



**REPORT**

**on**

**DAYLIGHT & SUNLIGHT WITHIN  
THE  
PROPOSED DWELLINGS**

**at**

**QUEENS WHARF, 47 QUEENS  
ROAD, READING RG1 4QE**

REF: WW/SA/ROL01231  
REV: - 01  
3<sup>rd</sup> November 2023

**expertise**  
*applied*

## TABLE OF CONTENTS

| <b>SECTION</b>                                        | <b>PAGE NO.</b> |
|-------------------------------------------------------|-----------------|
| 1. INTRODUCTION .....                                 | 1               |
| 2. PLANNING POLICY AND GUIDANCE .....                 | 3               |
| 3. METHOD OF ASSESSMENT AND NUMERICAL GUIDELINES..... | 5               |
| 4. APPLICATION OF THE BRE GUIDELINES.....             | 8               |
| 5. INFORMATION USED IN THE TECHNICAL STUDY .....      | 9               |
| 6. RESULTS OF TECHNICAL STUDY.....                    | 10              |
| 7. SUMMARY AND CONCLUSION .....                       | 12              |

## APPENDICES

APPENDIX A - TARGET ILLUMINANCE FACTOR TABLE

APPENDIX B - SUNLIGHT EXPOSURE TABLE

APPENDIX C - LAYOUT PLANS WITH TARGET ILLUMINANCE RESULTS



Figure 1: Oblique aerial photograph of the application building looking north

## 1. INTRODUCTION

- 1.1 Centric is proposing a residential conversion at Queens Wharf, 47 Queens Road, Reading RG1 4QE ("the Proposed Conversion"). The site, which is shown in Figure 1 at page ii, is bounded by properties on both Queen's Road and Kennet Side.
- 1.2 The proposed conversion is designed by Ashton Architecture and comprises the conversion of ground floor commercial units to residential dwellings.
- 1.3 Anstey Horne has been commissioned to undertake a formal technical assessment of the daylight and sunlight levels within the proposed accommodation. We have used 3D computer modelling and our specialist computer software to calculate the levels of daylight and sunlight that will be available in the proposed habitable rooms.
- 1.4 There are no mandatory standards for daylight or sunlight to dwellings, but the following publications offer guidance:
- BS EN 17037:2018 Daylight in Buildings (2018)
  - BRE Report 209, *Site Layout Planning for Daylight and Sunlight: A guide to good practice* (third edition, 2022)
  - CIBSE Lighting Guide 10, *Daylighting - A Guide for Designers: Lighting for the Built Environment* (SLL LG10, 2014)
- 1.5 The assessments have been undertaken based on BRE Report 209, *Site Layout Planning for Daylight and Sunlight: A guide to good practice* (third edition, 2022) which supersedes the second edition of the guide. The 2022 BRE Guidelines introduces more sophisticated tested methodologies that take into account external reflectance and climate-based daylight modelling (CBDM) whereby an assessment can be based on weather data for various locations across the United Kingdom.
- 1.6 The BRE Guidelines give advice on minimum recommended Target Illuminance (TI) and Daylight Factor (DF) in habitable rooms in dwellings. They also make recommendations for minimum levels of sunlight availability to interiors, based on hours of direct sunlight. The previously used Average Daylight Factor (ADF) and Annual Probable Sunlight Hours (APSH) methodology is no longer recommended for testing the proposed levels of light within new developments.

- 1.7 This report summarises the relevant planning policy, the basic principles of daylighting, the methods used to assess the potential levels that will be achieved in the new accommodation, the information used in compiling our 3D computer model and the results of our technical assessment. Drawings and full tables of results of our assessment are attached in the appendices.

## 2. PLANNING POLICY AND GUIDANCE

### National Planning Policy and Guidance

2.1 The Revised National Planning Policy Framework (July 2021) sets out the Government's planning policies and how these are expected to be applied. It provides a framework within which councils can produce their own local plans that reflect the needs and priorities of their communities.

