.2	
	F03-	R7	Residential	Studio	150	422	100%	3.2	
	F03-	R8	Residential	Studio	150	405	100%	3.2	
	F03-	R9	Residential	Studio	150	431	100%	3.2	
	F03-	R10	Residential	Studio	150	283	100%	2.5	
	F03-	R11	Residential	Studio	150	277	84%	2.4	
	F03-	R12	Residential	Studio	150	226	76%	2.7	
	F03-	R13	Residential	Studio	150	198	62%	2.7	
	F03-	R14	Residential	Studio	150	122	44%	2.1	
	F03-	R15	Residential	Studio	150	114	43%	1.1	
	F03-	R16	Residential	Studio	150	103	44%	0.7	

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
F04	F03-	R17	Residential	Studio	150	110	42%	0.8	
	F03-	R18	Residential	Studio	150	136	46%	0.8	
	F03-	R19	Residential	Studio	150	131	43%	0.8	
	F03-	R20	Residential	Studio	150	159	53%	0.0	
	F03-	R21	Residential	Studio	150	160	53%	0.0	
	F03-	R22	Residential	Studio	150	165	53%	0.0	
	F03-	R23	Residential	Studio	150	161	53%	0.0	
	F03-	R24	Residential	Studio	150	184	57%	0.0	
	F03-	R25	Residential	Studio	150	186	59%	0.0	
	F03-	R26	Residential	Studio	150	220	63%	0.0	
	F03-	R27	Residential	Studio	150	212	65%	0.0	No
	F04-	R1	Residential	Studio	150	395	100%	4.7	
	F04-	R2	Residential	Studio	150	333	100%	3.9	
	F04-	R3	Residential	Studio	150	182	80%	2.9	
	F04-	R4	Residential	Studio	150	397	100%	3.2	
	F04-	R5	Residential	Studio	150	409	100%	3.2	
	F04-	R6	Residential	Studio	150	438	100%	3.2	
	F04-	R7	Residential	Studio	150	458	100%	3.2	
	F04-	R8	Residential	Studio	150	442	100%	3.2	
	F04-	R9	Residential	Studio	150	460	100%	3.2	
	F04-	R10	Residential	Studio	150	306	100%	2.5	
	F04-	R11	Residential	Studio	150	389	100%	2.7	
	F04-	R12	Residential	Studio	150	336	97%	2.7	
	F04-	R13	Residential	Studio	150	310	95%	2.7	
	F04-	R14	Residential	Studio	150	266	71%	2.2	
	F04-	R15	Residential	Studio	150	265	70%	1.7	
	F04-	R16	Residential	Studio	150	259	70%	1.8	
	F04-	R17	Residential	Studio	150	268	72%	1.8	
	F04-	R18	Residential	Studio	150	290	77%	1.9	
	F04-	R19	Residential	Studio	150	274	76%	1.9	
	F04-	R20	Residential	Studio	150	177	57%	0.0	
	F04-	R21	Residential	Studio	150	175	57%	0.0	
	F04-	R22	Residential	Studio	150	177	57%	0.0	
	F04-	R23	Residential	Studio	150	176	57%	0.0	
	F04-	R24	Residential	Studio	150	201	60%	0.0	
	F04-	R25	Residential	Studio	150	206	62%	0.0	
	F04-	R26	Residential	Studio	150	215	65%	0.0	
	F04-	R27	Residential	Studio	150	231	70%	0.0	No
F05	F05-	R1	Residential	Studio	150	430	100%	5.3	
	F05-	R2	Residential	Studio	150	381	100%	4.5	
	F05-	R3	Residential	Studio	150	192	84%	2.9	
	F05-	R4	Residential	Studio	150	430	100%	3.2	
	F05-	R5	Residential	Studio	150	452	100%	3.2	