2.2 Chapter 11 'Making effective use of land' states in paragraph 125 (c) that:

*"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)."*

2.3 The Building Research Establishment, whose aims include achieving a higher quality built environment, published the BRE guidelines 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022) by PJ Littlefair in June 2022. This guide gives advice on site layout planning to retain good daylighting and sunlighting in existing surrounding buildings and achieve to it in new buildings. The guide is intended for use by designers, consultants and planning officials and notes that:

*"The advice given here is not mandatory and this document should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer."*

### Local Planning Policy and Guidance

2.4 The development site is located within Reading Borough Council.

#### Reading Local Plan (Adopted November 2019)

2.5 CR10: Tall Buildings – paragraph v states tall buildings are required to:

*"Ensure adequate levels of daylight and sunlight are able to reach buildings and spaces within the development".*

2.6 Paragraph 5.3.47 Wind and solar effects of tall buildings:

“Sunlight and daylight should meet the criteria outlined in the ‘Site layout planning for daylight and sunlight: a guide to good practice’, published by the Building Research Establishment (BRE)”.

2.7 Paragraph 5.3.49 states:

“The Building Research Establishment (BRE) has guidelines on assessing daylight and sunlight effects of development, which the Council will apply flexibly given the high density of the central area”.

2.8 CC8: Safeguarding Amenity states:

“Development will not cause... unacceptable living conditions... in terms of access to sunlight and daylight”.

### 3. METHOD OF ASSESSMENT AND NUMERICAL GUIDELINES

#### Daylight within new development

- 3.1 Section 2.1 of the BRE guide makes recommendations concerning daylight in new buildings. At the site layout stage of the design process, when window positions and sizes are unknown, the potential for daylight may be checked at a series of reference points on each main face of the building. At each of these reference points the amount of available skylight falling on the vertical wall can be quantified as the vertical sky component (VSC).
- 3.2 Where window positions and sizes are known, it is more informative to calculate the interior daylighting inside the building. The guidelines recommend two methodologies and state that either of these can be used to check daylight provision in new rooms within a development. The two methodologies are as follows:

#### Illuminance Method

- 3.3 The illuminance method involves using climatic data for the location of the site to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at a minimum hourly interval for a typical year.
- 3.4 The UK National Annex provides minimum illuminance recommendations for daylight provision within UK dwellings as follows:
- Bedrooms: 100 lux
  - Living rooms: 150 lux
  - Kitchens: 200 lux
- 3.5 The above recommendations are based upon the median illuminances that should be achieved over at least 50% of the assessment grid for at least 50% of the daylight hours over the course of the calendar year.
- 3.6 The BRE Guidelines note that

*“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. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design”.*

## Sunlight within new development

- 3.7 Section 3.1 of the BRE Guidelines make recommendations concerning sunlight in new buildings. It advises that

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

- 3.8 The BRE Guidelines advise that site layout can be used to affect the duration of sunlight in buildings. It notes that

*“A dwelling with no main window wall within 90° of due south is likely to be perceived as insufficiently sunlit. This is usually an issue only for flats. 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.”*

- 3.9 The BRE Guidelines note that *“The aim should be to minimise the number of dwellings whose living rooms face solely north, northeast or northwest, unless there is some corresponding factor such as an appealing view to the north.”* It also acknowledges that

*“for larger developments of flats, especially those with constraints, it may not be possible to have every living room facing within 90° of due south”.*

- 3.10 The BRE Guidelines recommend an approach to measuring sunlight exposure (SE) setting out that internal spaces should be able to receive a minimum of 1.5 hours of direct sunlight on a selected date between 1<sup>st</sup> February and 21<sup>st</sup> March with cloudless conditions. The BRE recommend that the test date should be 21<sup>st</sup> March and that at least one habitable room, preferably a main living room, should achieve at least the minimum criterion. It further notes that the criterion applies to rooms of all orientations, although if a room faces significantly north of due east or west, it is unlikely to be met.

- 3.11 The presence of balconies to provide private amenity within new developments does create challenges in relation to maximising sunlight potential as it limits the sky visibility from the centre point of the window. A flexible approach is therefore needed (particularly on large-scale developments where building heights tend to be greater and separation distances smaller) to strike a balance between the provision of balconies and achieving adequate levels of sunlight.

- 3.12 Whilst the BRE Guidelines intend to give good access to sunlight in a range of situations, it is noted that in some circumstances:

*“the designer or planning authority may wish to choose a different target value for hours of sunlight.”*

- 3.13 In summary the BRE Guidelines state that a dwelling will appear reasonably sunlit 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”. 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”.*

## 4. APPLICATION OF THE BRE GUIDELINES

### 4.1 In its introduction BRE Report 209 states its:

*“main aim is ... to help 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”.*

### 4.2 The guide notes that it

*“is intended for building designers and their clients, consultants and planning officials. The advice given here 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 many factors in site layout design.”*

### 4.3 Clearly, the BRE guide is an advisory document, not a rigid set of rules. Care must therefore be taken when applying its recommendations.

### 4.4 In theory the BRE report’s numerical guidelines may be applied to any setting, whether that is a city centre, suburban area or rural village. However, it notes,

*“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.”*

### 4.5 Clearly, rigid application of the BRE Report’s standard numerical guidelines may be inappropriate in a built-up urban environment where higher density affordable development may be desirable and where there simply cannot be the same expectation of light as in a suburban or rural context.

## 5. INFORMATION USED IN THE TECHNICAL STUDY

5.1 We undertook our technical study using a 3D computer model of the proposed scheme and its surrounding buildings, which we built from the following information:

- Proposed scheme:
  - Ashton Architecture's drawings of the proposed scheme dated September 2022
- Surrounding buildings:
  - Z-Mapping photogrammetric tile received 30<sup>th</sup> October 2023
  - OS map
  - Aerial photography from Microsoft Bing
  - Site visit, photographs and measurements

5.2 In calculating the daylight availability to the proposed habitable rooms, the following values were applied:

- Diffuse glass transmission: 0.68 for clear double glazing with a low emissivity coating;
- Maintenance factor for dirt on glass: 0.92 (i.e. 8% loss) for vertical glazing;
- Window aperture area: measured from 3D computer model multiplied by between 0.82 - 0.83 for the frame correction factor;
- Surface reflectance's of each room based on the following surface finishes and reflectances:
  - Ceilings: white 0.80
  - Walls: pale cream 0.80
  - Floors: light wood flooring 0.4

## **6. RESULTS OF TECHNICAL STUDY**

- 6.1 We have tested all habitable rooms within the Proposed Conversion. In all we tested 20 rooms, of which 9 are living rooms, dining rooms and kitchens (or a combination thereof) and 11 are bedrooms.
- 6.2 The rooms tested are shown outlined on our drawing no. ROL01231\_R01\_V01\_601-01 at Appendix C. The drawings give the use of each room and the room and window references used in our detailed tables of results.

### **Daylight within new development**

- 6.3 The daylight availability within the proposed habitable rooms has been calculated in accordance with the illuminance method. The results for the proposed habitable rooms tested are shown in the table at Appendix A (along with the relevant target for the room use concerned) and on the room layout drawings at Appendix C.
- 6.4 The basis of this study has been the target illuminance test. The results of this assessment conclude that 15 of the 20 rooms tested (75%) will either meet or exceed the minimum recommended levels outlined in the BRE Guidelines. There are five rooms that fall marginally short of the advisory levels of the BRE, and these relate to three bedrooms, a living dining room and a bedsit.
- 6.5 The BRE acknowledge that the expectation for natural light is less when compared to main living rooms. One bedroom (R1) achieves the required lux levels to 45% of its area, within 5% of the BRE's target of 50% such that this room is considered acceptable in terms of its daylight potential. There are two further bedrooms (R6 & R7) that also record levels below the BRE ideal which can be attributed to the proximity to neighbouring Kennet Wharf rather than the layout of the proposed rooms. Indeed, locating the bedrooms in this area rather than living rooms is a sensible approach to take which accords with the principles laid out within the BRE Guidelines in relation to good layout planning. There is a further living dining room (R4) which by virtue of its location at the juncture of the existing line, receives the necessary lux to 33% of its area. Importantly however, the drawings demonstrate that there will be good levels of light within the area closest to the main window, where it is envisaged that future occupants will spend the majority of their time. Finally, a bedsit (R3) will achieve the necessary lux levels to 45% of its area, marginally below the BRE's target of 50%.