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
	F05-	R6	Residential	Studio	150	458	100%	3.2	
	F05-	R7	Residential	Studio	150	476	100%	3.2	
	F05-	R8	Residential	Studio	150	459	100%	3.2	
	F05-	R9	Residential	Studio	150	473	100%	3.2	
	F05-	R10	Residential	Studio	150	333	100%	3.2	
	F05-	R11	Residential	Studio	150	464	100%	2.7	
	F05-	R12	Residential	Studio	150	409	100%	2.7	
	F05-	R13	Residential	Studio	150	433	100%	2.7	
	F05-	R14	Residential	Studio	150	388	100%	2.7	
	F05-	R15	Residential	Studio	150	420	100%	2.7	
	F05-	R16	Residential	Studio	150	383	100%	2.7	
	F05-	R17	Residential	Studio	150	425	100%	2.7	
	F05-	R18	Residential	Studio	150	393	100%	2.7	
	F05-	R19	Residential	Studio	150	396	100%	2.7	
	F05-	R20	Residential	Studio	150	186	57%	0.0	
	F05-	R21	Residential	Studio	150	174	56%	0.0	
	F05-	R22	Residential	Studio	150	193	61%	0.0	
	F05-	R23	Residential	Studio	150	184	59%	0.0	
	F05-	R24	Residential	Studio	150	202	60%	0.0	
	F05-	R25	Residential	Studio	150	208	63%	0.0	
	F05-	R26	Residential	Studio	150	222	67%	0.0	
	F05-	R27	Residential	Studio	150	235	70%	0.0	No

Appendix 5

Proposed two-hour sun-on-ground results



Ground Floor

2hr SoG_Proposed						
Property	Floor	Amenity ref.	Area (sq m)	Proposed (sq m)	Proposed (%)	Meets BRE?
Proposed	F00	A1	142.3	74.1	52	Yes
		Total	142.3	74.1	52	Yes

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Proposed 2-Hr Sunlit Area
- AXX

Amenity Area Number

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305 -P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 - 1404-P09-....dwg

NOTES:

For it to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March.

Amn: x% indicates the percentage of the amenity area receiving at least 2 hours of sunlight.