## Sunlight within new development

- 6.6 The focus of the BRE sunlight guidelines is on main living rooms, rather than bedrooms and kitchens, which the guide views as less important. The guide recommends that *“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 ... Where possible, living rooms should face the southern or western parts of the sky and kitchens towards the north or east.”*
- 6.7 We tested a total of 7 main living rooms (including rooms containing the main living area, such as a living/kitchen/dining room. Although we have tested various types of habitable room, the guidelines focus on main living rooms and conservatories and the results should be considered in this context.
- 6.8 The sunlight results for the rooms tested are given in the table at Appendix B.
- 6.9 In a conversion development such as this, orientation is out of the developer’s control and as such, it can be challenging to ensure that all rooms receive good levels of sunlight. Furthermore, in urban environments such as town centres, the availability of sunlight is inherently more limited given the degree of obstruction that is found in these typologies. The results show that 3 of the 7 living rooms tested (42%) will either meet or exceed the minimum recommended levels outlined in the BRE Guidelines in respect of Sunlight Exposure.
- 6.10 Three of the four living rooms which do not meet the minimum standard of 1.5 sunlight exposure hours face north. The BRE Guidelines advises that *“if a room faces significantly north of due east or west [the sunlight criterion] is unlikely to be met”.* As such, it is considered that the orientation of the site building rather than the proposed layouts is the main contributing factor to levels below the BRE’s advisory levels.
- 6.11 The other living room which does not pass (room reference R4), is served by windows which as shown in Appendix C, have their sunlight from south blocked by the protruding nature of the building. For this reason, the BRE Guidelines should be applied considered flexibly in this scenario.

## 7. SUMMARY AND CONCLUSION

- 7.1 There are no mandatory standards for daylight or sunlight provision within dwellings. Reading Borough Council's planning policy seeks to provide good living conditions for residents of new housing developments, including the provision of adequate daylight and sunlight within dwellings and sunlight to amenity spaces.
- 7.2 BRE Report 209, *Site Layout Planning for Daylight and Sunlight: A guide to good practice* (third edition, 2022) provides useful guidance on the subject.
- 7.3 We have assessed daylight and sunlight to all habitable rooms on the proposed ground floor conversion. The tests were undertaken in accordance with the BRE Guidelines, third edition, 2022.
- 7.4 Overall, the results show that 15 out of 20 rooms (75%) will either meet or exceed the BRE's advisory targets in respect of daylight. Where there are an isolated number of rooms that fall short of these recommendations, they do so either to a marginal degree or relate to room uses where the expectation for natural light is not the same when compared to many habitable spaces. In relation to sunlight, 3 out of the 7 main living spaces (42%) will achieve strict BRE compliance. The availability of sunlight in urban contexts such as this is inherently more challenging such that some degree of flexibility is recommended.
- 7.5 Although the BRE guide gives numerical guidelines, these are intended to be applied flexibly since natural lighting is only one of many factors in site layout design. Where higher density development is desirable there simply cannot be the same expectation of light as in a suburban or rural context.

- 7.6 In conclusion, the layout of the proposed development follows the BRE Guidelines and will provide good/ daylight and sunlight conditions within the proposed accommodation.



.....  
**ANSTEY HORNE**

3<sup>rd</sup> November 2023

## APPENDIX A

-

### TARGET ILLUMINANCE FACTOR TABLE

| Project Name: ROL01231 - R01 - V01<br>Project No.: Queens Wharf, 47 Queens Road, Reading<br>Report Title: SDA BS En17037 Analysis - Proposed Scheme<br>Date of Analysis: 01/11/2023 |          |                   |               |          |                 |                   |               |                         |                              |          |                            |                               |                   | Meets<br>Criteria |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------|---------------|----------|-----------------|-------------------|---------------|-------------------------|------------------------------|----------|----------------------------|-------------------------------|-------------------|-------------------|
|                                                                                                                                                                                     |          |                   |               |          |                 |                   |               |                         |                              | Criteria |                            |                               |                   |                   |
| Floor Ref                                                                                                                                                                           | Room Ref | Room<br>Attribute | Property Type | Room Use | Room<br>Area m2 | Effective<br>Area | Median<br>Lux | Area Meeting<br>Req Lux | % of Area<br>Meeting Req Lux | Req Lux  | Req % of<br>Effective Area | Req % of<br>Daylight<br>Hours | Daylight<br>Hours |                   |
| Queens Wharf                                                                                                                                                                        |          |                   |               |          |                 |                   |               |                         |                              |          |                            |                               |                   |                   |
| Gnd Floor                                                                                                                                                                           | R1       |                   | Residential   | Bedroom  | 12.25           | 8.23              | 89            | 3.79                    | 46%                          | 100      | 50%                        | 50%                           | 4380              | NO                |
|                                                                                                                                                                                     | R2       |                   | Residential   | LD       | 21.08           | 15.92             | 179           | 9.14                    | 57%                          | 150      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R3       |                   | Residential   | Bedsit   | 24.70           | 18.27             | 129           | 8.26                    | 45%                          | 150      | 50%                        | 50%                           | 4380              | NO                |
|                                                                                                                                                                                     | R4       |                   | Residential   | LD       | 19.21           | 14.20             | 91            | 4.69                    | 33%                          | 150      | 50%                        | 50%                           | 4380              | NO                |
|                                                                                                                                                                                     | R5       |                   | Residential   | Bedroom  | 9.90            | 6.42              | 160           | 4.25                    | 66%                          | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R6       |                   | Residential   | Bedroom  | 11.57           | 7.63              | 36            | 1.05                    | 14%                          | 100      | 50%                        | 50%                           | 4380              | NO                |
|                                                                                                                                                                                     | R7       |                   | Residential   | Bedroom  | 13.53           | 9.26              | 38            | 0.87                    | 9%                           | 100      | 50%                        | 50%                           | 4380              | NO                |
|                                                                                                                                                                                     | R8       |                   | Residential   | LD       | 15.97           | 11.40             | 617           | 11.40                   | 100%                         | 150      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R9       |                   | Residential   | Kitchen  | 12.31           | 8.36              | 490           | 8.36                    | 100%                         | 200      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R10      |                   | Residential   | LD       | 26.87           | 20.81             | 204           | 16.12                   | 77%                          | 150      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R11      |                   | Residential   | Bedroom  | 15.98           | 11.18             | 401           | 11.18                   | 100%                         | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R12      |                   | Residential   | Bedroom  | 14.64           | 9.74              | 201           | 8.18                    | 84%                          | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R13      |                   | Residential   | Bedroom  | 13.75           | 9.41              | 181           | 8.40                    | 89%                          | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R14      |                   | Residential   | Bedroom  | 13.13           | 9.11              | 185           | 8.86                    | 97%                          | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R15      |                   | Residential   | LD       | 20.39           | 15.26             | 160           | 8.42                    | 55%                          | 150      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R16      |                   | Residential   | Bedroom  | 14.37           | 9.99              | 289           | 9.99                    | 100%                         | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R17      |                   | Residential   | LD       | 18.55           | 13.37             | 229           | 9.94                    | 74%                          | 150      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R18      |                   | Residential   | Bedroom  | 13.15           | 9.10              | 405           | 9.10                    | 100%                         | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R19      |                   | Residential   | Bedroom  | 12.22           | 8.27              | 431           | 8.27                    | 100%                         | 100      | 50%                        | 50%                           | 4380              | YES               |
|                                                                                                                                                                                     | R20      |                   | Residential   | LD       | 20.75           | 14.76             | 241           | 10.66                   | 72%                          | 150      | 50%                        | 50%                           | 4380              | YES               |

**APPENDIX B**

-

**SUNLIGHT EXPOSURE TABLE**

Project Name: ROL01231 - R01 - V01  
Project No.: Queens Wharf, 47 Queens Road, Reading  
Report Title: Sunlight Exposure Analysis - Proposed Scheme  
Date: 01/11/2023