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

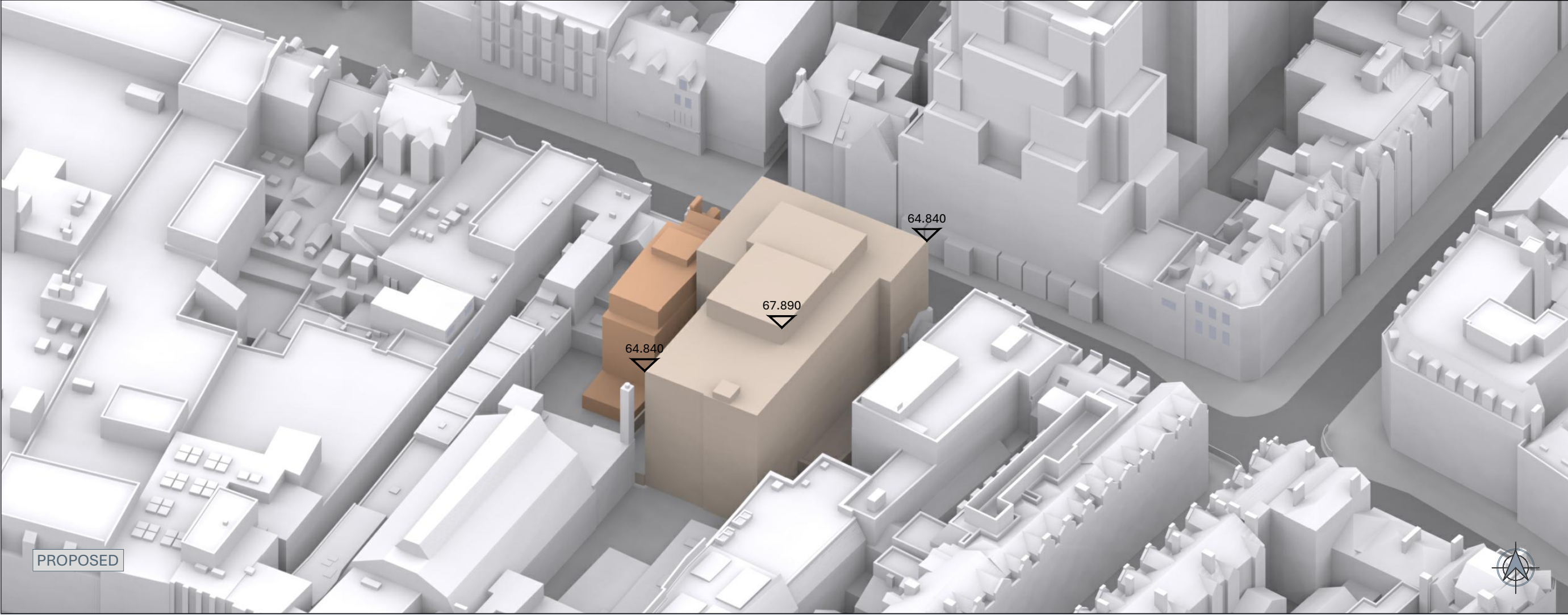
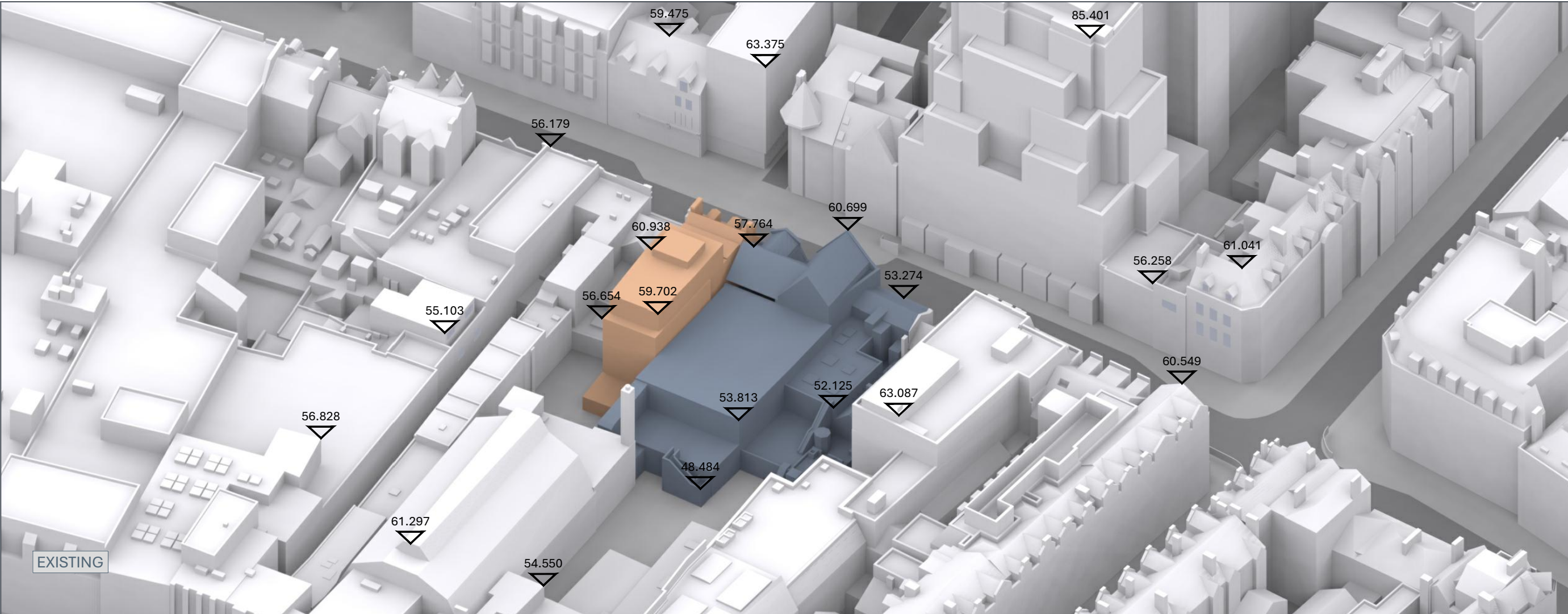
DRAWING:
TWO-HOURS SUN-ON-GROUND STUDY
Plan View

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	
DWG NO:	REV:
S06-A01-SOG-001	



Appendix 6

Future Baseline Condition Results



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing	Consented
Proposed	Cumulative
Cutback Envelope	

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

All heights given in m AOD

Rev	Description	Drawn	Date

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TITLE:

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READING,
RG1 1EX.

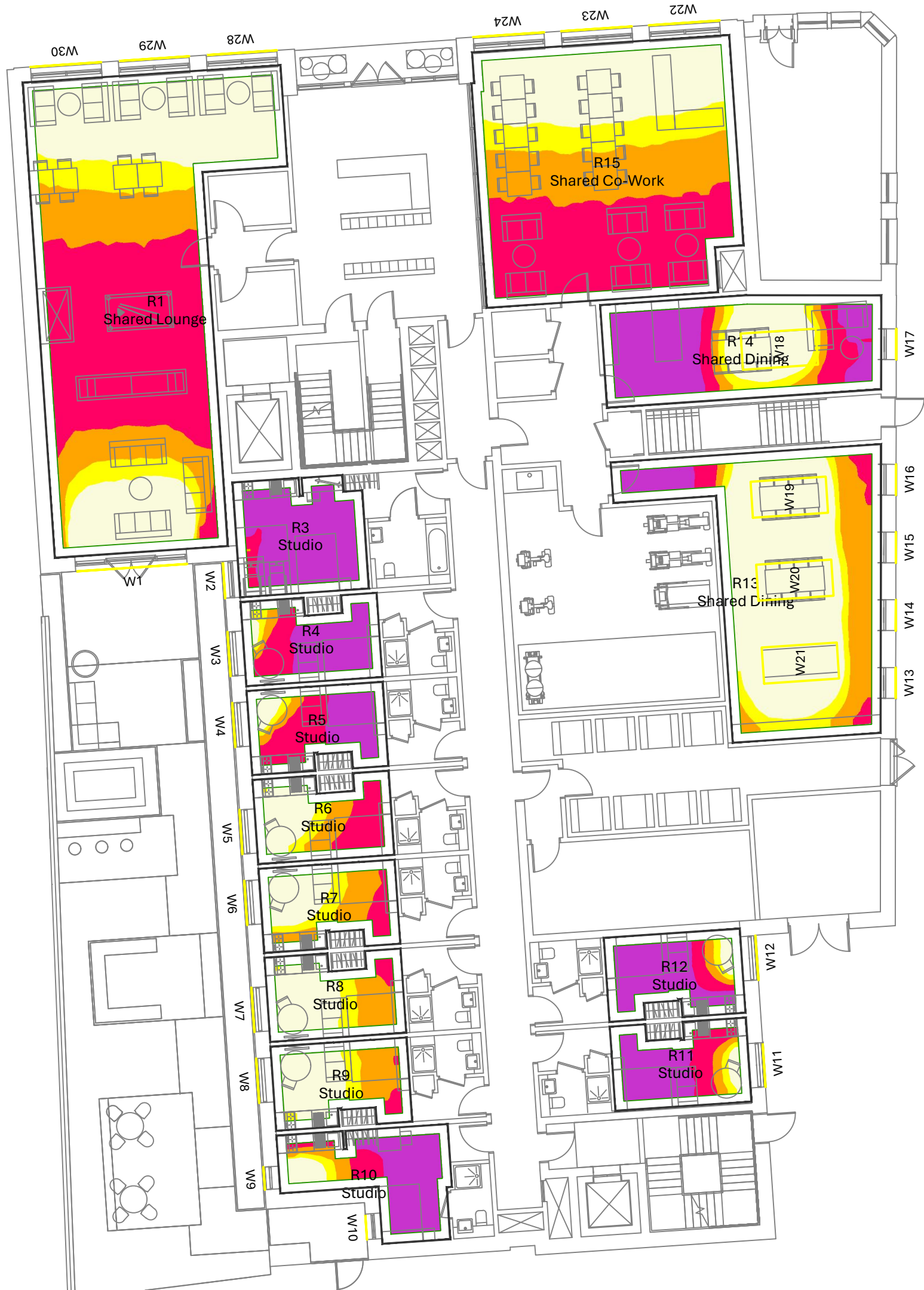
DRAWING:

EXISTING & PROPOSED SCENARIO
3D View

FUTURE BASELINE SCENARIO

DRAWN: VK	JOB NBR:
SCALE: NTS	22262
DATE: 31/07/2026	
DWG NO:	REV:

S06-A02-EXI-PRO-002



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:
Median illuminance (lux)
BRE 2022
≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:
Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:
Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A02-IDS-001





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200

≥ 150

≥ 100

≥ 50

< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A02-IDS-001 (1)





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A02-IDS-001 (2)





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

Red	≥ 200
Orange	≥ 150
Yellow	≥ 100
Light Yellow	≥ 50
Pink	< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A02-IDS-001 (3)



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	REV:
DWG NO:	S06-A02-IDS-001 (4)



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Median illuminance (lux)
BRE 2022

≥ 200
≥ 150
≥ 100
≥ 50
< 50

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission
Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 -
1404-P09-....dwg

NOTES:

Illuminance level calculated in accordance
with the BRE guide 2022:
"A space is considered to provide adequate
daylight if a target illuminance level is
achieved across a 50% of the space
for at least half of the daylight hours (4,380)
in the year."
SDA presents percentage of area achieves
the target illuminance (lux) for at least half
of daylight hours.