| Floor Ref    | Room Ref | Room Attribute | Property Type | Room Use | Window Ref | Window Orientation | Proposed Sunlight Exposure | Rating  |
|--------------|----------|----------------|---------------|----------|------------|--------------------|----------------------------|---------|
| Queens Wharf |          |                |               |          |            |                    |                            |         |
| Gnd Floor    | R1       |                | Residential   | Bedroom  | W1         | 254°               | 2.6                        |         |
|              |          |                |               |          |            |                    | 2.6                        | Minimum |
| Gnd Floor    | R2       |                | Residential   | LD       | W2         | 254°               | 1.9                        |         |
|              |          |                |               |          |            | 254°               | 1                          |         |
|              |          |                |               |          |            | 254°               | 0.6                        |         |
|              |          |                |               |          |            | 1.9                | Minimum                    |         |
| Gnd Floor    | R3       |                | Residential   | Bedsit   | W5         | 254°               | 0.5                        |         |
|              |          |                |               |          |            | 254°               | 0.5                        |         |
|              |          |                |               |          |            | 254°               | 0.2                        |         |
|              |          |                |               |          |            | 0.5                | Failed                     |         |
| Gnd Floor    | R4       |                | Residential   | LD       | W8         | 254°               | 0                          |         |
|              |          |                |               |          |            | 254°               | 0                          |         |
|              |          |                |               |          |            | 254°               | 0                          |         |
|              |          |                |               |          |            | 0                  | Failed                     |         |
| Gnd Floor    | R5       |                | Residential   | Bedroom  | W11        | 344°N              | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R6       |                | Residential   | Bedroom  | W12        | 254°               | 0.5                        |         |
|              |          |                |               |          |            |                    | 0.5                        | Failed  |
| Gnd Floor    | R7       |                | Residential   | Bedroom  | W13        | 254°               | 1                          |         |
|              |          |                |               |          |            |                    | 1                          | Failed  |
| Gnd Floor    | R8       |                | Residential   | LD       | W14        | 254°               | 3.5                        |         |
|              |          |                |               |          |            | 164°               | 7.7                        |         |
|              |          |                |               |          |            |                    | 9.3                        | High    |
| Gnd Floor    | R9       |                | Residential   | Kitchen  | W16        | 164°               | 7.6                        |         |
|              |          |                |               |          |            |                    | 7.6                        | High    |
| Gnd Floor    | R10      |                | Residential   | LD       | W17        | 164°               | 6.2                        |         |
|              |          |                |               |          |            | 164°               | 6.2                        |         |
|              |          |                |               |          |            |                    | 6.2                        | High    |
| Gnd Floor    | R11      |                | Residential   | Bedroom  | W19        | 164°               | 7.3                        |         |
|              |          |                |               |          |            |                    | 7.3                        | High    |
| Gnd Floor    | R12      |                | Residential   | Bedroom  | W20        | 344°N              | 0                          |         |
|              |          |                |               |          |            | 344°N              | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R13      |                | Residential   | Bedroom  | W22        | 344°N              | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R14      |                | Residential   | Bedroom  | W23        | 344°N              | 0                          |         |
|              |          |                |               |          |            | 344°N              | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R15      |                | Residential   | LD       | W25        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R16      |                | Residential   | Bedroom  | W26        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R17      |                | Residential   | LD       | W27        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R18      |                | Residential   | Bedroom  | W28        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R19      |                | Residential   | Bedroom  | W29        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |
| Gnd Floor    | R20      |                | Residential   | LD       | W30        | 74°N               | 0                          |         |
|              |          |                |               |          |            |                    | 0                          | Failed  |

## **APPENDIX C**

-

### **LAYOUT PLANS WITH TARGET ILLUMINANCE RESULTS**

DRAWING NOS. ROL01231\_R01\_V01\_601-01

LEGEND:

T1 (%) OF HOURS > REQ. LUX



SOURCES OF INFORMATION:

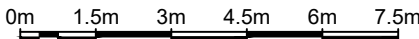
EXISTING, SURROUNDING & ANALYSED BUILDINGS

ACCUCITIES  
Received on 30/10/23

Site and aerial photos.

PROPOSED BUILDINGS

ASHTON ARCHITECTURE  
Received on 31/10/23



PROJECT INFORMATION

© Copyright Anstey Horne & Co. Ltd  
This drawing is the property of Anstey Horne & Co. Ltd. All rights reserved.  
This drawing should not be reproduced without permission.  
Do not scale from this drawing.

CLIENT: METRIX DEVELOPMENTS

PROJECT TITLE:  
QUEENS WHARF  
47 QUEENS ROAD  
READING, RG1 4QE

SCHEME REF: SCHEME RECEIVED: 31/10/23

DRAWING TITLE:  
TARGET ILLUMINANCE  
INTERNAL FLOOR LAYOUTS

MODELLER BY: / DRAWN BY: DATE: SCALE: 1:150 A3

PROJECT No: RELEASE No: VERSION No: DRAWING No:

ROL01231\_R01\_V01\_ 601-01

Daylight & Sunlight

GROUND



[ansteyhorne.co.uk](http://ansteyhorne.co.uk)

Regulated by RICS

Chartered Surveyors

Rights of Light | Party Walls | Building Consultancy | Fire Consultancy

LONDON BIRMINGHAM MANCHESTER BRISTOL PLYMOUTH NORWICH

**expertise**  
*applied*