Reflectance List

Ground Plane	0.20
Surrounding Buildings	0.20
Proposed Building	0.20
Internal Ceilings	0.80
Internal Walls	0.80
Internal Floors	0.40

Rev	Description	Drawn	Date

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TITLE:

138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:

DAYLIGHT ILLUMINANCE STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	

DWG NO:

S06-A02-IDS-001 (5)

REV:



Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?

Proposed									
F00	F00-	R1	Residential	Shared Lounge	150	124	43%	1.6	
	F00-	R3	Residential	Studio	150	17	0%	0.1	
	F00-	R4	Residential	Studio	150	42	8%	1.1	
	F00-	R5	Residential	Studio	150	61	13%	2.0	
	F00-	R6	Residential	Studio	150	152	51%	2.7	
	F00-	R7	Residential	Studio	150	178	58%	2.7	
	F00-	R8	Residential	Studio	150	222	70%	2.7	
	F00-	R9	Residential	Studio	150	219	68%	1.0	
	F00-	R10	Residential	Studio	150	35	12%	0.0	
	F00-	R11	Residential	Studio	150	47	14%	0.0	
	F00-	R12	Residential	Studio	150	37	9%	0.0	
	F00-	R13	Residential	Shared Dining	150	295	73%	0.0	
	F00-	R14	Residential	Shared Dining	150	57	35%	0.0	
	F00-	R15	Residential	Shared Co-Work	150	125	41%	0.0	No
F01	F01-	R1	Residential	Studio	150	143	47%	1.7	
	F01-	R2	Residential	Studio	150	149	49%	2.1	
	F01-	R3	Residential	Studio	150	22	2%	0.4	
	F01-	R4	Residential	Studio	150	51	15%	1.1	
	F01-	R5	Residential	Studio	150	78	20%	2.0	
	F01-	R6	Residential	Studio	150	197	62%	3.2	
	F01-	R7	Residential	Studio	150	232	89%	3.2	
	F01-	R8	Residential	Studio	150	290	95%	3.2	
	F01-	R9	Residential	Studio	150	284	96%	3.2	
	F01-	R10	Residential	Studio	150	196	79%	1.6	
	F01-	R11	Residential	Studio	150	81	27%	0.0	
	F01-	R12	Residential	Studio	150	79	25%	0.0	
	F01-	R13	Residential	Studio	150	81	29%	0.1	
	F01-	R14	Residential	Studio	150	58	11%	1.4	
	F01-	R15	Residential	Studio	150	51	9%	1.1	
	F01-	R16	Residential	Studio	150	47	6%	0.3	
	F01-	R17	Residential	Studio	150	46	8%	0.0	
	F01-	R18	Residential	Studio	150	52	8%	0.0	
	F01-	R19	Residential	Studio	150	39	8%	0.0	
	F01-	R20	Residential	Studio	150	126	44%	0.0	
	F01-	R21	Residential	Studio	150	131	43%	0.0	
	F01-	R22	Residential	Studio	150	120	42%	0.0	
	F01-	R23	Residential	Studio	150	129	44%	0.0	
	F01-	R24	Residential	Studio	150	134	47%	0.0	
	F01-	R25	Residential	Studio	150	140	48%	0.0	
	F01-	R26	Residential	Studio	150	163	51%	0.0	
	F01-	R27	Residential	Studio	150	155	52%	0.0	No

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
F02	F02-	R1	Residential	Studio	150	173	63%	2.0	
	F02-	R2	Residential	Studio	150	189	62%	2.3	
	F02-	R3	Residential	Studio	150	33	8%	0.5	
	F02-	R4	Residential	Studio	150	73	30%	1.6	
	F02-	R5	Residential	Studio	150	112	38%	2.0	
	F02-	R6	Residential	Studio	150	247	77%	3.2	
	F02-	R7	Residential	Studio	150	294	97%	3.2	
	F02-	R8	Residential	Studio	150	348	100%	3.2	
	F02-	R9	Residential	Studio	150	350	100%	3.2	
	F02-	R10	Residential	Studio	150	245	99%	2.5	
	F02-	R11	Residential	Studio	150	155	53%	0.8	
	F02-	R12	Residential	Studio	150	136	44%	0.9	
	F02-	R13	Residential	Studio	150	126	44%	2.2	
	F02-	R14	Residential	Studio	150	76	19%	2.0	
	F02-	R15	Residential	Studio	150	67	19%	1.1	
	F02-	R16	Residential	Studio	150	62	15%	0.3	
	F02-	R17	Residential	Studio	150	63	20%	0.1	
	F02-	R18	Residential	Studio	150	69	25%	0.1	
	F02-	R19	Residential	Studio	150	53	19%	0.2	
	F02-	R20	Residential	Studio	150	147	49%	0.0	
	F02-	R21	Residential	Studio	150	146	48%	0.0	
	F02-	R22	Residential	Studio	150	147	49%	0.0	
	F02-	R23	Residential	Studio	150	145	49%	0.0	
	F02-	R24	Residential	Studio	150	166	53%	0.0	
	F02-	R25	Residential	Studio	150	169	54%	0.0	
	F02-	R26	Residential	Studio	150	175	55%	0.0	
	F02-	R27	Residential	Studio	150	187	58%	0.0	No
F03	F03-	R1	Residential	Studio	150	253	89%	3.0	
	F03-	R2	Residential	Studio	150	243	91%	3.5	
	F03-	R3	Residential	Studio	150	76	21%	1.7	
	F03-	R4	Residential	Studio	150	206	58%	2.0	
	F03-	R5	Residential	Studio	150	247	66%	2.7	
	F03-	R6	Residential	Studio	150	339	99%	3.2	
	F03-	R7	Residential	Studio	150	373	100%	3.2	
	F03-	R8	Residential	Studio	150	392	100%	3.2	
	F03-	R9	Residential	Studio	150	417	100%	3.2	
	F03-	R10	Residential	Studio	150	282	100%	2.5	
	F03-	R11	Residential	Studio	150	277	84%	2.4	
	F03-	R12	Residential	Studio	150	226	76%	2.7	
	F03-	R13	Residential	Studio	150	198	62%	2.7	
	F03-	R14	Residential	Studio	150	122	44%	2.1	
	F03-	R15	Residential	Studio	150	114	43%	1.1	
	F03-	R16	Residential	Studio	150	103	44%	0.7	

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
F04	F03-	R17	Residential	Studio	150	110	42%	0.8	
	F03-	R18	Residential	Studio	150	136	46%	0.8	
	F03-	R19	Residential	Studio	150	131	43%	0.8	
	F03-	R20	Residential	Studio	150	159	53%	0.0	
	F03-	R21	Residential	Studio	150	160	53%	0.0	
	F03-	R22	Residential	Studio	150	165	53%	0.0	
	F03-	R23	Residential	Studio	150	161	53%	0.0	
	F03-	R24	Residential	Studio	150	183	57%	0.0	
	F03-	R25	Residential	Studio	150	186	59%	0.0	
	F03-	R26	Residential	Studio	150	219	63%	0.0	
	F03-	R27	Residential	Studio	150	212	63%	0.0	No
	F04-	R1	Residential	Studio	150	374	100%	4.7	
	F04-	R2	Residential	Studio	150	319	100%	3.9	
	F04-	R3	Residential	Studio	150	152	53%	2.9	
	F04-	R4	Residential	Studio	150	353	99%	3.2	
	F04-	R5	Residential	Studio	150	378	100%	3.2	
	F04-	R6	Residential	Studio	150	418	100%	3.2	
	F04-	R7	Residential	Studio	150	437	100%	3.2	
	F04-	R8	Residential	Studio	150	437	100%	3.2	
	F04-	R9	Residential	Studio	150	456	100%	3.2	
	F04-	R10	Residential	Studio	150	305	100%	2.5	
	F04-	R11	Residential	Studio	150	389	100%	2.7	
	F04-	R12	Residential	Studio	150	336	97%	2.7	
	F04-	R13	Residential	Studio	150	310	95%	2.7	
	F04-	R14	Residential	Studio	150	266	71%	2.2	
	F04-	R15	Residential	Studio	150	265	70%	1.7	
	F04-	R16	Residential	Studio	150	259	70%	1.8	
	F04-	R17	Residential	Studio	150	268	72%	1.8	
	F04-	R18	Residential	Studio	150	290	77%	1.9	
	F04-	R19	Residential	Studio	150	274	76%	1.9	
	F04-	R20	Residential	Studio	150	177	57%	0.0	
	F04-	R21	Residential	Studio	150	175	57%	0.0	
	F04-	R22	Residential	Studio	150	177	57%	0.0	
	F04-	R23	Residential	Studio	150	176	57%	0.0	
	F04-	R24	Residential	Studio	150	200	60%	0.0	
	F04-	R25	Residential	Studio	150	206	62%	0.0	
	F04-	R26	Residential	Studio	150	214	65%	0.0	
	F04-	R27	Residential	Studio	150	231	70%	0.0	No
F05	F05-	R1	Residential	Studio	150	428	100%	5.3	
	F05-	R2	Residential	Studio	150	376	100%	4.5	
	F05-	R3	Residential	Studio	150	186	82%	2.9	
	F05-	R4	Residential	Studio	150	413	100%	3.2	
	F05-	R5	Residential	Studio	150	437	100%	3.2	

Property & room attributes					BRE 2022				
Floor	Flat/Unit no.	Room ref.	Property type	Room use	Daylight illuminance			Sun exp.	
					Target (lx)	Result (lx)	% area ≥target	(Hrs)	Flat/unit satisfies?
	F05-	R6	Residential	Studio	150	451	100%	3.2	
	F05-	R7	Residential	Studio	150	470	100%	3.2	
	F05-	R8	Residential	Studio	150	456	100%	3.2	
	F05-	R9	Residential	Studio	150	473	100%	3.2	
	F05-	R10	Residential	Studio	150	333	100%	3.2	
	F05-	R11	Residential	Studio	150	464	100%	2.7	
	F05-	R12	Residential	Studio	150	409	100%	2.7	
	F05-	R13	Residential	Studio	150	433	100%	2.7	
	F05-	R14	Residential	Studio	150	388	100%	2.7	
	F05-	R15	Residential	Studio	150	420	100%	2.7	
	F05-	R16	Residential	Studio	150	383	100%	2.7	
	F05-	R17	Residential	Studio	150	425	100%	2.7	
	F05-	R18	Residential	Studio	150	393	100%	2.7	
	F05-	R19	Residential	Studio	150	396	100%	2.7	
	F05-	R20	Residential	Studio	150	187	57%	0.0	
	F05-	R21	Residential	Studio	150	174	56%	0.0	
	F05-	R22	Residential	Studio	150	193	61%	0.0	
	F05-	R23	Residential	Studio	150	183	59%	0.0	
	F05-	R24	Residential	Studio	150	202	60%	0.0	
	F05-	R25	Residential	Studio	150	208	63%	0.0	
	F05-	R26	Residential	Studio	150	221	66%	0.0	
	F05-	R27	Residential	Studio	150	234	70%	0.0	No



2hr SoG_Proposed						
Property	Floor	Amenity ref.	Area (sq m)	Proposed (sq m)	Proposed (%)	Meets BRE?
Proposed	F00	A1	142.3	65.3	46	No
Total			142.3	65.3	46	-

Ground Floor

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Proposed 2-Hr Sunlit Area
- AXX

Amenity Area Number

SOURCE DATA:

Existing and Surrounding Buildings
ZMapping
3d context model
QVS1
E04-S02-2025-11-06-...
136-137 Friar Street
Approved Planning Application
PL/23/1266

Proposed scheme
Falconer Chester Hall (Architects)
2d drawings received:
E17-AR-2026-07-23 - Submission Drawings
P21109-FCH-XX-00-DR-A-1300 - 1305
-P12-...dwg
P21109-FCH-XX-XX-DR-A-1400 - 1404-P09-....dwg

NOTES:

For it to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March.

Amn: x% indicates the percentage of the amenity area receiving at least 2 hours of sunlight.

Rev	Description	Drawn	Date

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TITLE:
138-144 FRIAR STREET,
READING,
RG1 1EX.

DRAWING:
TWO-HOURS SUN-ON-GROUND STUDY
Plan View

Future Baseline - Including developed form
of 136-137 Friar Street

DRAWN: VK	JOB NBR:
SCALE: 1:150@A3	22262
DATE: 31/07/2026	
DWG NO:	REV:
S06-A02-SOG-001	



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